**LIST OF EXHIBITS**

Direct Testimony and Supporting Exhibits of Michael Murray

on Behalf of Mission:data Coalition

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# Exhibit A

# DIGITAL PLATFORM REGULATION OF ELECTRIC UTILITIES

MISSION:DATA
empowering energy savings

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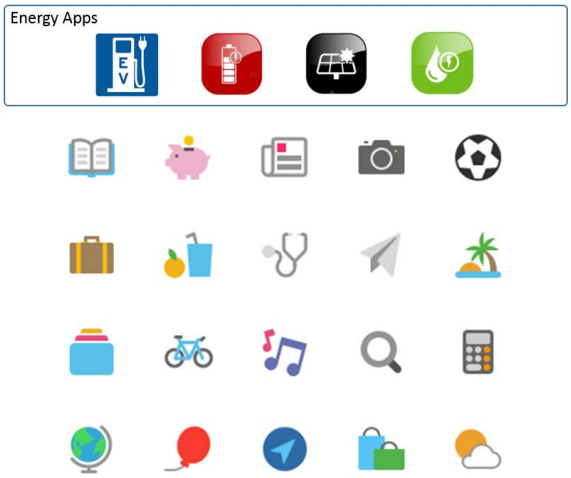
MISSION:DATA
empowering energy savings

Mission:data Coalition is a national coalition of 30 innovative energy technology companies that empower consumers with access to their own energy data. Mission:data advocates for customer-friendly data portability policies throughout the country in order to deliver benefits to consumers and enable a vibrant market for energy management services.

## EXECUTIVE SUMMARY

New smart meter "App Stores" provide fertile ground for energy innovation. But they also present new opportunities for electric utilities to hinder competition and impede their distributed energy competitors.

Monopoly electric utilities increasingly provide digital services such as data portability to distributed energy resources (DERs), but government regulation of these monopolies has not adapted to the digital age. Unfortunately, rate regulation alone is ill-equipped to face modern challenges posed by the digitization of the power sector. DERs provided by non-incumbents have digital interactions with utilities, such as gathering real-time or historic electric usage data, billing information, etc. and provide demand reduction services back to the utility. New smart meters from major manufacturers such as Itron and Landis+Gyr feature on-board computers that create tremendous opportunity for innovative DERs that would benefit customers, but they also create opportunities for utilities to abuse their market power by exploiting asymmetries of information and discriminating against DER providers by limiting access, withholding information or imposing onerous terms of use. This report analyzes the new competitive landscape of electricity-related services through the lens of digital platform regulation. Just as the U.S. Congress and countries around the world are grappling with how to regulate the tech giants' "app stores" such as Apple's, state public utility regulators must familiarize themselves with abuses that are coming to the electricity sector (such as crippling, discriminatory terms and conditions, and snooping) and then craft pro-consumer policies to address them such as non-discrimination mandates, prohibitions on self-dealing, and establishing fair terms for digital interconnection. Modern utility regulators must go beyond prudence review to restrain utilities' anti-competitive activities.




## UTILITIES' DIGITAL PLATFORMS NEED OVERSIGHT

The modern power grid is becoming increasingly decentralized, decarbonized and digitized. Industry and state utility regulators are beginning to grapple with those first two trends — decentralization and decarbonization. But relatively little attention has been paid to the third trend: digitization. The objectives of this paper are to (1) demonstrate the need for digital platform regulation, particularly as it relates to utilities' anti-competitive conduct that harms distributed energy resources (DERs), and to (2) propose policy solutions in the form of fair competition principles to guide regulators as the electricity system enters a new era.

State utility regulators are unprepared to oversee the increasing volume and variety of digital interactions that occur between DERs and utilities. DER aggregators of demand response, energy efficiency, smart electric vehicle (EV) charging, and various non-wires alternatives (NWAs) must communicate electronically with a monopoly distribution electric utility. DER aggregators interact with utilities' information technology (IT) systems for various purposes, such as gathering and analyzing customer energy usage information, acquiring information necessary for a customer to participate in a wholesale market, or receiving control signals from the utility to alter load. However, utilities are not traditionally skilled at managing IT systems, and DER aggregators have experienced failures on the part of utilities to provide certain

data in a timely and reliable manner.[1] Furthermore, many utilities view DERs as a competitive threat, and utilities' IT systems therefore represent a likely venue in which utilities can stifle DERs' business prospects with complex, opaque and highly technical processes. State regulators have long recognized the need for oversight of interconnection rules governing the attachment of solar photovoltaics to the distribution grid in order to establish fair terms between regulated and non-regulated entities. However, no state regulator has established comprehensive interconnection rules for digital interactions. There is a substantial risk that utilities will act discretely to hobble, undermine, or "slow-walk" their digital interactions with third party DERs in an anti-competitive fashion. As a result, it will be very difficult to decentralize and decarbonize the power sector (while maintaining low energy costs) if monopoly utilities are not held accountable for open and transparent operation of the online systems that are necessary for DERs to flourish. Put another way, many state utility regulators were already struggling to hold utilities accountable and maintain a level playing field in an analog world. A digital world presents even greater challenges.

While we acknowledge that some utility-owned DERs are useful and necessary, in order to meet the need for rapid emissions reductions in the face of climate change, the digital playing field must be leveled between *all* DERs and utilities. Our assumption in this paper is that behind-the-meter innovation will only occur at the speed necessary to address climate change if non-utility DERs (i.e., DERs owned or controlled by customers and/or customer-selected third parties) are permitted to proliferate. And as non-utility DERs grow, certain digital interactions with the utility become necessary, as exhibited during the recent California heat wave when third party demand response providers were called upon by utilities to manage peak demand and avoid blackouts.[2] DERs often require electronic access to customer usage data and certain information about customer accounts held by the utility in order to operate. It is these digital interactions between co-equal market participants — utilities and third party DERs — where regulatory oversight is necessary to ensure a level playing field.

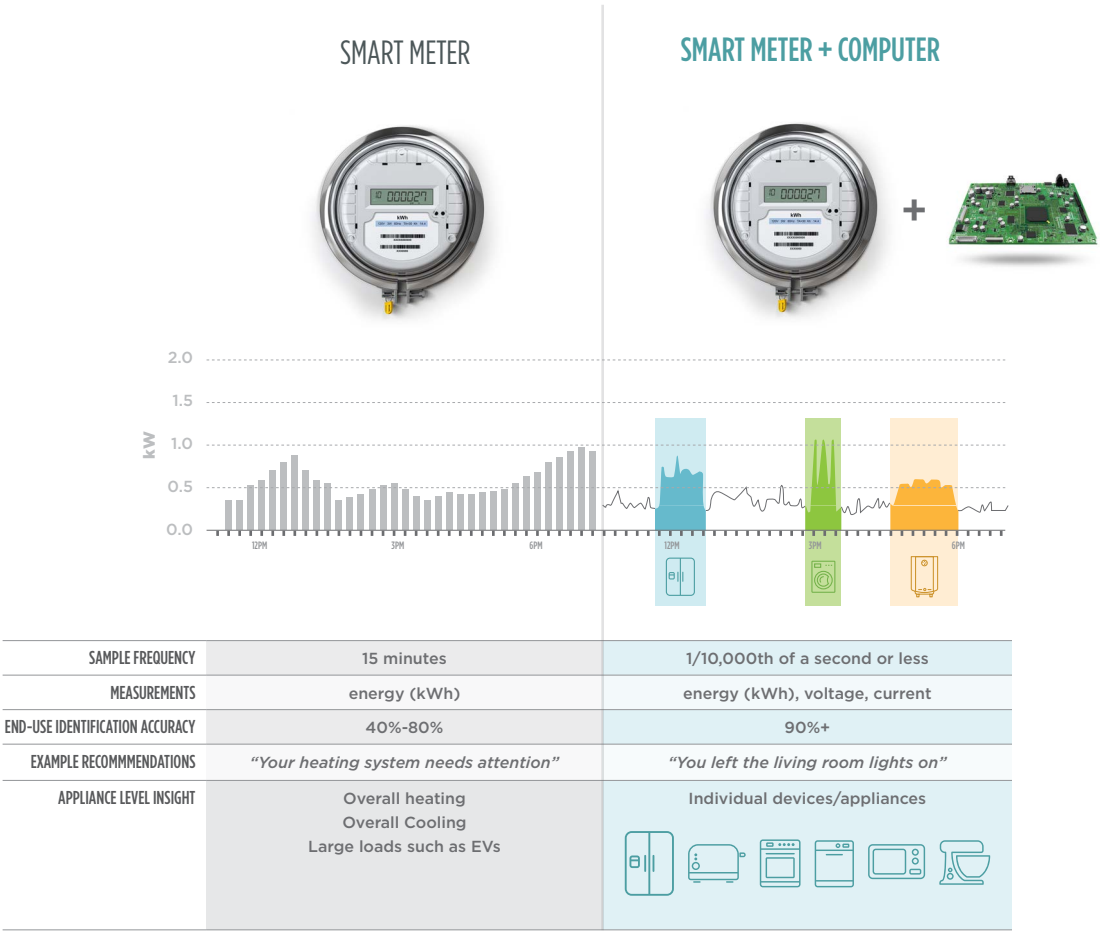

State public utility commissions have no choice but to become digital platform regulators in order to be effective in the 21st century. Utilities have many IT systems whose interactions with DERs must be overseen. The first major digital platform to come about has been Green Button Connect (GBC). Used in five (5) states today covering 36 million electric meters, GBC electronically provides customer-authorized DERs with energy usage and billing information necessary for DERs to function. Unfortunately, these platforms have not always worked reliably (or sometimes haven't worked at all), as we have written about previously.[3]

Recent technological developments besides GBC cry out for oversight of digital platforms. The latest is a new generation of smart meters that contain on-board computers. These computers allow software "apps" to be loaded on the meter. Apps could, for example, analyze electricity usage at high frequencies and disaggregate consumption by appliance or device. The ability to load an app onto a meter at zero marginal cost and receive accurate disaggregations of energy usage is potentially game-changing for DERs, who could better understand each household and more accurately target their customers with cost-effective efficiency recommendations. For this new "App Store" on advanced meters to benefit customers and to maximize its carbon-reducing potential, state regulators must force utilities to make these computing advancements accessible to third parties. Regulators must move beyond cost-of-service regulation by adopting pro-competition principles and developing enforcement mechanisms tailored to digital interactions.

1 See, e.g., *Complaint of OhmConnect, Inc. Against Southern California Edison Company for Data Failures.* California Public Utilities Commission, Docket No. C1903005. Filed March 8, 2019.

2 https://www.greentechmedia.com/articles/read/western-heat-wave-tests-californias-clean-grid-transition

3 See *Energy Data Portability: Assessing Utility Performance and Preventing 'Evil Nudges.'* Mission:data Coalition, January, 2019. Available at http://www.missiondata.io/reports/.




| | | |
|---|---|---|
| SAMPLE FREQUENCY | 15 minutes | 1/10,000th of a second or less |
| MEASUREMENTS | energy (kWh) | energy (kWh), voltage, current |
| END-USE IDENTIFICATION ACCURACY | 40%-80% | 90%+ |
| EXAMPLE RECOMMMENDATIONS | *"Your heating system needs attention"* | *"You left the living room lights on"* |
| APPLIANCE LEVEL INSIGHT | Overall heating<br>Overall Cooling<br>Large loads such as EVs | Individual devices/appliances |

## HOW UTILITIES CAN DISCRIMINATE AGAINST DERS

App Stores on smartphones have seen discrimination and anti-competitive activities in the past, as we discuss below. Utilities are poised to similarly hinder competition by virtue of their control over meter-based app stores. Examples of potential abuses include:

**Prohibiting Apps from Duplicating Utility-Provided Functions.** Suppose a software company makes an app that sends you text message alerts when you approach a budgeted amount for your monthly electric bill. This would be valuable to many customers, but many utilities already offer "high bill alerts" via text message. Utilities eager to maintain their direct customer relationship could ban similar apps in order to retain "ownership" of the customer. In the past, Apple has banned podcast apps that would have competed with Apple's native podcasts app and music apps that would have duplicated some of iOS's built-in music functions.

> Consumers will download apps that compete with pre-installed apps only when there is a noted quality difference, and even then, lower-quality pre-installed apps will still enjoy an advantage over third-party apps.
>
> **- U.S. House of Representatives Antitrust Subcommittee Report (p. 352)**

**Privileging the Utility's Pre-Installed Apps With Better User Experiences.** Your electric meter could come pre-installed with apps for energy disaggregation and bill alerts, courtesy of the utility. However, the utility could make it difficult or complex for customers to consent to the installation of a third party app that provides similar capabilities. Pre-installed apps involve less "friction" of user experience because they can be used immediately without completing a consent process or waiting for the app to be loaded. This pitfall

could be remedied by (1) banning pre-installation of apps by the utility and (2) requiring all apps, whether utility- or third party-made, to follow the same customer consent process.

**Utility-Friendly App Makers Receive Better Treatment.** App makers that are friendlier to the utility's business model could receive faster approvals; have terms and conditions selectively waived; or have reduced fees or commission percentages. A firm providing, say, behind-the-meter battery storage that reduces the utility's capital investment (and thus earnings) would be a prime target for "back-burner" treatment, whereas an app beneficial to the utility could be welcomed with a red carpet. When Uber was in violation of Apple's terms, Apple's CEO telephoned Uber's CEO and amicably resolved the disagreement. Smaller firms than Uber, however, would have simply seen their app banned from the App Store without an opportunity to appeal. Utilities must be agnostic when it comes to which services their customers choose. Size, political influence or business model should not influence how an app maker is treated by a utility.

**Crippling Hardware Features to Third Party Apps Such as Voltage or Current Measurement.** A utility could allow its own apps to access voltage or current information while providing inferior power data to third party apps. Voltage and current measurement permits even greater accuracy with load disaggregation; certain "signatures" seen in voltage and current fluctuations are traceable to certain loads, such as motors or compressors, in a way that power data (measured in watt-hours) cannot discern. Platform operators can reserve superior information for themselves via private APIs. According to the U.S. House of Representatives Antitrust Subcommittee Report, "Apple is permitted to use the private APIs on iOS devices, but third-party developers are not" (p. 353).

## EXISTING REGULATORY APPROACHES ARE INADEQUATE

Today, the primary tool of utility regulation is disallowing costs from inclusion in rates. Utilities must prove to their regulator that they have "prudently" incurred costs, meaning that those costs were necessary to deliver safe and reliable electric service. One could argue that the threat of cost disallowance is sufficient to compel a utility to operate its IT platforms in such a way that is open to DERs, pro-competitive, and maximally beneficial to customers. But there are several reasons why the threat of cost disallowance is by itself inadequate to ensure positive outcomes for digital platforms that serve DERs and customers:

1. **Disallowance is costly for regulators to prove**. Utilities can exploit information asymmetry to frustrate regulators' efforts to get information about the performance of IT platforms and App Stores. And since utilities' legal costs are paid by ratepayers, they can out-maneuver and outlast state regulators. Utilities can even appeal disallowances in court, further straining regulators' resources. As a result, disallowances are rare, diminishing their coercive force.[4]

2. **Time lags between prudence reviews.** Often, several years elapse from the time a utility's IT platform fails and the punishment (i.e. cost disallowance) is meted out (if punishment occurs at all). In contrast, in a competitive market, the failure of an IT platform results in immediate financial consequences in the form of reduced users, lowered revenue, and contractual penalties. A delayed feedback loop in conventional prudence reviews is not only a departure from norms in a competitive market, but it is ill-suited to IT systems that can change rapidly. For example, a perfectly functional IT platform can become inoperable within seconds.

3. **Lack of clear performance metrics.** Whereas the prudence of a power plant investment can be evaluated in part by its capacity utilization rate (0%-100%), there is no comparably simple, widely-used metric for an IT platform. "Uptime" or IT system availability can be manipulated by, for example, claiming uptime despite the presence of severe bugs. Moreover, it is difficult to predict the expected utilization of an IT platform by DERs outside of regulators' and the utility's control, frustrating the setting of appropriate utilization targets.

Performance-based regulation (PBR) is one possible mechanism for correcting these shortfalls. However, for PBR to be successful, regulators must educate themselves about the desirable outcomes for utilities as digital platform operators,

4 David Littell, Jessica Shipley and Megan O'Reilly. *Protecting Customers from Utility Information System and Technology (IS/IT) Failures: How performance-based regulation can mimic the competitive environment.* Regulatory Assistance Project. September, 2019. https://www.raponline.org/wp-content/uploads/2019/09/rap_littell_shipley_oreilly_performance_regulation_information_technology_2019_september.pdf

as well as *un*desirable outcomes to be avoided. We propose several performance metrics and tools for regulators that will be necessary to oversee digital platforms, whether or not PBR is applied. But first, we must understand lessons learned regarding the market power wielded by digital platform operators in other industries, most importantly App Stores on smartphones.

## LESSONS LEARNED FROM TECH

"Platform" is a modern-day buzzword with as many definitions as there are apps in an App Store. We have social platforms like Facebook, shopping platforms like Amazon, and communication platforms like Signal. In this paper, we define a digital platform as software through which other entities make and sell their own software. Examples include operating systems such as Microsoft Windows and Apple's iOS. Platforms act as funnels or bottlenecks through which customers access other products and services.

Digital platform owners are powerful middlemen. They host, curate, monetize, and deliver digital goods. Increasingly, in tech, they also act like banks, publishers, tax collectors, and judges who mediate disputes among their users. Charitably, platform owners could be described as gardeners, pruning the walled environment for users' enjoyment. Less charitably, they could be described as rent-seekers, censors, and iron-fisted rulers. Regardless of individual temperament, platform owners undeniably wield considerable power. They own the real estate in which commerce occurs, and their tenants can't afford to be evicted.

### THE POWER OF THE APP STORE

Almost from day one, Spotify had problems with Apple's App Store.

From its launch in 2008, the music-streaming app became one of the most popular apps on Apple's iPhone, propelling Spotify's meteoric growth. But as the App Store matured, its guidelines began rapidly changing. The most profound change involved in-app purchases (IAP). Apple required apps to use Apple's built-in payment system, meaning that Spotify users wishing to upgrade from "free" to "premium" service couldn't pay Spotify directly. Users would need to enter their credit card into Apple's payment system, where Apple would charge a 30% fee. If Spotify didn't submit to Apple's payment system, Spotify had two options: Either cripple Spotify's functionality by eliminating all "premium" service, or have Spotify removed from the App Store altogether.

Spotify has alleged that Apple's conduct is unfair and discriminatory, with the issue growing into an ongoing anti-trust investigation of Apple in the European Union. Other app makers have made similar complaints: Amazon's Kindle app for iPhone doesn't allow users to buy books from the app, because that would compete with Apple's own iBooks; gaming apps from Microsoft, Google and Facebook aren't allowed on the App Store because it would disrupt Apple's existing game economy.

In addition to IAP, other guidelines are a moving target. App developers find themselves on a treadmill, spending millions of dollars adding and subtracting features to remain in compliance with the latest standards. And even if developers keep up with the dizzying pace of updates, they might find that the App Store guidelines are not evenly enforced. For example, Apple permits Uber to intake credit card information directly from customers without using Apple's IAP. "We aren't seeking special treatment," said Daniel Ek, Spotify's CEO. "We simply want the same treatment as numerous other apps on the App Store, like Uber or Deliveroo, who aren't subject to the Apple tax and therefore don't have the same restrictions."[5]

As recently as June, 2020, angry app developers took to social media to complain as Apple refused app updates from numerous developers until they submitted to in-app purchases (and Apple's 30% fee). Remarking on this outburst, tech journalist and analyst Ben Thompson noted that app developers are intimidated into silence:

> *I wondered on Twitter[6] if Apple was blocking other developers from updating their apps unless they added in-app purchase, and was surprised at the response: twenty-one app developers who contacted me had added in-app purchase in the last twelve months…Nine more had either committed to adding in-app purchase, still had their app in limbo, or had simply given up on the App Store.*

5 https://newsroom.spotify.com/2019-03-13/consumers-and-innovators-win-on-a-level-playing-field/

6 https://twitter.com/benthompson/status/1273079296618201093

*I have sat on these anecdotes for several months now, in part because this is all I can say: none of the developers were willing to go on the record for fear of angering Apple.*

Successful platforms such as the iPhone have considerable power over app developers. The iPhone has created fertile ground and a large user base for apps to thrive, but with that potential comes a downside: App developers are often forced to submit to whatever financial, technical or business arrangement Apple wants.

Similarly, utilities could charge third party DERs exorbitant sums to appear on the meter-based app store. Utilities could offer their own apps to customers at no charge, harming precisely the innovation that these new smart meters promised to bring to consumers. In addition, utilities could modify their app store's terms and conditions to disadvantage any apps perceived as a strategic or competitive threat.

Regardless of one's views on Apple's practices, electric utilities deserve greater scrutiny from regulators because electric utilities have received government-sanctioned monopolies. Nowhere in America do consumers have a choice as to which meter is installed on the side of their house. Consumers' level of captivity can be debated in the tech world, but complete captivity is incontestable in the electricity sector. Regulators therefore have an obligation to ensure that meter-based digital platforms are truly open to the competitive marketplace and are not monopolized by their utility owners.

### FEATURES FOR ME, BUT NOT FOR THEE

Discriminatory behavior of platform owners can also extend beyond business terms and sales commissions to the selective availability of certain technical features to some app developers but not to others. Take Tile, a helpful product for finding lost keys and wallets. Buy a one-inch-square Tile and put it in your wallet, and it broadcasts a Bluetooth beacon that makes your wallet findable with your iPhone. Among forgetful consumers, Tile saw considerable commercial success. That is, until Apple announced they would be adding a different type of radio to iPhone that is superior to Bluetooth for use by Apple's competing product, AirTags. AirTags — small disks — serve the same purpose as Tiles, but they broadcast ultra wideband radio signals that propagate through walls more effectively than Bluetooth, and with lower battery drain. Conveniently for Apple, it appears that iOS will make the ultra wideband radio accessible only to Apple's AirTags and not to competitors such as Tile. After incubating a lucrative market around finding lost objects using iPhone and Bluetooth, Apple is now tilting the playing field in its favor by selectively "crippling" certain features of new iPhones for app developers.

Similarly, utilities could ban all apps (except their own) that use voltage and current readings in disaggregating energy usage. As described above, high-frequency voltage and current measurements can significantly improve the accuracy of statistical inferences, permitting apps to determine how much energy is being used by each device or appliance. Excluding such apps from the app store would tilt the playing field in the utility's favor even further, ensuring that only the utility would have detailed insights into household energy usage patterns.

## RECOMMENDATIONS

### PRINCIPLES FOR DIGITAL PLATFORM REGULATION

Public utility commissions have a historic opportunity to become leaders in digital platform regulation **before** millions of electric meters across the U.S. are upgraded. The question about meter replacements is not merely about "smart meters"; it is whether on-board computers will be included. Addressing the potential (and, some would say, inevitable) harms from these computers requires Commission oversight. The following principles — based on non-discrimination, due process rights, and fair competition — should be incorporated into Commission orders and rules:

1. **App Stores' policies shall be fair, reasonable and non-discriminatory (FRAND).**
    - **Commission approval of terms.** The Commission must approve the terms under which DERs access and use the App Store. This includes business terms and cybersecurity terms. Utilities should not be permitted to impose their own terms without Commission approval.
    - **No crippling:** Every app developer gets access to the same hardware and software features as the utility. For example, a utility shall not reserve voltage or current measurement capabilities only for itself. If meters support Wifi (as many manufacturers'

do), utilities shall not ban apps that bypass the utility by sending meter readings out to a third party over the customer's Wifi network.

- **No self-preferencing.** Utilities shall not be permitted to pre-install their own apps on meters.
- **Regulatory oversight of costs and revenues.** Charges to third parties for use of the platform may not be excessive in relation to the utility's actual operating costs for maintaining the App Store. Revenues, if any, should be scrutinized so that ratepayers are not forced to subsidize unregulated businesses.

2. **Due process rights for DERs.**
   - **Rapid adjudication of disputes.** Commissions should hear disputes raised by DERs and permit discovery. In order to operate at the pace of modern technology, regulators should target resolution of disputes within 60-90 days.
   - **Structurally separate approval of apps.** To avoid conflicts of interest and anti-competitive conduct, approval of an app to exist on a utility's App Store should be the Commission's responsibility, not the utility's. App developers should have the opportunity to comment on utilities' proposed apps prior to Commission approval.
3. **Fair Competition.**
   - **Transparency of platform features.** Pre-release documentation on changes to meters and the App Store over time should be available to all app developers with sufficient advance notice.
   - **Reverse compatibility.** If upgrades to meters or the App Store become necessary and would result in apps not being backwards-compatible with prior versions, the utility shall provide sufficient notice and opportunity for app makers to adapt.
   - **No snooping ("mind your own business"):** Utilities may not surveil, reverse-engineer or gain insights into third party apps. Utilities may only monitor apps for legitimate system health reasons. Commissions should conduct periodic audits to ensure compliance.
   - **Prohibition on using a metering App Store until policies are in place.** If a regulator is unable to ensure a utility's compliance withthese principles, then the regulator should prohibit *all* use of meter-based App Stores, including the utility's use.

## TOOLS FOR REGULATORS

In addition to implementing the principles above, state regulators need a new set of tools and information to monitor utilities' IT platforms. Quarterly or annual written reports are simply inadequate in a digital age. Regulators need to invest in information systems to continuously monitor compliance and implement service level agreements (SLAs), a mainstay of modern IT contracting. Only then can Commissions become true digital platform regulators. Specifically, Commissions should:

1. **Require issue tracking systems.** Issue-trackers or web-based "help desks" are simple online tools for submitting support requests. Support requests are submitted by an app developer who, for example, may be confused by an unknown error message. The Commission should have supervisory visibility over all issues in order to assess the utility's responsiveness and overall uptime of the platform. Issue-tracking websites must be administered by the Commission rather than delegated to utilities.
2. **Performance metrics.** Key metrics should be reported on a continuously-updated, publicly-accessible website. Performance metrics are essential in how modern technology companies manage their IT vendors in a competitive market, and public disclosure helps ensure equal access to information and aids in enforcement. Key metrics include:
   a. Availability / uptime of meter-based computers and the App Store
   b. Statistics regarding errors in App Store operation, such as number, description, severity and duration of errors
   c. User experience time to complete an authorization for loading an app onto his or her meter
   d. Time for the utility to conduct technical app reviews
   e. Number and severity of reported issues by DERs in the online issue-tracker, including mean acknowledgment time and mean resolution time

3. **Service Level Agreements (SLAs).** SLAs establish minimum performance criteria for platform operators and are extremely common in IT contracting today. In order to ensure accountability. SLAs for utilities should prescribe the following:
    a. Maximum time to acknowledge a reported defect according to severity classification (mild, medium, severe)
    b. Maximum time to resolve a reported defect according to severity
    c. Punishments for violations, such as financial penalties

## CONCLUSION

Electric meters are part of a utility's natural monopoly, but the software that runs on them is not. Major manufacturers are now shipping meters with on-board computers, scrambling existing notions of the demarcation line between monopoly and competitive service. Meter-based app stores that support a range of innovative apps from independent entities could bring tremendous new benefits to consumers, such as tailored recommendations for energy efficiency. However, these benefits to consumers will not materialize in an optimal or efficient manner without effective oversight from state regulators. In order to establish a level playing field, public utility commissions must embrace their new role as digital platform regulators.

# Exhibit B

advancements in reactor design, and (6) credit the response of advanced nuclear reactors to postulated accidents, including slower transient response times and relatively small and slow release of fission products. The proposed rule would add 10 CFR part 53, ''Licensing and Regulation of Advanced Nuclear Reactors.''

The NRC will periodically make available portions of preliminary proposed rule language on the federal rulemaking website at *http://www.regulations.gov under Docket ID NRC–2019–0062.* This preliminary proposed rule language is draft and may be incomplete in one or more respects; however, the NRC welcomes diverse stakeholder feedback to inform the proposed rulemaking activity.

Various sections of the 10 CFR part 53 preliminary proposed rule language will be released to stakeholders during the development of the proposed rule. The public will be provided with opportunities to comment on the preliminary proposed rule language before or during public meetings and on a rolling basis throughout the 12-month public comment period. The NRC plans to hold public meetings every 4 to 6 weeks over the next 12 months. The meetings will be noticed in the NRC's Public Meeting Notice System at least 10 days in advance of the scheduled meeting. Preliminary proposed rule language is being provided to increase transparency and to facilitate discussions with stakeholders on the licensing process for advanced nuclear reactors. The NRC will post new and revised updates to the preliminary proposed rule language periodically on the Federal rulemaking website at *www.regulations.gov* that may be of interest to stakeholders. The NRC will not issue a **Federal Register** notice each time preliminary proposed rule language is added to the docket. Please monitor the docket on *www.regulations.gov* and use the following information to sign up for docket alerts.

The NRC may post materials related to this rulemaking, including public comments received, on the Federal Rulemaking website at *https://www.regulations.gov* under Docket ID NRC–2019–0062. The Federal Rulemaking website allows you to receive alerts when changes or additions occur in a docket folder. To subscribe: (1) Navigate to the docket folder (NRC–2019–0062); (2) click the ''Sign up for Email Alerts'' link; and (3) enter your email address and select how frequently you would like to receive emails (daily, weekly, or monthly).

Dated: October 29, 2020.

For the Nuclear Regulatory Commission.

**John R. Tappert,**

*Director, Division of Rulemaking, Environmental, and Financial Support, Office of Nuclear Material Safety and Safeguards.*

[FR Doc. 2020–24387 Filed 11–5–20; 8:45 am]

**BILLING CODE 7590–01–P**

## BUREAU OF CONSUMER FINANCIAL PROTECTION

### 12 CFR Chapter X

**[Docket No. CFPB–2020–0034]**

**RIN 3170–AA78**

## Consumer Access to Financial Records

**AGENCY:** Bureau of Consumer Financial Protection.

**ACTION:** Advance notice of proposed rulemaking.

**SUMMARY:** Section 1033 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) provides, among other things, that subject to rules prescribed by the Bureau of Consumer Financial Protection (Bureau), a consumer financial services provider must make available to a consumer information in the control or possession of the provider concerning the consumer financial product or service that the consumer obtained from the provider. The Bureau is issuing this Advance Notice of Proposed Rulemaking (ANPR) to solicit comments and information to assist the Bureau in developing regulations to implement section 1033.

**DATES:** Comments must be received on or before February 4, 2021.

**ADDRESSES:** You may submit comments, identified by Docket No. CFPB–2020–0034 or RIN 3170–AA78, by any of the following methods:

- *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the instructions for submitting comments.
- *Email: 2020-ANPR-1033@cfpb.gov.* Include Docket No. CFPB–2020–0034 or RIN 3170–AA78 in the subject line of the message.
- *Mail/Hand Delivery/Courier:* Comment Intake—Section 1033 ANPR, Bureau of Consumer Financial Protection, 1700 G Street NW, Washington, DC 20552.

*Instructions:* The Bureau encourages the early submission of comments. All submissions should include the agency name and docket number or Regulatory Information Number (RIN) for this rulemaking. Because paper mail in the Washington, DC area and at the Bureau is subject to delay, and in light of difficulties associated with mail and hand deliveries during the COVID–19 pandemic, commenters are encouraged to submit comments electronically. In general, all comments received will be posted without change to *https://www.regulations.gov.* In addition, once the Bureau's headquarters reopens, comments will be available for public inspection and copying at 1700 G Street NW, Washington, DC 20552, on official business days between the hours of 10 a.m. and 5 p.m. Eastern Time. At that time, you can make an appointment to inspect the documents by telephoning 202–435–9169.

All comments, including attachments and other supporting materials, will become part of the public record and subject to public disclosure. Proprietary information or sensitive personal information, such as account numbers or Social Security numbers, or names of other individuals, should not be included. Comments will not be edited to remove any identifying or contact information.

**FOR FURTHER INFORMATION CONTACT:** Gary Stein, Office of Consumer Credit, Payments, and Deposits Markets at 202–435–7700; or Will Wade-Gery, Office of Innovation, at *officeofinnovation@cfpb.gov* or 202–435–7700. If you require this document in an alternative electronic format, please contact *CFPB_Accessibility@cfpb.gov.*

**SUPPLEMENTARY INFORMATION:** The Bureau is issuing this ANPR to solicit comments and information to assist the Bureau in developing regulations to implement section 1033 of the Dodd-Frank Act (section 1033), which provides for consumer access to financial records. The Bureau is issuing this ANPR to solicit stakeholder input on ways that the Bureau might effectively and efficiently implement the financial record access rights described in Section 1033, recognizing that various market participants have helped authorized data access become more secure, effective, and subject to consumer control. While the Bureau expects these trends to continue, there are indications that some emerging market practices may not reflect the access rights described in section 1033. The Bureau is also seeking information regarding the possible scope of data that might be made subject to protected access, as well as information that might bear on other terms of access, such as those relating to security, privacy, effective consumer control over access and accessed data, and accountability for data errors and unauthorized access. The Bureau is also interested in

comment on whether and how issues of potential regulatory uncertainty with respect to section 1033 and its interaction with other statutes within the Bureau's jurisdiction, such as the Fair Credit Reporting Act, may be impacting this market to the potential detriment of consumers, and seeks information that may help resolve such uncertainty. The Bureau invites comment on all aspects of this ANPR from all interested parties, including consumers, consumer advocacy groups, industry members and trade groups, and other members of the public.

This ANPR proceeds in five sections. Section I summarizes the Dodd-Frank Act's description of consumer rights to access financial records. Section II provides defined terms for the ANPR. Section III provides an overview of data access, with a particular focus on the authorized data access ecosystem, including the players involved, modes of access, competitive incentives and standard-setting, and consumer impacts. Section IV summarizes the Bureau's actions to date relating to consumer-authorized data access. Section V includes a series of questions about whether and how the Bureau might most effectively provide regulatory guidance in this area.

As discussed in greater detail in section IV, the Bureau has taken several steps with respect to section 1033, including extensive engagement with stakeholders from a range of perspectives. These include a request for information issued in 2016, a Bureau statement of principles in 2017, and most recently, a February 2020 symposium. The valuable information and comments the Bureau has received through its stakeholder engagement efforts informs section III's discussion of the complex issues raised with respect to effective implementation of section 1033 and the section V questions intended to assist Bureau decisions concerning potential rulemaking.

## I. Section 1033

Section 1033 is comprised of five subsections. Section 1033(a) provides that, subject to rules prescribed by the Bureau, a covered person shall make available to a consumer, upon request, information in the control or possession of the covered person concerning the consumer financial product or service that the consumer obtained from such covered person, including information relating to any transaction, series of transactions, or to the account including costs, charges and usage data.[1] The information is to be made available in an electronic form usable by consumers. Section 1033(b) then outlines certain exceptions from these general access rights. For example, a covered person may not be required to make available to the consumer ''confidential commercial information, including an algorithm used to derive credit scores or other risk scores or predictors'' and ''information that the covered person cannot retrieve in the ordinary course of its business with respect to that information.'' [2]

Section 1033(c) establishes that section 1033 does not ''impose any duty on a covered person to maintain or keep any information about a consumer.'' [3] Section 1033(d) states that ''[t]he Bureau, by rule, shall prescribe standards to promote the development and use of standardized formats for information, including through the use of machine readable files, to be made available to consumers under this section.'' [4] Finally, section 1033(e) requires that the Bureau consult with the Board of Governors of the Federal Reserve System, the Office of the Comptroller of the Currency (OCC), the Federal Deposit Insurance Corporation, and the Federal Trade Commission to ensure, to the extent appropriate, that any rule pursuant to section 1033 imposes substantively similar requirements on covered persons, takes into account conditions under which covered persons do business both in the United States and in other countries, and does not require or promote the use of any particular technology in order to develop systems for compliance.[5]

## II. Definitions

This ANPR relies upon several terms defined in the Dodd-Frank Act. For convenience, this ANPR also defines several additional terms. The non-statutorily defined terms in this ANPR are for purposes of this ANPR only and should not be understood to indicate any legal interpretation, legal guidance, or policy judgment by the Bureau. When specific questions in section V below depart from these definitions, that is specifically noted.

- ''Authorized data'' means data initially sourced from a data holder as a result of authorized data access.
- ''Authorized data access'' (or ''consumer-authorized data access'') means third-party access to consumer financial data pursuant to the relevant consumer's authorization.
- ''Authorized entities'' are entities or persons with authorized data access to particular consumer financial data.
- ''Consumer data access'' means authorized data access and direct access.
- ''Consumer financial data'' (or ''consumer data'') means ''information in the control or possession of [a] covered person concerning a consumer financial product or service that the consumer obtained from such covered person, including information relating to any transaction, series of transactions, or to the account, including costs, charges and usage data.'' [6]
- ''Data aggregator'' (or ''aggregator'') means an entity that supports data users and/or data holders in enabling authorized data access.
- ''Data holder'' means a covered person with control or possession of consumer financial data.
- ''Data user'' means a third party that uses consumer-authorized data access to provide either (1) products or services to the authorizing consumer or (2) services used by entities that provide products or services to the authorizing consumer.
- ''Direct access'' means direct access by the individual consumer to consumer data rather than by an authorized entity.

## III. Background

### *A. Access to Consumer Financial Data*

Many providers of consumer financial products and services accumulate information concerning the consumers who use their products and services, the accounts that consumers maintain with them, and other information relating to consumers' use of such products and services. Providers of demand deposit accounts, for example, will accumulate information about the transactions made with a given account and about charges

[1] Section 1002 of the Dodd-Frank Act defines certain terms used in section 1033. Section 1002(4) defines a ''consumer'' as ''an individual or an agent, trustee, or representative acting on behalf of an individual.'' 12 U.S.C. 5481(4). Section 1002(5), by incorporation, provides a multi-part definition of ''consumer financial products or services.'' *See* 12 U.S.C. 5481(5). Finally, section 1002(6) defines ''covered persons,'' in part, as entities engaged in offering or providing consumer financial products or services. *See* 12 U.S.C. 5481(6).

[2] *See* 12 U.S.C. 5533(b)(1) and (4).

[3] 12 U.S.C. 5533(c).

[4] 12 U.S.C. 5533(d).

[5] *See* 12 U.S.C. 5533(e). The Bureau works with other regulators on innovation matters through various means. For example, the Bureau and the OCC recently convened virtual innovation office hours so that participants would have an opportunity to discuss issues that touch upon both consumer protection and prudential regulation. *See https://www.consumerfinance.gov/about-us/newsroom/cfpb-occ-host-virtual-innovation-office-hours/.*

[6] 12 U.S.C. 5533(a). For purposes of this ANPR, consumer data access involves data that relate to the accessing or authorizing of that consumer's use of a given product or service. As such, references to ''consumer data'' incorporate the idea of ''information in the control of a covered person concerning a consumer financial product or service that [the applicable] consumer has obtained from such covered person.''

assessed to the account. In many cases, there are well-established statutory and regulatory frameworks that impose requirements on providers of consumer financial products and services to disclose certain information to their customers about their accounts. Disclosure requirements may include, for example, periodic statements with account information on transactions and fees or disclosures about the collection, sharing, use, and protection of consumers' non-public personal information.[7]

In addition, consumers wishing to access consumer data[8] can often do so by interacting directly with their consumer financial service providers through providers' online servicing portals or mobile applications. Many providers of consumer financial products and services, from traditional providers like banks and credit unions to newer entrants such as online lenders, make available to consumers extensive electronic data about their use of the institution's products and services. Direct access of this kind is how many consumers now manage their main consumer financial accounts, like their checking accounts, credit card accounts, or mortgage loan accounts.[9]

For some time, a range of companies—including traditional financial institutions and non-bank financial technology, or ''fintech,'' firms—have been accessing consumer data with consumers' authorization and providing services to consumers using data from the consumers' various financial accounts. In recent years, the number and usage of products and services that utilize or rely upon consumers' ability to authorize third-party access to consumer data have grown substantially and rapidly.[10] This growth in authorized data access has been accompanied by expansion in the number of distinct applications or ''use cases'' for authorized data, including, but not limited to, personal financial management; financial advisory services; assistance in shopping for and selecting new consumer financial products and services; making and receiving payments; assisting consumers with improving savings outcomes; identity verification and account ownership validation; credit profile improvement; and underwriting.

This type of consumer-authorized data access and use holds the promise of improved and innovative consumer financial products and services, enhanced control for consumers over their financial lives, and increased competition in the provision of financial services to consumers.[11] Further, stakeholders assert that the increasing ability of consumers to authorize third-party access to consumer data can improve the quality and the consumer experience of consumer financial products and services, expand access and reduce costs related to using those products and services, and further consumer-friendly innovation and competition in consumer financial markets.[12] At the same time, stakeholders have also noted that consumers still face certain potential risks if they authorize access to consumer data, including some risks relating to the methods by which they authorize such access and by which the records are collected and used by authorized entities.[13]

### *B. Authorized Data Access Ecosystem Participants*

In authorizing a third party to access consumer data, consumers engage in a broad and complex ecosystem that enables such access. In addition to consumers themselves, the main participants in that system are data holders, data users, and data aggregators. A given participant, however, may play more than one—or even all—of these roles.

Data holders include providers of consumer financial products and services that, in the ordinary course of their business, collect, generate, or otherwise possess and retain information about consumers' use of their products and services. In theory, this category could include almost every type of provider of consumer financial products and services. In practice, however, activity in the authorized data access ecosystem to date has focused on banks, credit unions, and other providers of core transaction accounts (especially demand deposit accounts) in their role as data holders.[14] This focus, however, has not been exclusive.

Data users are providers of products and services who use authorized data access to inform or enable the delivery of their products and services. Non-bank fintech companies who offer consumer financial products and services are prominent data users; however, other companies, including banks, also can and do act as data users. As discussed below, data users may use authorized data to enable or seek to improve a wide and growing array of consumer financial products and services, including both those competing in longstanding consumer financial markets as well as innovative products and services in new markets.

Although data users may access consumer data from data holders without the use of any intermediaries, the Bureau understands that currently most authorized data access is effected via data aggregators. These entities access and transmit consumer financial data to data users pursuant to consumer authorization. In some cases, they may also retain consumer data. Data aggregators are often ''fourth parties'' that support data users in procuring consumer authorization to access data, and in accessing such data, often support data holders in facilitating authorized third-party access to their

[7] *See, e.g.,* Regulation Z, 12 CFR 1026.5(b)(2) and 1026.7(b) (implementing the Truth in Lending Act with respect to periodic statements for credit cards); Regulation E, 12 CFR 1005.9(b) (implementing the Electronic Fund Transfer Act with respect to periodic statements for traditional bank accounts and other consumer asset accounts); Regulation DD, 12 CFR 1030.6(a) (implementing the Truth in Saving Act with respect to periodic statements for deposit accounts held at depository institutions); Regulation P, 12 CFR 1016.4 and 1016.5 (implementing the Gramm-Leach Bliley Act's privacy provisions). Further, on October 5, 2016, the Bureau issued a final rule amending Regulations E and Z for prepaid accounts. For prepaid accounts, the final rule provides an alternative to providing the periodic statement if a financial institution, among other things, makes an electronic history of a consumer's account transactions available to the consumer that covers at least 12 months preceding the date the consumer electronically accesses that account history. The requirement became effective on April 1, 2019.

[8] *See supra* note 6.

[9] *See, e.g.,* Lauren Perez, *Online Banking Spikes in Pandemic, With 91% of Americans Banking Virtually in July,* DepositAccounts (Aug. 27, 2020), *available at https://www.depositaccounts.com/blog/online-banking-spikes-amid-pandemic.html.*

[10] *See, e.g.,* The Financial Data and Technology Association of North America, *Competition Issues in Data-Driven Consumer and Small Business Financial Services* (Jun. 2020) at 5–6, *available at https://fdata.global/north-america/wp-content/uploads/sites/3/2020/06/FDATA-US-Anticompetition-White-Paper-FINAL.pdf.*

[11] *See* Bureau of Consumer Fin. Prot., *Consumer Protection Principles: Consumer-Authorized Financial Data Sharing and Aggregation* (Oct. 18 2017) (2017 Principles) at 1, *available at https://files.consumerfinance.gov/f/documents/cfpb_consumer-protection-principles_data-aggregation.pdf.*

[12] *See, e.g.,* Bureau of Consumer Fin. Prot., *Consumer-authorized financial data sharing and aggregation: Stakeholder insights that inform the Consumer Protection Principles* (Oct. 18, 2017) (Stakeholder Insights Report) at 4, *available at https://files.consumerfinance.gov/f/documents/cfpb_consumer-protection-principles_data-aggregation_stakeholder-insights.pdf.*

[13] *See, e.g.,* Bureau of Consumer Fin. Prot., *Bureau Symposium: Consumer Access to Financial Records: A summary of the proceedings* (Jul. 2020) (Symposium Summary Report) at 3–7, *available at https://files.consumerfinance.gov/f/documents/cfpb_bureau-symposium-consumer-access-financial-records_report.pdf.*

[14] Consumers may wish to authorize data users to access many more types of data held by many more types of entities. However, the Bureau is concerned in this ANPR only with consumer financial data held by providers of consumer financial products and services.

customers' data. To date, the market for data aggregation services has primarily focused on aggregators offering services to data user clients; [15] however, as discussed in more detail below, this dynamic has been shifting in recent years towards data aggregators performing services for providers in the providers' capacity as data holders, as well.

Aggregators may play a larger role in the U.S. data access system than in certain other countries because of the relatively large number of bank and credit union data holders in the U.S. and the lack of controlling data standards. Given this multitude of consumer data sources, data users have turned to specialized intermediaries to enable access. In this way, such data users do not have to negotiate access with a large number of data holders with a wide range of data accessibility practices (or in the case of screen scraping, develop and maintain a distinct technical solution for every potential data holder), but instead can contract with one or a handful of aggregators that have already developed and maintain access with respect to many data holders.[16]

These three categories—data holder, data user, and data aggregator—are not mutually exclusive in theory or in practice. First, to the extent they collect, generate, or otherwise possess and retain information about their customers in the ordinary course of their business, both data users and data aggregators also may be data holders. For example, a fintech that offers, often on behalf of a depository institution partner, demand deposit accounts to consumers—such fintechs are frequently referred to as ''neobanks''—may act as a data user if it obtains, pursuant to consumer authorization, consumer data about a consumer's accounts at other financial institutions to facilitate consumer-directed movement of funds between accounts. But that same neobank may also act as a data holder when one of its consumers authorizes a different financial institution to access consumer financial data at the neobank in connection with applying for a personal loan from that different financial institution. Second, data users may also function as data aggregators, whether they are providing aggregation services purely ''in-house'' in connection with their own consumer data-supported products and services or if they instead contract with other data users to provide aggregation services.

### *C. Competitive Dynamics and Evolving Modes of Authorized Data Access*

Authorized data access holds the potential to intensify competition and innovation in many, perhaps even most, consumer financial markets. Such intensification can take one of three main forms.

First, authorized data access can enable improvements to existing products. For example, a mortgage lender can improve its products by using authorized data access to verify digitally an applicant's account assets. The consumer is spared the burden of assembling these data and may be able to proceed faster as a result. Additionally, the lender may have greater assurance of data accuracy and reliability.

Second, authorized data access can foster competition for existing products, thereby broadening access, lowering prices, or both. For example, lenders may be able to use consumer data—like deposit account transaction history—to underwrite consumers who might otherwise face more costly credit terms, assuming that they can obtain credit at all. Or a lender might use near real-time account data to provide a consumer with short-term credit options that compete with checking account overdraft functionality and pricing.

Finally, authorized data access can be used to offer new types of products and services. For example, a company may offer an automated personalized financial advice service that consolidates consumer data from across a consumer's various transaction accounts at multiple providers, a service which had only imperfect analogs prior to its development. Of course, many products and services that rely on authorized data access may encompass several or all of the three competitive dynamics.

One notable aspect of the competition fostered by consumer-authorized data access is that in many cases data users may compete for customers with the data holders from which they have obtained data. Sometimes this competition might be direct, as in the example above of a just-in-time lender competing with a bank offering overdraft coverage. Sometimes it might be less direct, as may occur if a bank's customers use a personal financial management application that recommends that some of those consumers shift their business to a competing provider.[17] These competitive dynamics mean that data holders may have an incentive to restrict access by certain data users or to seek greater clarity about the purposes to which particular accessing parties may put accessed data. By the same token, data users may have incentives not to be forthcoming about such purposes.

Of course, these competitive incentives may be outweighed by countervailing incentives. Data holders may have an incentive to provide consumers with the means to enable more secure and controlled authorized data access. Thus, data holders may face consumer demand to allow authorized data access. They also may find that working collaboratively with data users and data aggregators results in a form of authorized data access that is more secure or provides other benefits to data holders.[18] Similarly, data users and aggregators have incentives to develop secure and reliable means of authorized data access, which may necessitate collaboration with data holders. For example, they may find that screen scraping is technically unreliable or challenging to maintain, compared to modes of authentication and access that require collaboration with data holders.

These competitive dynamics appear to be reflected in evolving modes of authorized data access. To date, most consumer-authorized third parties have accessed consumer data through data holders' digital banking portal using

[15] As recently noted by the OCC, under such arrangements, ''[a] data aggregator typically acts at the request of and on behalf of a bank's customer without the bank's involvement in the arrangement.'' Office of the Comptroller of the Currency, *OCC Bulletin 2020–10: Third-Party Relationships: Frequently Asked Questions to Supplement OCC Bulletin 2013–29* (Mar. 5, 2020) (OCC Bulletin), *available at https://www.occ.gov/news-issuances/bulletins/2020/bulletin-2020-10.html.* This has been driven to a significant extent by the primary technical means by which consumer-authorized data access has and continues to be effected; *i.e.,* credential-based access and screen scraping. ''Credential-based access'' refers to authorized access that uses the consumer's user ID and password or like credentials to log into the data holder's online financial account management portal, generally on an automated basis. ''Screen scraping'' refers to authorized access that uses proprietary software to convert consumer data presented in the provider's online financial account management portal into standardized machine-readable data, again generally on an automated basis. Credential-based access and screen scraping often are described *collectively* as ''screen scraping.'' But while the two practices typically are linked, they are technically and conceptually distinct.

[16] *See* note 15 (defining ''screen scraping'').

[17] The intensity of competition may be further affected by the fact that data users may be data holders, as well.

[18] Regulatory requirements may also impact incentives. The OCC notes that even when ''a bank is not receiving a direct service from a data aggregator and if there is no business arrangement, banks still have risk from sharing customer-permissioned data with a data aggregator. Bank management should perform due diligence to evaluate the business experience and reputation of the data aggregator to gain assurance that the data aggregator maintains controls to safeguard sensitive customer data.'' OCC Bulletin.

digital banking credentials the consumer shared with third parties. Such access generally requires no formal agreement between data holder and data user or data aggregator.[19] More recently, however, the authorized data access ecosystem has seen the emergence of formal, bilateral access agreements between large aggregators and large data holders, which seek generally to move authorized access away from credential-based access and screen scraping towards tokenized access, commonly through application programming interfaces, or ''APIs.'' (When access is tokenized, a third party seeking access uses unique credentials that other parties cannot use; tokenized access is generally considered more secure than access that depends on using the consumer's own credentials.) In addition, a broad range of ecosystem participants have started to come together to develop standards for data sharing through APIs. Networks or consortia of data holders have begun to acquire or partner with data aggregators to offer access solutions to data holders as well as to their traditional data user clients. These moves may herald a broader move towards multilateral standards for data access, much as network standards function in two-sided payment card markets.

It is not clear, however, how these evolving access practices and standards will affect competition or innovation in markets in which participants use authorized data. It is also unclear how effectively they will address other consumer protection risks that may arise with authorized access, including risks relating to the methods by which consumer data is accessed and the purposes for which data users may use authorized data. Panelists at the Bureau's February 2020 ''Symposium on Consumer Access to Financial Records and Section 1033 of the Dodd-Frank Act'' (Symposium) identified significant progress on some of these issues and uncertainties by participants within the authorized data access ecosystem. However, they also made clear that participants have sometimes struggled to resolve issues in a manner satisfactory to all impacted parties, and according to some participants, in a manner commensurate with the access rights described in section 1033.[20] Participants expressed a range of perspectives on issues relating to, among others, data security, consumer privacy, data minimization,[21] consumer control and transparent use of consumer data, data accuracy, accountability and liability for errors and other problematic transactions, and the mechanisms by which consumer-permissioned parties access records.[22] For example, Symposium panelists discussed whether and how data holders might respect rights described in section 1033 and also refuse access to an authorized third party for security reasons, such as alleged fraud or deficient security practices.[23] Panelists similarly discussed consumer privacy risks arising from existing modes of authorized data access. Panelists proposed and discussed a variety of approaches and actions the Bureau might consider to address these kinds of issues.[24]

### *D. Other Laws*

There are other Federal laws with potential implications for consumer access to financial records pursuant to section 1033, particularly the authorized data access ecosystem.[25] Although Symposium participants did not always agree on whether or how these laws apply in the area of authorized data access, there was general consensus that the Bureau might need to resolve potential stakeholder uncertainty with respect to application of the following laws and their implementing regulations.

#### The Gramm-Leach-Bliley Act

The Gramm-Leach-Bliley Act (GLBA) and the Bureau's implementing regulation, Regulation P, require financial institutions to provide their customers with notices concerning their privacy policies and practices, among other things. They also place certain limitations on the disclosure of nonpublic personal information to nonaffiliated third parties, and on the redisclosure and reuse of such information.

#### The Fair Credit Reporting Act

The Fair Credit Reporting Act (FCRA) and its implementing regulation, Regulation V, govern the collection, assembly, and use of consumer report information and provide the framework for the credit reporting system in the United States. They also promote the accuracy, fairness, and privacy of information in the files of consumer reporting agencies.

#### The Electronic Fund Transfer Act

The Electronic Fund Transfer Act (EFTA) and its implementing regulation, Regulation E, establish a basic framework of the rights, liabilities, and responsibilities of participants in the electronic fund and remittance transfer systems. Among other requirements, EFTA and Regulation E prescribe requirements applicable to electronic fund transfers, including disclosures, error resolution, and rules related to unauthorized electronic fund transfers.

## IV. Bureau Actions to Date

The Bureau has not promulgated any regulations to implement section 1033. The Bureau has, however, taken several actions in the interest of consumer access to financial records. The Bureau's approach has focused on identifying and promoting consumer interests in, among other areas, access, control, security, and privacy, while allowing the market to develop without direct regulatory intervention.

### *A. The 2016 RFI*

In 2016, the Bureau published in the **Federal Register** a Request for Information Regarding Consumer Access to Financial Information (2016 RFI) on topics including authorized data access.[26] The 2016 RFI described the authorized data access ecosystem as it existed then, as well as certain risks and issues related to that ecosystem.[27] The questions in the 2016 RFI focused on ''current market practices'' and on ''how [commenters] believe market practices may or should change over time.'' [28] In response, the Bureau received comments from a broad range of stakeholders, including large and small data holders, their trade associations, data aggregators, account data users, individual consumers, and consumer advocates. The Bureau collected further

[19] *See* note 15. Such access can involve some degree of collaboration between data holders and third parties which are seeking access. For example, the Bureau understands that many large banks and aggregators engage in ''whitelisting.'' In this practice, the aggregator identifies its traffic to the bank, which allows the bank to permit the aggregator to access consumer data via credential-based access and screen scraping. Also *see, e.g.,* John Pitts, *OCC did its part to secure customer data. Now it's CFPB's turn.* (Mar. 16, 2020), American Banker, *available at https://www.americanbanker.com/opinion/occ-did-its-part-to-secure-customer-data-now-its-cfpbs-turn.*

[20] The Symposium is described further below at Section IV.C. *See also* Symposium Summary Report.

[21] The principle of data minimization invokes the general notion that data users only request, and data holders only share, consumer data necessary to perform the service described to and authorized by the consumer. *See* Symposium Summary Report at 6.

[22] *See, e.g.,* Symposium Summary Report at 3–9.

[23] *See id.* at 8.

[24] *See id.* at 4 & 8.

[25] *See id.* at 6–9.

[26] *See* 81 FR 83806 (Nov. 22, 2016).

[27] *See* 81 FR 83808–83809 (Nov. 22, 2016).

[28] *See* 81 FR 83810 (Nov. 22, 2016).

insights, including from stakeholders, through meetings and oral discussions.

*B. The Bureau's 2017 Stakeholder Insights Report and Consumer Protection Principles*

In October 2017, the Bureau published two documents about consumer-authorized data access. The first document, entitled ''Consumer-authorized financial data sharing and aggregation: Stakeholder insights that inform the Consumer Protection Principles'' (Stakeholder Insights Report), summarized comments received in response to the 2016 RFI as well as insights gathered in meetings with market stakeholders.[29] The second document, ''Consumer Protection Principles: Consumer-Authorized Financial Data Sharing and Aggregation'' (2017 Principles), expressed ''the Bureau's vision for . . . a robust, safe, and workable data aggregation market that gives consumers protection, usefulness, and value.'' [30] The 2017 Principles covered nine topics related to consumer-authorized access: Access; data scope and usability; control and informed consent; authorizing payments; security; access transparency; accuracy; ability to dispute and resolve unauthorized access; and efficient and effective accountability mechanisms.[31]

*C. The Bureau's 2020 Symposium*

Following release of the 2017 Principles, the Bureau continued to monitor developments concerning consumer-authorized data access. To that end, the Bureau held the Symposium in February 2020.[32] Panelists at the Symposium represented large and small banks, data aggregators and their trade groups, fintechs, consumer advocates, and other market observers and researchers, and each made a written submission to the Bureau in advance of the Symposium.[33]

As a follow-up to the Symposium, the Bureau published three documents: first, a report summarizing Symposium proceedings; [34] second, a blog post that offered consumers ''key information about how data sharing works, what [consumers] should consider before sharing [their] data, and some tips on how [consumers] can best protect [their] data and accounts'' [35]; and third, an announcement of the Bureau's intention to publish this ANPR.[36]

*D. Stakeholder Concerns Regarding the Consumer-Authorized Data Access Ecosystem*

The Bureau believes that ensuring consumer access to financial records, consistent with other consumer protections, is important to achieving the Bureau's statutory purpose and objectives. Specifically, the Bureau is charged with ''ensuring that consumers have access to markets for consumer financial products and services, and that [such markets] are fair, transparent, and competitive.'' [37] Congress further instructed the Bureau to exercise its authorities so that ''markets for consumer financial products and services operate transparently and efficiently to facilitate access and innovation.'' [38] The Bureau believes that the consumer access to financial records provided in section 1033 is an important component of the overall consumer protection framework established by the Dodd-Frank Act.

Through these information gathering opportunities, stakeholders have raised a number of concerns about the current state and direction of the consumer-authorized data access ecosystem. First, some stakeholders contend that not all consumers are able to authorize access to consumer data in a manner commensurate with the access rights described in section 1033. For example, stakeholders report that certain data fields—including, potentially, ''costs, charges and usage data'' [39]—are sometimes withheld.[40] Similarly, some stakeholders assert that data holders may be defining permitted ''use cases'' in ways that conflict with the access rights described in section 1033.[41] Although authorized data access ecosystem participants have moved towards data sharing standards that might help to resolve some of these issues, some stakeholders assert that those efforts will not, as a matter of course, fully effectuate the access rights described in section 1033.[42]

Second, stakeholder positions suggest that issues relating to access rights may not be fully resolvable without accompanying resolution of a series of interconnected issues, such as the security of authorized access to consumer data or how consumers should most appropriately exercise control over authorized access.[43] Here, too, informal efforts by ecosystem participants have effected some improvements over time, but some stakeholders have asserted that Bureau regulatory involvement may be required to resolve some of these questions.[44]

Third, stakeholders have raised questions about the application of other consumer financial laws and regulations to consumer-authorized data access.[45] For example, some Symposium panelists asserted that the law is unclear as to: (1) Which parties are liable for unauthorized access under the Electronic Fund Transfer Act and Regulation E, as well as under other provisions of law; (2) if and how the Fair Credit and Reporting Act applies to consumer data in the context of authorized data access; and (3) the manner in which the Gramm-Leach-Bliley Act and its implementing regulations regarding privacy and security apply to data aggregators.[46] Some market stakeholders have alleged

[29] *See* Stakeholder Insights Report.

[30] 2017 Principles at 1.

[31] *See* 2017 Principles at 3–5. In publishing the 2017 Principles, the Bureau noted that the 2017 Principles ''do not themselves establish binding requirements or obligations relevant to the Bureau's exercise of its rulemaking, supervisory, or enforcement authority.'' *Id.* at 2. The Bureau further observed ''that many consumer protections apply to this market under existing statutes and regulations. These Principles are not intended to alter, interpret, or otherwise provide guidance on—although they may accord with—the scope of those existing protections.'' *Id.*

[32] *See* Bureau of Consumer Fin. Prot., *CFPB to Host Symposium on February 26* (Feb. 20, 2020), *available at https://www.consumerfinance.gov/about-us/newsroom/cfpb-hosts-symposium-february-2020/.* This document also contains a list of Symposium panelists.

[33] For panelists' written submissions, see Bureau of Consumer Fin. Prot., *CFPB Symposium: Consumer Access to Financial Records, available at https://www.consumerfinance.gov/about-us/events/archive-past-events/cfpb-symposium-consumer-access-financial-records/.* For a recording of the Symposium, see Bureau of Consumer Fin. Prot., *CFPB Symposium: Consumer Access to Financial Records* (Feb. 26, 2020), *available at https://www.youtube.com/watch?v=_bQsdQ0462o.*

[34] *See* Symposium Summary Report.

[35] Max Bentovim, *What to consider when sharing your financial data* (Jul. 24, 2020), *available at https://www.consumerfinance.gov/about-us/blog/what-to-consider-when-sharing-your-financial-data/.*

[36] Bureau of Consumer Fin. Prot., *CFPB Announces Plan to Issue ANPR on Consumer-Authorized Access to Financial Data* (Jul. 24, 2020), *available at https://www.consumerfinance.gov/about-us/newsroom/cfpb-anpr-consumer-authorized-access-financial-data/.*

[37] 12 U.S.C. 5511(a).

[38] 12 U.S.C. 5511(b)(5).

[39] 12 U.S.C. 5533(a).

[40] *See, e.g.,* Symposium Summary Report at 3.

[41] *See id.* at 6.

[42] *See, e.g.,* Symposium Summary Report at 4, 9; John Pitts, Panelist Written Submission to the Bureau's 2020 Symposium at 3–4, *available at https://files.consumerfinance.gov/f/documents/cfpb_pitts-statement_symposium-consumer-access-financial-records.pdf;* Dan Murphy, Panelist Written Submission to the Bureau's 2020 Symposium at 4, *available at https://files.consumerfinance.gov/f/documents/cfpb_murphy-statement_symposium-consumer-access-financial-records.pdf.*

[43] *See id.* at 6–7.

[44] *See, e.g.,* Symposium Summary Report at 3, 5, 8–9.

[45] *See id.* at 7–8.

[46] *See id.* While the Bureau has certain authorities with regard to the Gramm-Leach-Bliley's privacy provisions, the Bureau has no supervisory, enforcement, or rulemaking authority with regard to the Act's data security provision, 15 U.S.C. 6801, or its implementing regulations.

that uncertainty, ambiguities, or irresolution relating to these kinds of questions may be impeding consumer data access.

## V. Topics on Which the Bureau Seeks Comment

In light of the authorized data access ecosystem's evolution since section 1033 was enacted, the Bureau has determined to commence a process that ultimately could lead to regulations that clarify the Bureau's compliance expectations and help to establish market practices to ensure that consumers have access to consumer financial data. The Bureau is issuing this ANPR to solicit comments and information that will assist the Bureau in developing proposed regulations under section 1033.

The Bureau seeks comment from interested parties—including consumers, consumer advocacy groups, industry participants, and other members of the public—on any (or all) of a number of questions relating to potential rulemaking in connection with section 1033.[47] These comments, together with other outreach and analysis, will help the Bureau to determine how it might formulate potential regulatory interventions to better effectuate consumer access to financial records as described in section 1033. Consumers have an interest in being able to secure data access as provided in section 1033 effectively and in a manner that enables ongoing and efficient consumer-friendly market innovation. In considering potential interventions, the Bureau will be mindful of avoiding undue or unnecessary burden on industry, particularly in light of self-regulatory standard-setting work that a broad group of market participants has conducted and continues to conduct and other initiatives that may help to foster a safe consumer-authorized data sharing ecosystem.

The Bureau has grouped questions into nine categories: Costs and benefits of consumer data access; competitive incentives; standard-setting; access scope; consumer control and privacy; other legal requirements; data security; data accuracy; and other information. For convenience, the questions (and this introduction) continue to use the defined terms from section II above, except when specifically noted.[48] Questions should be understood as directed to practices and outcomes in the United States (except where specifically noted), but commenters may reference non-U.S. information if they believe that is helpful to illuminate or explain the relevance of their comment to potential regulatory action in the U.S. The Bureau requests that, wherever possible, commenters support their responses with information about market practices (both in the U.S. and elsewhere) and/or other empirical data and analysis. The Bureau further encourages commenters to include in their responses any relevant information regarding the potential costs and benefits of consumer data access to consumers and covered persons. Such information may be qualitative, quantitative, or both.

### *A. Benefits and Costs of Consumer Data Access*

1. What are the benefits to consumers from authorized data access? What are the benefits to consumers from direct access? What specific regulatory steps by the Bureau would enhance those impacts and how would they do so?

2. How does authorized data access facilitate competition and innovation in the provision of consumer financial services? What are the impacts of direct access on such competition and innovation? What specific regulatory steps by the Bureau would enhance that impact and how would they do so?

3. What costs to consumers flow from authorized data access? What costs result from direct access? What specific regulatory steps by the Bureau would reduce any such impacts and how would they do so?

4. Are there ways in which authorized data access has limited (or may in the future limit) competition and innovation resulting in harms to consumers? Are there ways in which the development of the ecosystem for authorized data access has caused (or may in the future cause) consumer harm? Are there ways in which direct access has had or may have such impacts? What specific regulatory steps by the Bureau would reduce any such impacts and how would they do so?

5. What should the Bureau learn about the costs and benefits of authorized data access from regulatory experience in State jurisdictions or in jurisdictions outside the United States? What should it learn from such sources with respect to direct access? How should this inform the Bureau's consideration of specific regulatory steps that it might take to implement section 1033?

6. How do the costs and benefits to data holders of authorized data access vary across different covered persons, including community banks and credit unions, and how should these variances inform the Bureau's actions with respect to implementing section 1033? How do the costs and benefits to data holders of direct access vary across different covered persons and how should these variances inform the Bureau's actions with respect to implementing section 1033?

### *B. Competitive Incentives and Authorized Data Access*

7. What reasons are there to believe that competitive incentives will facilitate or undermine authorized data access? What responsive actions should the Bureau take and why?

8. To what extent should the Bureau expect the overlap across data holders, data aggregators, and data users to impact competition and innovation favorably or unfavorably? How should the Bureau take account of such overlap in implementing section 1033?

9. Should the Bureau expect access-related agreements between data holders and other participants in the authorized data access ecosystem to impact competition and innovation favorably or unfavorably? How should the Bureau take account of such impacts in implementing section 1033?

10. Should the Bureau expect data access ecosystem participants to develop and adopt multilateral rules applicable to authorized data access? How should the Bureau expect any such rules to impact competition and innovation and how should the Bureau take account of any such impacts in implementing section 1033?

11. Do customers of smaller data holders receive the same benefits from competition and innovation enabled by authorized data access as do customers of larger data holders? If not, why is that the case? How should any variance inform the Bureau's actions with respect to the implementation of section 1033?

12. Do consumers' individual decisions to authorize data access entail significant negative or positive externalities on other consumers, data holders, data aggregators or data users?[49] If so, what are those externalities and what impact do they have on competition, innovation, and the benefits, costs, and risks faced by consumers? How should such externalities inform the Bureau's actions with respect to the implementation of section 1033?

[47] When responding to a question, please note the question number at the top of the response.

[48] As noted, section II's defined terms are for purposes of this ANPR and should not be understood to imply any legal interpretation, guidance, or policy judgment by the Bureau.

[49] An externality is a direct effect on the well-being of a consumer from the actions of other consumers.

*C. Standard-Setting*

13. To what extent should the Bureau expect broad-based standard-setting work by authorized data access ecosystem participants to enable and facilitate authorized data access? What favorable or unfavorable impacts to competition and innovation should the Bureau anticipate from such work? How should implementation of section 1033 access rights take account of such broad-based standard-setting by system participants?

14. Should the Bureau seek to encourage broad-based standard setting work by authorized data access ecosystem participants? If so, how should it do so?

15. What steps should the Bureau take to prescribe standards applicable to covered persons to promote the development and use of standardized formats for information that can be obtained by means of section 1033 data access rights? What form should such standards take? Should these standards differ depending on whether data is accessed directly by the consumer or through an authorized entity?

16. What steps, if any, should the Bureau take to promote particular mechanisms of authorized data access? If some mechanisms are more beneficial (or as beneficial but at lower cost to consumers), what are the obstacles to further adoption of such mechanisms, and what steps should the Bureau take to mitigate such obstacles?

*D. Access Scope*

17. The Dodd-Frank Act defines ''consumer'' as ''an individual or an agent, trustee, or representative acting on behalf of an individual.'' [50] Who should be considered ''an agent, trustee, or representative'' of an individual consumer for purposes of implementing section 1033 access rights? Should any exclusions apply? If so, what exclusions and why?

18. Are there types of data holders that should not be subject to the access rights in section 1033? If so, why? Are there any unique issues for any types of data holders that the Bureau should consider in implementing the access rights provided in section 1033, and if so, how should the Bureau account for such issues?

19. How might the Bureau protect against the exposure of confidential commercial information, information that must be kept confidential by law, or information collected for the purpose of preventing fraud or other illegal conduct while at the same time protecting the access rights provided in section 1033? Should the Bureau's approach differ depending on whether data is accessed by authorized third parties or directly?

20. Apart from any restrictions identified in response to the preceding question, are there data elements to which section 1033 access rights should not apply? If so, which elements and for what reasons? Should any restrictions on access to data elements differ depending on whether data is accessed by authorized third parties or directly?

21. What information should be considered information that cannot be retrieved in the ordinary course of business? How should a Bureau rule seeking to implement the access rights provided in section 1033 account for such information? Should any such accounting differ depending on whether data is accessed by authorized third parties or directly by consumers?

22. Aside from any restrictions identified in response to earlier questions in this section, should any other restrictions on data access be permitted? For example, should a data holder be permitted to restrict authorized access to consumer data created during, or relating to, certain time periods? Should a data holder be permitted to restrict the frequency with which data can be accessed? If such restrictions should be permitted, how and why should they be permitted? Should any of these restrictions differ depending on whether data is accessed by authorized third parties or directly? Should any of these restrictions differ based on the purpose for which data is accessed?

23. Should the Bureau propose to address the operational reliability of authorized data access, and if so, how and why? Should the Bureau consider any different ways to address the operational reliability of direct access, and if so, how and why?

24. How should the Bureau ensure that any implementation of section 1033 access rights does not promote or require the use of particular access (or other) technologies?

*E. Consumer Control and Privacy*

With respect to questions in this section, the Bureau encourages commenters to identify, where applicable, the extent to which their responses may differ between primary and secondary uses of authorized data, where primary use reflects the primary purpose for which a consumer, acting pursuant to reasonable expectations, would choose to authorize access to consumer data, and secondary use reflects all other purposes for which authorized data may be used. With respect to secondary uses of authorized data, the Bureau encourages commenters to consider and explain whether their responses differ depending on whether the consumer data remain identifiably associated with the authorizing individual as well as if and how such data may be disassociated. The Bureau also encouragers commenters responding to this section to identify, where applicable, the extent to which their responses may differ between uses of authorized data for the purposes of effecting payments on behalf of consumers and other uses.

25. To what extent does direct access to consumer data pursuant to section 1033 raise any privacy concerns that should be considered by the Bureau?

26. In what respects do consumers understand the actual movement, use, storage, and persistence of authorized data? To what extent do such movement, use, storage, and persistence of authorized data align with reasonable consumer expectations or preferences, including privacy expectations or preferences? What should the Bureau do, if anything, to improve consumer understanding or to effect closer alignment between practice and consumer expectations or preferences? Should the Bureau consider placing any restrictions on the movement, use, storage and persistence of authorized data, and if so, what restrictions and why?

27. To what extent are consumer understanding and expectations informed by the disclosed terms and conditions of authorized data access or other disclosures? What should the Bureau do, if anything, to improve consumer understanding of disclosed terms and conditions or to improve alignment between such terms and conditions and consumer expectations and/or preferences? Should the Bureau consider requiring any specific disclosures in connection with authorized access? If so, please describe the form, content, and other features of such disclosures.

28. What tools can market participants provide consumers to align consumer expectations and preferences with the actual movement, use, storage, and persistence of authorized data, and what steps, if any, should the Bureau take to improve the effectiveness of such tools?

29. What steps, if any, should the Bureau take to address authorized entities combining authorized data with data from other sources? What are the costs, benefits, and risks to consumers from such combining, and how are

[50] *See* 12 U.S.C. 5481(4).

those costs, benefits, and risks disclosed to consumers? Should the Bureau address such disclosure, and if so, how and why?

30. Should the Bureau propose to address any of the following, and if so, how and why: (i) Data aggregators providing authorized data to entities other than in connection with the primary purpose or purposes for which the consumer authorized data access; or (ii) data aggregators retaining consumer data other than in connection with the primary purpose or purposes for which the consumer authorized access?

31. Should the Bureau propose to address any of the following, and if so, how and why: (i) Data users providing authorized data to entities other than in connection with the primary purpose or purposes for which the consumer authorized data access; or (ii) data users retaining consumer data other than in connection with the primary purpose or purposes for which the consumer authorized data access?

32. How, if at all, should a Bureau rule implementing section 1033 seek to limit authorized access to the minimum amount of consumer data necessary to effect the purpose of authorizing access as reasonably understood by the authorizing consumer? What are the benefits and risks to consumers, to competition, and to innovation in consumer financial services of such steps? What are the benefits and risks to consumers, to competition, and to innovation if such steps are not taken?

*F. Legal Requirements Other Than Section 1033*

Some questions in this section refer to ''regulatory uncertainty.'' As used in this section, that term refers to potential stakeholder uncertainty about provisions of law *other than* section 1033, including potential uncertainty that may arise because of the potential interaction or overlap between these other provisions and section 1033.

33. How, if at all, are data holders subject to laws or regulations (whether Federal, State, or foreign) that may be in tension with any proposed obligation to make consumer data accessible per section 1033? How, if at all, should the Bureau address such potential tension?

34. To the extent not addressed in your response to the preceding question, is regulatory uncertainty impeding consumer data access, undermining competition or innovation in the provision of consumer financial services, or otherwise impacting benefits or contributing to risks that consumers might derive from authorized access? If so, in what ways? Which legal provisions are the source of any such uncertainty, and what steps, if any, should the Bureau take to resolve any such uncertainty to the benefit of consumers?

35. In what ways, if any, is regulatory uncertainty around consumer data access imposing costs on consumers, data holders, data users, or data aggregators? Which legal provisions are the source of any such costs, and what steps, if any, should the Bureau take to address any such uncertainty or to mitigate any such costs?

36. What foreign, Federal, or State laws or regulations impose requirements or grant rights that are substantively similar to section 1033? How should the Bureau take into consideration these substantively similar requirements in implementing section 1033? How should the Bureau take account of the conditions under which covered persons do business in the United States and in other countries?

37. To the extent not already addressed above, what actions, if any, should the Bureau take to modify or clarify existing rules that have (or could have) application to consumer data access? What goals would such modification or clarification serve? What costs would they impose or reduce?

*G. Data Security*

38. How effectively does existing law that bears on data security mitigate data security risks associated with data access and, in particular, authorized data access? What steps, if any, should the Bureau take to improve the effectiveness of existing laws that bear on data security in the context of data access?

39. Do data holders, data users, and data aggregators have adequate market incentives to ensure that consumer data is secure? To what extent have they acted on the basis of any such incentives to this point or should be expected to so act going forward?

40. If the Bureau proposes a rule to protect the access rights described in section 1033, how should that rule take appropriate account of data security concerns?

*H. Data Accuracy*

41. To what extent are consumers harmed, or the benefits to consumers of data access endangered or otherwise restricted, by the risk of inaccurate consumer data being provided to consumers or data users? If such harms or restrictions arise, does their extent vary by the type of use to which data is put? If so, why is that the case?

42. Are there risks that some data holders may not have adequate market incentives or legal requirements to ensure that the consumer data they provide to consumers or authorized third parties is accurate and that they correct inaccuracies when they occur?

43. What risks of data inaccuracy are introduced as a result of the data access ecosystem? Do data users and data aggregators have adequate market incentives or legal requirements to ensure that the consumer data they use is accurate or sufficiently accurate for the purposes to which it is put? If your answer varies by the type of use to which consumer data is put, please explain why that is the case. How can data users and data aggregators act on such incentives, to the extent that they exist? To what extent have they so acted to this point or should be expected to so act going forward?

44. What steps, if any, should the Bureau take to address the accuracy of consumer data that as a result of authorized data access is in the control or possession of data aggregators or data users?

45. How effectively does existing law mitigate the risks that inaccurate consumer data is associated with direct access and authorized data access?

*I. Other Information*

46. Is there any other information that would help inform the Bureau as it considers whether to initiate a rulemaking and how best to implement the consumer data access rights provided by section 1033?

## VI. Signing Authority

The Director of the Bureau, having reviewed and approved this document, is delegating the authority to electronically sign this document to Laura Galban, a Bureau Federal Register Liaison, for purposes of publication in the **Federal Register**.

Dated: October 22, 2020.

**Laura Galban,**

*Federal Register Liaison, Bureau of Consumer Financial Protection.*

[FR Doc. 2020–23723 Filed 11–5–20; 8:45 am]

**BILLING CODE 4810–AM–P**

# Exhibit C

117 Congress
*2d Session*

COMMITTEE PRINT REPORT

CP 117–8
PART I

# INVESTIGATION OF COMPETITION IN DIGITAL MARKETS

## MAJORITY STAFF REPORT AND RECOMMENDATIONS

SUBCOMMITTEE ON ANTITRUST,
COMMERCIAL, AND ADMINISTRATIVE LAW
OF THE COMMITTEE ON THE JUDICIARY OF
THE HOUSE OF REPRESENTATIVES

**PART I**

JERROLD NADLER, CHAIR, COMMITTEE ON THE JUDICIARY

DAVID N. CICILLINE, CHAIR, SUBCOMMITTEE ON ANTITRUST,
COMMERCIAL, AND ADMINISTRATIVE LAW

ORIGINALLY RELEASED OCTOBER 2020
ADOPTED BY COMMITTEE APRIL 2021
PUBLISHED JULY 2022

The implementation cost of requiring interoperability by dominant firms would be relatively low. Unlike interconnecting in traditional communications markets, there is little direct cost associated with interoperating with dominant platforms.[2446]

Finally, interoperability is an important complement, not substitute, to vigorous antitrust enforcement. As discussed in this Report, Facebook has tipped the social network toward a monopoly, and due to its strong network effects, does not face competitive pressure. On its own, interoperability is unlikely to fully restore competition in the social networking market due to the lack of meaningful competition in the market today. On the other hand, in the absence of procompetitive policies like interoperability, it is also possible that enforcement alone may provide incomplete relief due to future market tipping.[2447]

(b) *Data Portability*. Data portability is also a remedy for high costs associated with leaving a dominant platform. These costs present another barrier to entry for competitors and a barrier to exit for consumers. Dominant platforms can maintain market power in part because consumers experience significant frictions when moving to a new product.[2448] Users contribute data to a platform, for example, but can find it hard to migrate that data to a rival platform.[2449] The difficulty of switching tends to keep users on incumbent platforms.[2450] Providing consumers and businesses with tools to easily port or rebuild their social graph, profile, or other relevant data on a competing platform would help address these concerns.[2451] Although complementary to interoperability, data portability alone would not fully address concerns related to network effects since consumers would still need to recreate their networks on a new platform and would not be able to communicate with their network on the incumbent platform.[2452]

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[2446] *Id*. at 15 ("Unlike the familiar AT&T example, there would be no cost to interconnection in the digital platform context. The standard is simply a way to present and transfer information that is already being presented and transferred. No wire needs to be connected to achieve it, nor do machines need to be co-located, or special workers employed. Transferring digital files has almost zero cost, but regardless of that cost, Facebook would be transferring those files to serve its users in any case. Facebook might need to pay some costs to redesign the format in which it transfers text and images, but if it has been found liable for monopolization by a court, it is expected that a remedy will have costs. The real cost of ongoing interoperability to Facebook.com is the possibility that it loses customers once the barriers to entry fall. But that risk is what every firm faces in a competitive market and represents a benefit to consumers.").

[2447] *Id*. at 10 ("A divestiture may reduce the existing market power of the dominant network but not eliminate the market power due to network effects that was achieved through anticompetitive conduct. And, alone, divestiture may not prevent future tipping. Thus, on their own, they risk being insufficient to fully restore the lost competition.").

[2448] *See* JOSHUA GANS, THE HAMILTON PROJECT, ENHANCING COMPETITION WITH DATA AND IDENTITY PORTABILITY 5 (2018), *http://www.hamiltonproject.org/assets/files/Gans__20180611.pdf*.

[2449] *See id*.

[2450] *See* Josh Constine, *Friend Portability Is the Must-Have Facebook Regulation*, TECHCRUNCH (May 12, 2019), *https://technologycrunch.com/2019/05/12/friends-wherever*; Chris Dixon, *The Interoperability of Social Networks*, BUS. INSIDER (Nov. 10, 2010), *https://www.businessinsider.com/the-interoperability-of-social-networks-2011-2*; Data and Privacy Hearing at 134 (statement of Dina Srinivasan, Fellow, Yale Thurman Arnold Project).

[2451] Submission from Charlotte Slaiman, Competition Policy Dir., Pub. Knowledge, to H. Comm. on the Judiciary (May 14, 2020) (on file with Comm.) [hereinafter Slaiman Submission]; *id.*, app. I, at 3–4 (statement of Gene Kimmelman, Senior Advisor, Pub. Knowledge).

[2452] *Competition in Digital Technology Markets: Examining Self-Preferencing by Digital Platforms: Hearing Before the Subcomm. on Antitrust, Competition Policy and Consumer Rights of the S. Comm. on the Judiciary*, 116th Cong. 21 (2020) (statement of Sally Hubbard, Dir. of Enf't Strategy, Open Mkts. Inst.) (on file with Comm.). Last year, Senators Mark R. Warner (D–VA), Josh Hawley (R–MO), and Richard Blumenthal (D–CT) introduced S.2658, the "Augmenting

Continued

# Exhibit D

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PUC 1-11

Request:

Referring to Schedule SAB/BLJ-1, page 13, please provide a description of each of the investments upon which the capex costs were calculated in the CapEx column for each year, including (a) a breakdown of intangible software costs by component, (b) the functionality and purpose of each investment, (c) the date when the Company assumes the software component will be in service, and (d) the estimated date it will be performing the functionality.

Response:

Please see Attachment PUC 1-11 for a breakdown of the intangible software costs by component for each year on Schedule SAB/BLJ-1, Page 13. Please see Attachment H to the AMF Business Case, beginning on Page 25, for detailed descriptions for each of the components on Attachment PUC 1-11, including the functionality and purpose of each investment along with the estimated functionality dates. As indicated in the Company's response to PUC 1-19 and in the descriptions in Attachment H, the majority of the intangible software components are anticipated to be deployed and implemented in AMF Year 4. On Attachment PUC 1-11, the year in which the costs are reflected is the respective year that the Company anticipates the component will be placed in service and performing its functionality.

**The Narragansett Electric Company**
**d/b/a Rhode Island Energy**
**AMF - Intangible Software Costs**

| | | | | | DEPLOYMENT | | | | POST-DEPLOYMENT / OPERATIONS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | AMF Recovery Year 1 | AMF Recovery Year 2 | AMF Recovery Year 3 | AMF Recovery Year 4 | AMF Recovery Year 5 | AMF Recovery Year 6 | AMF Recovery Year 7 |
| Cost Category 1 | Cost Category 3 | Cost Category 4 | Full Description | FERC Account | October to September 2023 | October to September 2024 | October to September 2025 | October to September 2026 | October to September 2027 | October to September 2028 | October to September 2029 |
| 04. Program | PPL Labor | PPL Labor | PPL PMO Oversight (IT) - AMF Implementation PMO | 303 | $731,567 | $954,136.13 | $898,860.71 | $215,492.11 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Network Model Analytics | NMA/AGA | Network Model Analytics / AGA | 303 | 0 | 0 | 0 | $391,538.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Data Lake | Data Lake | Data Lake | 303 | 0 | 0 | 0 | $1,321,842.80 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Advanced Analytics | Adv.Analytics | Advanced Analytics | 303 | 0 | 0 | 0 | $845,259.62 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Data Lake | Data Lake | Data Lake - SI VENDOR | 303 | 0 | 0 | 0 | $1,218,090.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | CSS | CSS | Customer Service Software | 303 | 0 | 0 | 0 | $1,682,263.92 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Deployment Exchange Management (Electric) | Deply. xchg. Mgt. | Deployment Exchange Management | 303 | 0 | 0 | 0 | $334,411.30 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Deployment Exchange Management (Electric) | Deply. xchg. Mgt. | Deployment Work Management - SI Vendor | 303 | 0 | 0 | 0 | $886,855.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Headend | Headend | Software as a Service (SaaS) Vendor - Headend (Implement) | 303 | 0 | 0 | 0 | $6,713,923.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Headend | Headend | SI Vendor - Headend (Implement) | 303 | 0 | 0 | 0 | $3,355,090.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Headend Upgrade | Headend | E2E System Testing (Headend Upgrade) | 303 | 0 | 0 | 0 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | WiSun | WiSun | Software as a Service (SaaS) - WiSun (Implement) | 303 | 0 | 0 | 0 | $1,967,347.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | MDMS | MDMS | Software as a Service (SaaS) Vendor - MDMS (Implement) | 303 | 0 | 0 | 0 | $3,082,659.80 | $0.00 | $0.00 | $0.00 |
| 03.Systems | MDMS | MDMS | SI Vendor - MDMS (Implement) | 303 | 0 | 0 | 0 | $1,356,995.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | MDMS Upgrade | MDMS | E2E System Testing (MDMS Upgrade) | 303 | 0 | 0 | 0 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Middleware | Middleware | Middleware (Implement) | 303 | 0 | 0 | 0 | $758,467.96 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Middleware | Middleware | Middleware - SI Vendor (Implement) | 303 | 0 | 0 | 0 | $1,998,095.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | CyberSecurity | CyberSecurity | CyberSecurity (Implement) | 303 | 0 | 0 | 0 | $708,353.37 | $0.00 | $0.00 | $0.00 |
| 03.Systems | CyberSecurity | CyberSecurity | SI Vendor - CyberSecurity (Implement) | 303 | 0 | 0 | 0 | $1,869,875.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Customer Portal | Customer Portal | Customer Portal | 303 | 0 | 0 | 0 | $1,079,000.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Outage Alerts | Outage Alerts | Customer Outage Alerts | 303 | 0 | 0 | 0 | $332,000.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Green Button | Green Button | Green Button Connect | 303 | 0 | 0 | 0 | $664,000.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Bill Alerts | Bill Alerts | Bill Alerts | 303 | 0 | 0 | 0 | $332,000.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | DG Portal | DG Portal | Solar Marketplace | 303 | 0 | 0 | 0 | $664,000.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Carbon Footprint Calc. | Carbon Footprint Calc. | Carbon Footprint Calculator | 303 | 0 | 0 | 0 | $166,000.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | C&I and Multi-Family Port. View | Portfolio View | C&I and Multi-Family Portfolio View | 303 | 0 | 0 | 0 | $415,000.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Time Varying Rates (TVR) | TVR | Time Varying Rates (TVR) - Full Implementation | 303 | 0 | 0 | 0 | $0.00 | $791,745.41 | $1,734,299.48 | $490,128.11 |
| 03.Systems | ADMS & OMS | ADMS & OMS | ADMS & OMS | 303 | 0 | 0 | 0 | $1,794,901.56 | $0.00 | $0.00 | $0.00 |
| | | | | | **$731,567.23** | **$954,136.13** | **$898,860.71** | **$34,153,460.44** | **$791,745.41** | **$1,734,299.48** | **$490,128.11** |

**(1) Descriptions of cost line items can be found in Benefit Cost Guide Memo - CONFIDENTIAL - Attachment H**

**The Narragansett Electric Company**
**d/b/a Rhode Island Energy**
**AMF - Intangible Software Costs**

| | | | | | POST-DEPLOYMENT / OPERATIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | AMF Recovery Year 8 | AMF Recovery Year 9 | AMF Recovery Year 10 | AMF Recovery Year 11 | AMF Recovery Year 12 | AMF Recovery Year 13 | AMF Recovery Year 14 | AMF Recovery Year 15 |
| Cost Category 1 | Cost Category 3 | Cost Category 4 | Full Description | FERC Account | October to September 2030 | October to September 2031 | October to September 2032 | October to September 2033 | October to September 2034 | October to September 2035 | October to September 2036 | October to September 2037 |
| 04. Program | PPL Labor | PPL Labor | PPL PMO Oversight (IT) - AMF Implementation PMO | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Network Model Analytics | NMA/AGA | Network Model Analytics / AGA | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Data Lake | Data Lake | Data Lake | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Advanced Analytics | Adv.Analytics | Advanced Analytics | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Data Lake | Data Lake | Data Lake - SI VENDOR | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | CSS | CSS | Customer Service Software | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Deployment Exchange Management (Electric) | Deply. xchg. Mgt. | Deployment Exchange Management | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Deployment Exchange Management (Electric) | Deply. xchg. Mgt. | Deployment Work Management - SI Vendor | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Headend | Headend | Software as a Service (SaaS) Vendor - Headend (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Headend | Headend | SI Vendor - Headend (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Headend Upgrade | Headend | E2E System Testing (Headend Upgrade) | 303 | $552,195.95 | $184,065.32 | $0.00 | $0.00 | $0.00 | $618,687.56 | $206,229.19 | $0.00 |
| 03.Systems | WiSun | WiSun | Software as a Service (SaaS) - WiSun (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | MDMS | MDMS | Software as a Service (SaaS) Vendor - MDMS (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | MDMS | MDMS | SI Vendor - MDMS (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | MDMS Upgrade | MDMS | E2E System Testing (MDMS Upgrade) | 303 | $0.00 | $847,344.69 | $282,448.23 | $0.00 | $0.00 | $0.00 | $0.00 | $971,211.71 |
| 03.Systems | Middleware | Middleware | Middleware (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Middleware | Middleware | Middleware - SI Vendor (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | CyberSecurity | CyberSecurity | CyberSecurity (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | CyberSecurity | CyberSecurity | SI Vendor - CyberSecurity (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Customer Portal | Customer Portal | Customer Portal | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Outage Alerts | Outage Alerts | Customer Outage Alerts | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Green Button | Green Button | Green Button Connect | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Bill Alerts | Bill Alerts | Bill Alerts | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | DG Portal | DG Portal | Solar Marketplace | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Carbon Footprint Calc. | Carbon Footprint Calc. | Carbon Footprint Calculator | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | C&I and Multi-Family Port. View | Portfolio View | C&I and Multi-Family Portfolio View | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Time Varying Rates (TVR) | TVR | Time Varying Rates (TVR) - Full Implementation | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | ADMS & OMS | ADMS & OMS | ADMS & OMS | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| | | | | | **$552,195.95** | **$1,031,410.00** | **$282,448.23** | **$0.00** | **$0.00** | **$618,687.56** | **$206,229.19** | **$971,211.71** |

**(1) Descriptions of cost line items can be found in Benefit Cost Guide Memo - CONFIDENTIAL - Attachment H**

**The Narragansett Electric Company**
**d/b/a Rhode Island Energy**
**AMF - Intangible Software Costs**

| | | | | | POST-DEPLOYMENT / OPERATIONS | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | AMF Recovery Year 16 | AMF Recovery Year 17 | AMF Recovery Year 18 | AMF Recovery Year 19 | AMF Recovery Year 20 |
| Cost Category 1 | Cost Category 3 | Cost Category 4 | Full Description | FERC Account | October to September 2038 | October to September 2039 | October to September 2040 | October to September 2041 | October to September 2042 |
| 04. Program | PPL Labor | PPL Labor | PPL PMO Oversight (IT) - AMF Implementation PMO | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Network Model Analytics | NMA/AGA | Network Model Analytics / AGA | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Data Lake | Data Lake | Data Lake | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Advanced Analytics | Adv.Analytics | Advanced Analytics | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Data Lake | Data Lake | Data Lake - SI VENDOR | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | CSS | CSS | Customer Service Software | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Deployment Exchange Management (Electric) | Deply. xchg. Mgt. | Deployment Exchange Management | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Deployment Exchange Management (Electric) | Deply. xchg. Mgt. | Deployment Work Management - SI Vendor | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Headend | Headend | Software as a Service (SaaS) Vendor - Headend (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Headend | Headend | SI Vendor - Headend (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Headend Upgrade | Headend | E2E System Testing (Headend Upgrade) | 303 | $0.00 | $0.00 | $693,185.64 | $231,061.88 | $0.00 |
| 03.Systems | WiSun | WiSun | Software as a Service (SaaS) - WiSun (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | MDMS | MDMS | Software as a Service (SaaS) Vendor - MDMS (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | MDMS | MDMS | SI Vendor - MDMS (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | MDMS Upgrade | MDMS | E2E System Testing (MDMS Upgrade) | 303 | $323,737.24 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Middleware | Middleware | Middleware (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Middleware | Middleware | Middleware - SI Vendor (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | CyberSecurity | CyberSecurity | CyberSecurity (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | CyberSecurity | CyberSecurity | SI Vendor - CyberSecurity (Implement) | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Customer Portal | Customer Portal | Customer Portal | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Outage Alerts | Outage Alerts | Customer Outage Alerts | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Green Button | Green Button | Green Button Connect | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Bill Alerts | Bill Alerts | Bill Alerts | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | DG Portal | DG Portal | Solar Marketplace | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Carbon Footprint Calc. | Carbon Footprint Calc. | Carbon Footprint Calculator | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | C&I and Multi-Family Port. View | Portfolio View | C&I and Multi-Family Portfolio View | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | Time Varying Rates (TVR) | TVR | Time Varying Rates (TVR) - Full Implementation | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 03.Systems | ADMS & OMS | ADMS & OMS | ADMS & OMS | 303 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| | | | | | **$323,737.24** | **$0.00** | **$693,185.64** | **$231,061.88** | **$0.00** |

**(1) Descriptions of cost line items can be found in Benefit Cost Guide Memo - CONFIDENTIAL - Attachment H**

# Exhibit E

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MDC 1-4

Request:

In AMF Book 1 at 36:19-20, Mr. Walnock and Ms. Reder describe Green Button Connect ("GBC").

(a) Please complete the spreadsheet attached to indicate what data fields and historical information will be provided through GBC.

(b) Will Rhode Island Energy attain independent certification of adherence to the GBC standard?

(c) If the answer to (b) is no, please explain in detail why not, and provide all documents related to its decision not to seek independent certification.

(d) If the answer to (b) is yes, please explain whether certification will be achieved once, or whether Rhode Island Energy will attain certification on an ongoing basis. Please explain in detail the Company's response.

(e) Will Rhode Island Energy provide natural gas usage data via GBC?

(f) If the answer to (e) is no, please explain in detail why not.

(g) Please provide a list of all Function Blocks from the GBC standard that Rhode Island Energy proposes to implement. For reference, a helpful list of all Function Blocks is provided by one vendor here: https://utilityapi.com/docs/greenbutton/scope#fb-reference-table

Response:

(a) The Company has not yet determined all the details required to complete the attached spreadsheet for the design of Green Button Connect ("GBC"). The Company plans to leverage Green Button code and internal business processes used by other PPL Corporation ("PPL") affiliates in Pennsylvania and Kentucky as the foundation when it commences the detailed design phase. PPL affiliates currently have Green Button functionality for customers in Pennsylvania and GBC enhancements are planned to be implemented for customers in Kentucky later this year. These implementations will serve as the starting point for the GBC solution for advanced metering functionality ("AMF") meters in Rhode Island.

(b) The Company has not yet determined all the details for the design of GBC. The Company plans to review all options available with respect to certification.

(c) See (b) above.

(d) See (b) above.

(e) At this time, there are no plans to include natural gas usage data via GBC. The Company has not included AMF functionality for natural gas meters in the AMF Business Case.

(f) See the Company's response to part (e), above.

(g) See the Company's response to part (a), above. It is too early in the process for Rhode Island Energy to have determined the Function Blocks that it will implement.

# Exhibit F

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MDC 1-10 Supplemental

Request:

See AMF Book 1 at 55:8-9 where Mr. Walnock and Ms. Reder indicate, "AMF will animate the market for third-party products and services by enabling customers to share energy usage information with authorized entities."

(a) Does Rhode Island Energy have any quantitative targets (in terms of number of third parties, number of customers using third party enabled services, or any other metric) by which it will evaluate the success or failure of market animation?

(b) If yes, please provide those targets and a detailed explanation for each.

(c) If no, please explain in detail why no quantitative targets were developed.

(d) Has Rhode Island Energy conducted any interviews, research or surveys of third parties that have in any way informed the Company's proposed functionality?

(e) If yes, please provide copies of documentation (including meeting summaries).

(f) If yes, please explain in detail, and provide specific examples of, how the Company's proposal has been modified by such interviews, research or surveys in order to animate the market for third parties.

(g) If no, please explain in detail why no interviews, research or surveys of third parties were conducted.

Original Response:

(a)-(c) On February 10, 2023, the Company filed a Motion to Object to Data Requests by Mission:Data Coalition Nos. 1-3, 1-5(a), 1-6, 1-7(c)-(g), 1-8, 1-9, and 1-10(a)-(c) and Motion for a Protective Order With Respect to Mission:Data Coalition Data Request Nos. 1-5(a) and 1-7, in which it asserted an objection to this data request. That motion remains pending, and pursuant to the direction provided in Public Utilities Commission ("Commission") counsel's February 16, 2023 email, the Company is not providing a response to this data request at this time. To the extent required after the Commission rules on the Company's objection, the Company will provide a response as and when directed.

(d) No, Rhode Island Energy has not conducted any formal interviews, research or surveys of third parties to inform proposed functionality; however, through the Power Sector

Transformation ("PST") Advisory Group process, the Company engaged in multiple meetings and sessions over several years that informed the content for the AMF Business Case. Enabling third party products and services was one of the topics of discussion with the AMF/GMP Sub-Committee of the PST Advisory Group. These stakeholder members represent a broad spectrum of interests ranging from environmental and clean-energy groups to low-income, community, and business interests, as well as non-regulated power producers ("NPPs"). See Figure 1.3: PST AMF and GMP Sub-Committee Meeting Schedule of the AMF Business Case, Bates Page 18. Through this stakeholder process, the Company incorporated feedback from the Sub-Committee members regarding the timing of Green Button Connect functionality through the Customer Portal in the AMF Functionality Roadmap (Figure 6.1 of the AMF Business Case). For example, based on the input from the AMF/GMP Subcommittee, the Company advanced Green Button Connect into Group 3 (i.e., planned within six months after deployment starts).

(e) Please see Attachment MDC 1-10 for a copy of the AMF Data Governance and Data Security slide deck presented to the AMF/GMP Subcommittee at the August 16, 2022 PST Advisory Group meeting. There are no additional meeting summaries to share.

(f) See the response to subpart (d), above.

(g) Rhode Island Energy did not conduct interviews, research or surveys of third parties because it was able to rely upon and leverage the prior experience of PPL Corporation's affiliates in Kentucky and Pennsylvania. In addition, the robust stakeholder process through of the PST Advisory Group provided multiple perspectives regarding the enablement of third party services and products, among other issues that is reflected in the content of AMF Business Case. See also the response to subpart (d), above.

Supplemental Response:

Pursuant to the Chairman of the Public Utilities Commission's Procedural Order regarding the Company's objection to Mission:Data Coalition's Data Request 1-10 (a) through (c), the Company responds as follows:

(a) No, the Company has not established any quantitative targets due to unknowns in the marketplace currently. To understand potential third-party service involvement and measure the success of achieving impact of the market for third party engagement, the Company intends to track and report on the counts of customers exporting their Green Button Connect data. See Section 14.1 and Figure 14.1: Reporting Metrics in the AMF Business Case (Bates Pages 197-198).

(b) See the response to subpart (a), above.

(c) See the response to subpart (a), above.

Rhode Island Energy™
a PPL company

# AMF Data Governance and Data Security

# People, Process, Technology, and Purpose are Key

Rhode Island Energy™
a PPL company

- People – The requirement for greater security and faster delivery cycles requires changes in team make up and requires regular training. Security is integrated through the business for security/compliance requirements.

  *Company maintains a cybersecurity organization comprised of individuals who are trained, certified and experienced in information and cybersecurity. Investment in, and ongoing assessment of our cyber skills is vital to the success of our cybersecurity function.*

- Processes – Software and components need to be tracked as they change and as well as the vulnerabilities affecting them. A systematic process is needed since manual processes for tracking vulnerabilities as they are disclosed are unreliable.

  *Company has a Data Governance Council that is made up of a cross-functional body of departments to ensure the governance initiatives are coordinated in the most functional manner with ongoing efforts across PPL. Company leverages internal security policies derived from best practices designed to look for novel and effective ways to protect the company's assets from current and emerging threats.*

- Technology – Signature-based solutions providing ground truth based on output and continuous monitoring of newly disclosed vulnerabilities and compromises mapped to production software and associated systems

  *AMF system will be evaluated for compliance with cybersecurity requirements derived from the Company's Enterprise Security Standards and appropriate industry security standards and frameworks. This evaluation process will continue throughout the development lifecycle*

- Purpose – Evaluate the risk and possible repercussions

  *Company considers not only the potential impact to the flow of power to customers, but also the intended flow of data through the company's System(s).*

# PPL Data Governance Plan

Rhode Island Energy™
a PPL company

- Defines pertinent policies addressing data privacy, data governance, information classification, and Cybersecurity and enterprise security standards
- Supports critical infrastructure and vital business functions including AMF
- Framework includes a comprehensive set of principles and standards:

  - ✓ Data Governance Policy
  - ✓ PPL Standards of Integrity
  - ✓ PPL Responsible Behavior Program
  - ✓ Information Security
  - ✓ Information Classification and Handling
  - ✓ Electronic Information Security
  - ✓ Records Management
  - ✓ PPL Cybersecurity Policy
  - ✓ PPL FERC Standards of Conduct
  - ✓ PPL Enterprise Information Security Policy
  - ✓ Data Security Standard

- Designed to ensure the data generated by the Company and through its AMF:
  - Collected, managed, stored, transferred, and protected in a way that preserves customer privacy
  - Practices are consistent with cybersecurity requirements
  - Facilitates access to further operational requirements
  - Enables grid modernization and clean energy objectives

# PPL Data Governance Policy

Rhode Island Energy™
a PPL company

## **Data Governance Policy** (Governance Team/Roles & Responsibilities)

- Define the roles and responsibilities for different data creation and usage types, and clear lines of accountability.
- Develop best practices for effective data management and protection.
- Protects data against internal and external threats
- Ensure that data consumers complies with applicable laws, regulations, exchange, and standards
- Ensure that a data trail is effectively documented

## **AMF Data Privacy Review** (Framework to communicate with customers and third parties)

- Data Access Principles
  - Utilizes widely recognized data privacy frameworks for AMF
  - Supported by NIST as long-established and best practices that are readily available and straightforward concepts to consistently utilize when building privacy controls into processes
- Data Privacy Review
  - Compares the NIST Guidelines to the Company's existing privacy policies, procedures and the AMF implementation plan to identify where best practice is in place or further alignment is needed

# AMF Data Privacy Review

Rhode Island Energy™
a PPL company

- AMF Data Privacy
  - Evolving AMF technologies brings new types of information that can involve privacy
  - Need to review existing policies to confirm adequate coverage
  - Standard practices are required to safeguard information
  - Consumers need notification of privacy exposures
- Using NIST Interagency Report 7628 volume 2 on Privacy and the Smart Grid as a basis for a review
- Applies to AMF and to GMP

## DRAFT - Data Privacy Review Categories

1 Management and Accountability
2 Notice and Purpose
3 Choice and Consent
4 Collection and Scope
5 Use and Retention
6 Individual Access
7 Disclosure and Limiting Use
8 Safety and Safeguards
9 Accuracy and Quality
10 Openness, Monitoring, and Challenging Compliance
11 Personal Information in the Smart Grid
12 Wireless Access to Smart Meters and Secondary Devices
13 Commisioning, Registration, and Enrollment for Smart Devices
14 Smart Grid Data Acess by Third Parties
15 Plug-in Electric Vehicles Privacy Concerns
16 Awareness and Training
17 Mitigating Privacy Concerns within the Smart Grid
18 Emerging Smart Grid Privacy Risks

# Cyber Security: Technology and Process

Rhode Island Energy™
a PPL company

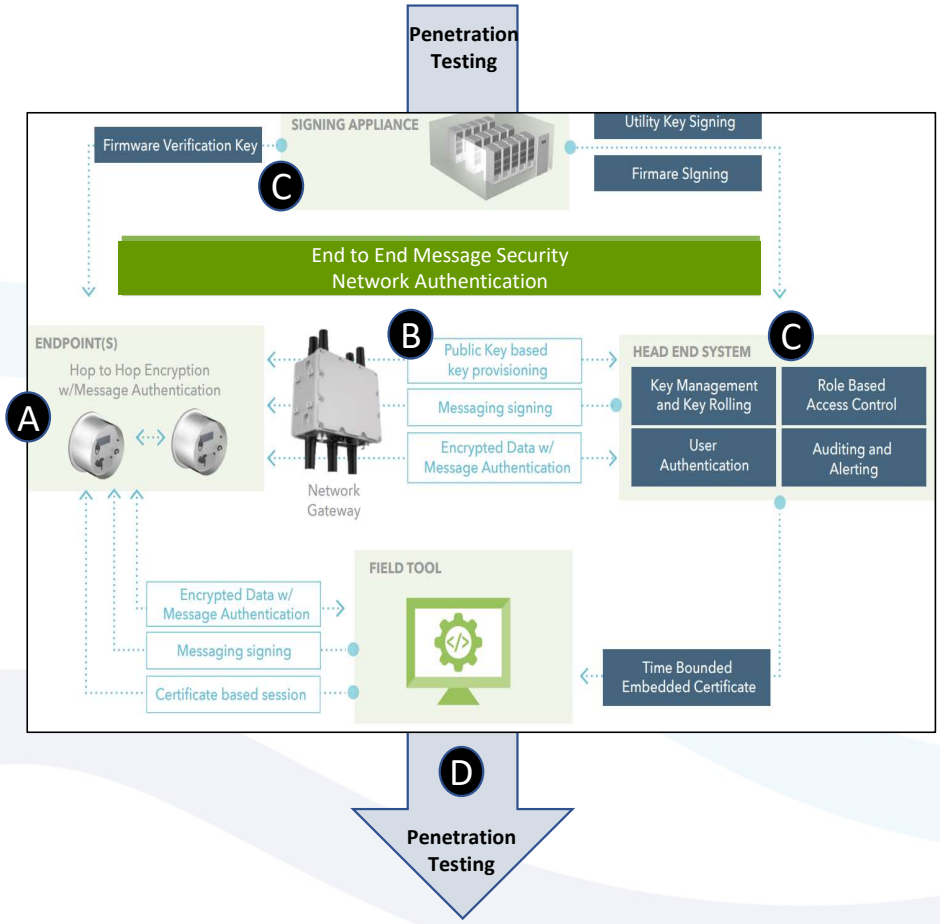
A. Data encryption capability for transit at the networking layers on the devices
   - Uses advanced encryption protocol standard to protect the transfer of data online

B. RF network provides a uniquely keyed application layer messaging encryption to ensure privacy between an endpoint and the associated head end system
   - Uses 3-layered approach provides best in class cryptography and privacy controls

C. Resistance and local security tamper resistance protects devices from being modified and allows for monitoring

D. Penetration testing will also be required by a third-party focusing on the network and software layers

E. Ongoing testing coupled with design characteristics, which includes A+B+C+D, ensures the entire system is secure



# Green Button for Customers, Third Parties/NPPs

Rhode Island Energy™
a PPL company

- RIE can generate Green Button data from AMF meters
- Green Button Connect will be available through the Customer Portal designed to provide customers with secure access to energy usage in a consumer-friendly and computer-friendly format.
- Provides customers with the ability to take advantage of a growing array of services to help manage energy use and save on their bills.
- Enables and incentivizes entrepreneurs to build innovative applications, products and services which will help consumers manage energy use
- Benefits utilities that receive numerous requests for information
- Customers can authorize the sharing of their data with third-parties.

# Performance Metrics and Reporting

Rhode Island Energy™
a PPL company

- Suite of metrics designed to provide a transparent assessment progress of AMF implementation in key areas
- Focus is on providing metrics for three key areas:
  - Implementation
  - Customer
  - Operations
- AMF Program Report to be provided at the end of the year with mid-year project status update meeting

DRAFT Performance Metrics

| Benefit Category | Benefit Metric |
|---|---|
| Program Implementation | **Major Project Release progress**<br>Progress of AMF Program Functionality Releases |
| | **Meter Pre-Sweep Completions**<br>Counts of Completed Pre-Sweeps |
| | **Network Deployment**<br>Counts of Completed Device Installs |
| | **Meter Deployment**<br>Counts of Completed Exchanges |
| | **Meter Base Repairs**<br>Counts of Meter Bases requiring repairs prior to meter exchange |
| | **Sector Completion**<br>Sector Acceptance Status |
| | **Program Spend**<br>Costs Breakdown Summary for key categories of the AMF Program |
| Customer | **Customer Interactions**<br>Counts and reasons for customer contacts to the AMF Program |
| | **Customer Portal Enrollments**<br>Counts of customers signing up for Customer Portal access |
| | **Customer Surveys / Customer Satisfaction**<br>Breakdown of Customer Satisfaction survey results of AMF communication, access to information & FAQs, and issue resolution |
| | **Customers Accessing Green Button Connect Data**<br>Counts of customers who have exported their Green Button Connect data |
| | **Customers who Opt out of AMF meter**<br>Count of customers who have elected to Opt Out from receiving an AMF meter |
| Operations | **Billing Read Rate**<br>Register meter reads expected vs. delivered |
| | **Interval Read Rate**<br>Interval meter reads expected vs. delivered |
| | **MDMS estimates sent to Billing**<br>Percentage of meters requiring estimates for billing |
| | **Remote Switch Performance**<br>Percentage success rates of remote switches |
| | **Last Gasp Alerting**<br>Percentage of Last Gasp alerts successfully delivered to the OMS (Outage Management System) |
| | **VVO metric**<br>Number of feeders with AMF deployed that have implemented Volt Var Optimization |

# Exhibit G

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MDC 1-2

Request:

In the same testimony, Mr. Walnock and Ms. Reder state that a "Supplier Portal" will be available to NPPs.

(a) Who will be eligible to use the Supplier Portal? Will the Supplier Portal in Rhode Island only be accessible to licensed competitive suppliers? Please explain the Company's position and rationale.

(b) How will the Supplier Portal for Rhode Island Energy be different in any way from the portals in other PPL jurisdictions mentioned in Book 1 at 29:1-3? Please provide a detailed explanation of each difference.

Response:

(a) The Company has not yet determined specific access eligibility for the Rhode Island Energy Supplier Portal. The PPL Electric Utilities Corporation ("PPL Electric") Supplier Portal in Pennsylvania is available to licensed competitive suppliers, and it will serve as a template for the development for the Rhode Island Energy Supplier Portal. The Company will determine specific access eligibility as part of the detailed design phase for AMF implementation.

(b) The Company has not yet determined all the details for the design of the Supplier Portal, however it plans to leverage the PPL Electric Supplier Portal code and internal business processes used in Pennsylvania. Today, accessibility and eligibility for the PPL Electric Supplier Portal is managed by the process referenced in the Company's response to MDC 1-1 (b).

PPL Electric has had a Supplier Portal since 2013. PPL Electric developed that Supplier Portal based on input from the supplier stakeholders, and it has gone through several phases of added functionality and improvements since. The PPL Electric Supplier Portal will serve as the starting point for the design of the Rhode Island Energy Supplier Portal, with Rhode Island Energy specifics to be determined during the detailed design phase. From a preliminary view, functionality that currently exists in the PPL Electric Supplier Portal that is expected to be part of the Rhode Island Energy Supplier Portal includes:

- Request customer bill image
- Request monthly usage – summary

Prepared by or under the supervision of: William J. Hennegan and Philip J. Walnock

- Request ICAP & NITS
- Load Profile
- Meter Constant
- Request customer historical interval usage
- Supplier contact information
- Download Eligible Customer List

# Exhibit H

Decision 13-09-025 September 19, 2013

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

| | |
|---|---|
| In the Matter of Pacific Gas and Electric Company for Adoption of its Customer Data Access Project. (U39E). | Application 12-03-002 (Filed March 5, 2012) |
| And Related Matters. | Application 12-03-003<br>Application 12-03-004 |

# DECISION AUTHORIZING PROVISION OF CUSTOMER ENERGY DATA TO THIRD PARTIES UPON CUSTOMER REQUEST

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(Cont'd)

**Title** **Page**

## DECISION AUTHORIZING PROVISION OF CUSTOMER ENERGY DATA TO THIRD PARTIES UPON CUSTOMER REQUEST

### 1. Summary

This decision approves the applications of Pacific Gas and Electric Company, Southern California Edison Company and San Diego Gas & Electric Company for authority to provide third parties access to customer data when requested by the customer.

More specifically, this decision authorizes Pacific Gas and Electric Company to increase electric rates and charges to recover up to $19.4 million in costs to support the Customer Data Access Project. This decision approves Southern California Edison's application to provide third-party access to customer usage data and to recover up to $7.588 million to develop its platform and an additional $1.512 million in incremental ongoing operations costs. This decision approves San Diego Gas & Electric Company's application to offer third parties access to data under its umbrella term "Customer Energy Network." Each company shall file conforming tariffs within 180 days of adoption of this decision.

The decision also resolves outstanding issues that are needed to implement the service. Specifically, this decision decides that it is appropriate to offer this service to customers at a price of zero. The implementation schedules proposed by each company for implementing this service are reasonable and each utility may proceed to implement the service as soon as they are ready.

This decision adopts criteria that third parties must meet in order to be eligible to receive customer data. The decision adopts the "wait and see" registration proposal, which permits third parties to receive consumption data provided that (a) they obtain the requisite customer authorization; (b) they meet

the technical eligibility requirements; (c) they acknowledge receipt of the relevant tariff rule(s); and (d) they are not otherwise prohibited by the Commission from receiving such data.

The decision, however, establishes an expedited process to remove a third party from the list of registered companies if the third party fails to comply with the rules for protecting and using the customer's consumption data. When a utility suspects possible violations of tariff rules, a notice to the third party and to the Commission's Energy Division triggers a 21-day period to remedy suspected violations. The Energy Division, at its discretion, may facilitate a resolution of these issues. If the issues are not resolved, the utility should file a Tier 2 advice letter to remove a third party from the registration list (and provide notice to customers of this filing). If the utility acts in this way, it bears no liability for misuse of customer data from the time of the provision of notice to the third party and to the Energy Division. The Commission, not a utility, bears responsibility to remove a third party from the list of those eligible to receive data and may do so either through action on an advice letter or through some other appropriate form of Commission action.

This proceeding is closed.

## 2. Background

Decision (D.) 11-07-056, *Decision Adopting Rules to Protect the Privacy and Security of the Electricity Usage Data of the Customers of Pacific Gas and Electric Company, Southern California Edison Company and San Diego Gas & Electric Company* (Privacy Decision)[1] sought to enable customers to make their energy usage data

[1] A copy of the privacy decision is available from the Commission's website at http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/140369.htm.

available to third parties of their choice. To accomplish this, the Privacy Decision, in Ordering Paragraph 8, directed Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E) to:

> Within six months of the mailing of this decision, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric must each file an application that includes tariff changes which will provide third parties access to a customer's usage data via the utility's backhaul when authorized by the customer. The three utilities should propose a common data format to the extent possible and be consistent with ongoing national standards efforts. The program and procedures must be consistent with policies adopted in Ordering Paragraphs 6 and 7 and the Rules Regarding Privacy and Security Protections for Energy Usage Data in Attachment D of this decision. The application should propose eligibility criteria and a process for determining eligibility whereby the Commission can exercise oversight over third parties receiving this data. The three utilities are encouraged to participate in a technical workshop to be held by the Commission in advance of the filing date. The applications may seek recovery of incremental costs associated with this program.
>
> This triggered the three applications that are the subject of this proceeding.

### 2.1. Procedural Background

On March 5, 2012, PG&E filed Application (A.) 12-03-002; SDG&E filed A.12-03-003; and SCE filed A.12-03-004.

On March 8, 2012, Resolution ALJ 176-3290 reached a preliminary determination that each of these proceedings was ratesetting and that hearings would be necessary.

On April 9, 2012, the Division of Ratepayer Advocates (DRA), Marin Energy Authority (MEA) and the Alliance for Retail Energy Markets (AReM)

filed protests in A.12-03-002. In addition The Technology Network (TechNet) filed a response in A.12.03-002.

Also on April 9, 2012, DRA and AReM filed protests in A.12-03-003 and A.12-03-004. TechNet filed responses in A.12-03-003 and A.12-03-004.

On April 9, 2012, DRA also filed a Motion for Consolidation in each of the three proceedings.

On April 17, 2012, via an e-mail to the service list in each Application, Administrative Law Judge (ALJ) Sullivan consolidated the three applications into one proceeding.[2]

On April 19, 2012, SDG&E filed a reply to the protests in A.12-03-003. On April 19, 2012, SCE filed a reply to the protests in A.12-03-004.

On April 25, 2012, an Administrative Law Judge's Ruling scheduled a Prehearing Conference (PHC) for May 14, 2012.

On May 25, 2012, an Assigned Commissioner's Ruling and Scoping Memo identified issues for resolution, made provision for the filing of a joint report by PG&E, SCE, and SDG&E, and established a cycle for comments and replies.

On July 30, 2012, PG&E, SCE, and SDG&E filed and served a *Joint IOU [Investor-Owned Utilities] Report on the Informal All-Party Discussions Regarding the Issues Identified in the Assigned Commissioner's Ruling and Scoping Memo* (Joint Report).

On August 20, 2012, EnerNOC, Inc. (EnerNOC), TechNet, AReM, Open Energy Network (OPEN), and Distributed Energy Consumer Advocates (DECA) filed comments on the Joint Report.

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[2] The e-mail ruling consolidating the three proceedings was memorialized by a formal ruling filed on April 25, 2012.

On August 28, 2012, PG&E, DECA, DRA, SCE and SDG&E filed reply comments.

On September 27, 2013, DECA filed a Motion for Leave to File a Late-Filed Notice of Intent to Claim Intervenor Compensation, as well as a Notice of Intent to Claim Intervenor Compensation. ALJ Sullivan, via a December 20, 2012 e-mail, approved the late filing.

On February 21, 2013, PG&E filed a Motion to Adopt Procedural Stipulation (Stipulation). The ALJ, via a February 25, 2013 e-mail ruling, set Friday March 1 as a due date for responses to the motion. No party filed in opposition to the motion. The ALJ, via a March 14, 2013 e-mail, granted the motion and adopted a stipulation but modified the briefing cycle envisioned in the stipulation.

Opening Comments or Briefs were due by March 20, 2013, and timely filed by DRA.

Replies were due on April 11, 2013 and timely filed by EnerNOC, PG&E, and SCE.

Subsequently, via an April 15, 2013 e-mail ruling, the ALJ granted DRA's request for a sur-reply brief and granted all parties the opportunity to file a sur-reply brief. On April 15, 2013, DRA filed a sur-reply brief.

On May 14, 2013, SolarCity Corporation (SolarCity) filed a Motion for Party Status. On May 22, 2013, via an e-mail to the service list, ALJ Sullivan granted SolarCity's Motion for Party Status.

### 2.2. Jurisdiction

As noted above, the proximate cause of these three applications was D.11-07-056, which required PG&E, SCE and SDG&E to propose tariff changes to provide third-parties access to a customer's usage data via the utility's backhaul –

an electronic path from the utility to the third party – when authorized by the customer. In addition, D.11-07-056 and D.12-08-045 set forth criteria that the Commission applies to determine if the proposed services comply with the privacy policies adopted by the Commission.

The Commission's jurisdiction over the tariffing of this service flows from Public Utilities Code Section 701,[3] which gives the Commission broad regulatory jurisdiction over public utilities:

> 701. The commission may supervise and regulate every public utility in the State and may do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction.

This broad authority is refined through additional sections of the code. The jurisdiction of the Commission over the offering of new tariffed services by regulated electric corporations is very clear. Under § 454:

> (a) Except as provided in Section 455, no public utility shall change any rate or so alter any classification, contract, practice, or rule as to result in any new rate, except upon a showing before the commission and a finding by the commission that the new rate is justified.

Thus, the three utilities may not offer this service until the Commission finds that the new rate is justified.

### 3. Joint Report and Stipulation

The Joint Report provides key information on the status of informal discussions among the parties seeking to clarify and to resolve the issues identified in the Scoping Memo.

[3] All statutory references are to the Public Utilities Code unless otherwise noted.

The Stipulation, supported by all parties active in the proceeding at the time, noted that all parties agreed to the following:

1. The parties agree that all pleadings filed by the parties to date in the proceeding, including the applications, protests and responses to the applications; the motions for party status; the Joint IOU Report; and opening and reply comments to the Joint IOU Report, are admitted into evidence and included in the record of the proceeding without objection.
2. The parties agree that, in addition to the above, the transcript of the May 14, 2012 PHC and the testimony served in connection with each IOU application are all admitted into evidence and included in the record of the proceeding without objection.
3. The parties agree that, while contested issues remain and must be resolved by the Commission in its decision on these applications, formal evidentiary hearings on issues identified in the Assigned Commissioner's Ruling and Scoping Memo (cost, pricing, timing, other proceedings and third parties) are unnecessary and that the stipulated record and comments heretofore filed or to be filed as noted below are sufficient for purposes of issuing a Proposed Decision (PD) on the merits. The parties agree that DRA and all other parties may file a round of briefs/comments on the remaining contested issues, including 1) cost of implementation as impacted by 3) below; 2) whether the IOUs' consent forms comply with the Privacy decision, 3) whether Community Choice Aggregation/Direct Access (DA) providers should pay for data – and whether, therefore, a proposed PG&E settlements with them should be disapproved; and 4) whether an IOU may cut off third-party access to data for violating the rules protecting data privacy, and the mechanics of such process, according to the following schedule: Opening Comments: March 13, 2013; Reply Comments: April 4, 2013.[4]

[4] An ALJ Ruling of March 14 amended this schedule. Opening Comments/Briefs were due March 20, 2013 and Reply Comments/Briefs were due April 11, 2013.

4. The parties agree that the Assigned ALJ may, after considering the foregoing record and round of comments due in March-April 2013, thereafter issue a PD on the merits of the application based on the stipulated record evidence. The parties reserve in full their rights to file comments on the PD in accordance with Rule 14.3 of the Commission's Rules of Practice and Procedure.[5]

Based on this unopposed stipulation, we identify *Pacific Gas and Electric Company, Smart Grid Customer Data Access (CDA) Project, Prepared Testimony* (March 5, 2012) as Exhibit PG&E-1 and move it into the record of this proceeding as evidence. Similarly, we identify *Testimony of Southern California Edison Company in Support of Its Application for Approval of Proposal to Enable Automated Access of Customer Usage Data To Authorized Third Parties and Approval of Cost Recovery Mechanism* (March 5, 2012) as Exhibit SCE-1 and move it into the record of this proceeding as evidence. In addition, we identify *Prepared Direct Testimony of Ted M. Reguly On Behalf of San Diego Gas & Electric Company* (March 5, 2012) as Exhibit SDG&E-1 and we identify *Prepared Direct Testimony of Brendan Blockowicz on Behalf of San Diego Gas & Electric Company* (March 5, 2012) as Exhibit SDG&E-2 and move both exhibits into the record of this proceeding as evidence.

In addition, we move into the record of this proceeding as evidence (without further identification) the applications, protests and responses to the applications; the motions for party status; the Joint IOU Report; and opening and reply comments to the Joint IOU Report; and the transcript of the May 14, 2012 PHC.

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[5] *Stipulation Regarding Record and Waiver of Evidentiary Hearings, A.12-03-002, A.10-03-003, A.12-03-004, Customer Data Access Applications (Stipulation),* February 21, 2013, at 4-5 (Attached to *Motion of Pacific Gas and Electric Company to Adopt Procedural Stipulation* (February 21, 2013).)

## 4. Issues Before the Commission

The central issue before the Commission is whether to grant, deny, or grant with conditions the applications of PG&E, SCE, and SDG&E to provide the proposed third-party access to customer usage data via the "back haul."

Each company describes in detail the services it plans to offer to make information available.

PG&E proposes to implement the CDA Project, which it describes in testimony. PG&E describes the project and its proposed implementation in phases as follows:

> Phase 1 will focus on the development of the infrastructure/systems required to share customer electric meter interval data in the OpenADE ESPI [Energy Service Provider Interface] Release 1.0 format.[6]
>
> … Phase 2 will focus on increasing the types of customer data that will be supported by the CDA platform to support OpenADE ESPI Release 1.5.
>
> … Phase 3 is expected to address the data and technology requirements to exchange data related to Home Area Networks [HAN] as highlighted in the anticipated OpenADE ESPI Release 2.0 format.[7]

SCE plans to provide third-party access to energy usage data through its "Energy Service Provider Interface (ESPI) process."[8] SCE describes this as "a

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[6] ESPI is a standard codified by and maintained at the North American Energy Standards Board (NAESB) as the NAESB ESPI Standard (REQ.21). OpenADE is a "Task Force" within the OpenSG User's Group, and is responsible for developing business requirements, use cases, and system requirements specifications, as recommendations for inclusion in standards specifications created by NAESB or other standards development organizations. See SDG&E Comments on PD at 2 for this clarification.

[7] *Stipulation*. at 1-8.

[8] Ex. SCE-1 at 1.

technology platform and infrastructure such that customer-authorized third-party requests for data can be supported in a secure, automated manner, consistent with the ESPI standard adopted by the North American Energy Standards Board (NAESB)."[9] SCE notes that its "ESPI proposal focuses on the automated exchange of interval usage data, and thereby provides simpler access to customer data than currently available methods, such as the Green Button."[10]

SDG&E already has implemented a program to provide third-party access to data. The SDG&E program is called "Customer Energy Network" which SDG&E sees "as a long term platform for distributing Smart Meter consumption data to authorized third parties."[11] SDG&E describes its current initiative as "implementation of recently ratified standards."[12]

SDG&E's testimony provides details on how SDG&E plans to evolve this service. SDG&E states that it proposes to enhance Customer Energy Network (CEN) in the following ways:

- Modify CEN to utilize the NAESB ESPI standard for information data exchange.
- Develop a robust, configurable solution to support multiple third parties and associated program eligibility rules.
- Enhance the web-based user interface to allow customers to view eligible third parties and associated program details.
- Create an automated electronic customer authorization and enrollment process that supports multiple third parties.

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[9] *Id*. at 2.

[10] *Id*. at 3.

[11] Ex SDG&E-2 at 1.

[12] *Id*. at 2.

- "Refactor" (or make technical enhancements to) the application to incorporate lessons learned from Google PowerMeter around data quality, monitoring, and exception management.[13]

In making a decision concerning each of the proposed services, the Commission must determine whether the proposed service conforms to the privacy policies adopted in D.11-07-056 and whether the proposed terms of service and rates merit a finding of reasonable. The Scoping Memo stated that:

> [t]he scope of the proceeding includes all issues related to the implementation of a backhaul program to provide third parties access to a customer's usage data based upon the consent of the customer. In addition, the scope of the proceeding includes all issues presented in the applications and the refined issues growing out of the parties' protests and the PHC.[14]

The Scoping Memo stated that at the PHC, the discussion among parties indicated that the issues identified in the proceeding fell into the following categories:

> 1. Cost – Whether the costs that are associated with the implementation of these programs are reasonable?
>
> 2. Pricing – What are the pricing issues for this service? What pricing issues arise concerning Community Choice Aggregators and Electric Service Providers (ESPs)?
>
> 3. Timing – What is the appropriate schedule for resolving the issues in this proceeding? Do all three utilities need to proceed at the same schedule, or can utilities that are ready to proceed act? Is coordination needed across these three applications?
>
> 4. Other Proceedings – What is the relationship between this proceeding and other tariff filings and rules development, particularly those arising from D.11-07-056?

---

[13] *Id.* at 2-3.

[14] Scoping Memo at 5.

> 5. Third Parties – What policies should apply to third parties receiving the data? What procedures should the Commission adopt to ensure third-party compliance with privacy safeguards adopted by the Commission?[15]

Subsequently, PG&E, SCE, and SDG&E jointly filed a report that addressed the issues identified above. The report indicated provided information on the informal discussions intended to resolve and clarify these open issues.

## 5. Discussion and Analysis

For each issue identified in the Scoping Memo, this decision will present the analysis of the Joint Report, the Stipulation, the response and replies of parities, and then a discussion and resolution of outstanding issues.

### 5.1. Cost – Whether the costs that are associated with the implementation of these programs are reasonable?

The issues pertaining to costs first arose in the separate application of each of the electric utilities. A brief summary of the cost discussion in the applications follows.

The PG&E Application states that it requests the Commission to authorize PG&E:

> … to increase electric rates and charges to collect a total of $9 million over 4 years as the reasonable level of revenue requirements necessary to support its Customer Data Access Project as described in this Application and PG&E's prepared testimony. This level of revenue requirements supports PG&E's overall request of $19.4 million to fund the Project.[16]

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[15] *Id.*

[16] PG&E Application at 1.

The SCE Application states that SCE proposes "to recover $7.588 million to develop its platform, and additional $1.512 million in incremental ongoing operations costs for 2012-2014."[17]

The SDG&E Application states:

> At this time, and as detailed in the testimony of Mr. Brendan Blockowicz, SDG&E is not requesting additional funding for the proposed Backhaul Program as specifically outlined in this Application. … Depending on whether actual customer adoption rates exceed SDG&E's preliminary estimates owing to the effect of an unknown factor, or if a substantially different backhaul process were to be adopted by this Commission, then additional funding may be essential, whereby SDG&E reserves the right to request any associated incremental funding necessary to reasonably implement the program after a closer examination of the known variances against anticipated costs.[18]

The Joint Report states that "during informal discussions, DRA stated that it had reviewed the IOUs' testimony regarding casts and determined that it no longer planned to dispute the costs associated with the implementation of the ESPI platforms."[19] The Joint Report further states "the IOUs propose that the three cost proposals be adopted."[20]

The Stipulation moved the three applications and supporting documents into evidence, as well as the Joint Report and comments of the parties.

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[17] SCE Application at 2-3.

[18] SDG&E Applications at 5.

[19] Joint Report at 4.

[20] *Id*.

Concerning costs, PG&E estimates that the total project cost over four years will total $19,353,621 and require an increase in revenue requirement over the first four years of $9,014,183.[21]

Concerning costs, SCE estimates a capital cost $7.588 million plus operating costs of $1.512 million in 2013 and 2014 for a total of $9.1 million.[22]

SDG&E, in contrast, notes that it "has already requested funding for providing third parties with access to customer energy usage data as described in SDG&E's General Rate Case application, A.10-12-005.[23] Concerning SDG&E's CEN- Phase 3, SDG&E states that "all costs are allocated to SDG&E" and requests "no additional funding at this time."[24]

#### 5.1.1. Comments and Replies Pertaining to Costs

No party provided any comments either opposing the requests for cost recovery or disputing the cost estimates provided in the applications of PG&E and SCE.

No party provided comments on SDG&E's proposal, which requested no additional cost recovery in this application, but indicated that the costs associated with this service were under consideration in SDG&E's General Rate Case (GRC).

#### 5.1.2. Discussion of Cost-Related Issues

To approve the tariffing of this service and the recovery of costs, the Commission must reach a determination that the associated costs are reasonable.

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[21] PG&E Ex. 1 at 1-9.

[22] Ex. SCE-1 at 4.

[23] Ex. SDG&E-1 at 3.

[24] *Id*. at 3.

Since the costs incurred by SDG&E associated with this service are under review in SDG&E's GRC, no further action is needed to review SDG&E's costs.

For PG&E and SCE, the Commission must make a determination that the costs incurred in the provision of the service are reasonable. Such a determination requires evidence. With the stipulation, the data on costs and testimony supporting costs provided by PG&E and SCE enters into the record. Moreover, there is no evidence disputing the reasonableness of costs claimed by PG&E and SCE.

PG&E's testimony documents the source of the CDA project. PG&E documents the estimated operation and maintenance costs, including the costs of third-party account management staff, customer support staff, program management staff, call center training and customer education and awareness.[25] Table 2-1 provides a summary of these operations and maintenance costs for the years 2014-2016. In addition, the testimony provides an estimate of the information technology related costs related to setting up the computer systems and portals to handle the customer requests for third-party access.[26] These costs total $8,576,573 for the first phase of data access[27] and $3,027,489 for the second phase of data access.[28] After the new service is developed, it will then transition into the information technology portfolio, where it will incur operating and maintenance expenses, which PG&E summarizes in Table 3-4.[29] PG&E includes a

[25] Ex. PG&E-1 at 2-8.

[26] *Id.*, Table 3-1, at 3-14.

[27] *Id.*

[28] *Id.* at 3-15.

[29] *Id.* at 3-16.

chapter titled "Results of Operations" which documents the development of "revenue requirements" used to support the capital expenditures and expenses.

Finally, PG&E integrates revenue requirements to support both the capital investments and operations expenses into Table 5-1, which itemizes revenue requirements for the years 2013-2016 and estimates the total revenue requirement for 2013 through 2016 as $19.4 million.[30] Specifically, PG&E estimates project costs of $6,965,548 in 2013, $6,421,314 in 2014, $2,880,926 in 2015 and $3,085,833 in 2016, for a total of $19,353,621 over this four-year period. Costs, if any, beyond this period will be considered in PG&E 2016 GRC.[31]

PG&E proposes "to establish a Customer Data Access Balancing Account (CDABA) to record and recover the actual costs of the CDA project from 2013-2016."[32] PG&E proposes that:

> The CDABA would be a one-way balancing account, which would allow PG&E to record the revenue requirement associated with the actual Operations and Maintenance (O&M) expense and capital cost incurred to implement the CDA Project.[33]
>
> PG&E will transfer the year-end balance of the CDABA,[2] up to the amount as authorized by the Commission, to Distribution Revenue Adjustment Mechanism (DRAM), and will consolidate the transferred amount with other DRAM revenue as part of the Annual Electric True-Up (AET) process. If PG&E spends more than the authorized amount, PG&E must seek Commission authorization to recover the difference in rates.[34]

---

[30] *Id.* at 5-2.

[31] *Id.*

[32] *Id.*

[33] *Id.*

[34] *Id.*

No party opposed PG&E's development of costs or its proposal for cost recovery.

Based on the record in this proceeding and our review of PG&E's testimony, we find PG&E's summary of project costs of $19.4 million ($8.91 million expense-related and $10.45 million capital-related) to be a reasonable estimate of project costs. Therefore it is reasonable for PG&E to increase its rates to the level of revenue requirement necessary to support its CDA Project. We therefore grant PG&E's request of $19.4 million ($8.91 million expense-related and $10.45 million capital-related) to fund the Project. In addition, we authorize PG&E to establish a CDABA to record and recover the actual costs of implementing the CDA project from 2013 through 2016, as requested. PG&E costs beyond 2016 for this program should be considered in PG&E's GRC for test year 2016.

Turning now to SCE, we find that SCE provides testimony and information pertaining to its costs and cost recovery. SCE, like PG&E, plans to offer an ESPI platform for the transfer of data. SCE plans to develop a simple electronic form based on its "Customer Information Standardized Request, or CISR"[35] by which a customer can request the transfer of consumption data to a third party. The information would be then made available to third parties in the ESPI format. SCE provides information on the capital costs associated with developing a computer process for both these tasks to total $7,588,000 over the years "pre-2012, 2012 and 2013."[36] In addition, once the ESPI system is developed and implemented, operating the service will incur labor expenses for managing

[35] Ex. SCE-1 at 21.

[36] *Id*. at 27.

third-party relationships, customer support, processing, and training. SCE estimates that these labor costs will total $1.035 million over 2013 and 2014.[37] Finally, SCE estimates that operating the system will require additional non-labor expenses, associated with communications, IT licensing, and other matters totaling $477,000 over 2013 and 2014.[38]

SCE proposes to recover the recorded revenue requirements to cover these costs through its Base Revenue Requirement Balancing Account (BRRBA) mechanism. Specifically, SCE requests "approval to recover the recorded revenue requirements associated with $1.512 million in O&M expenses and $7.588 million in capital expenditures over the 2012 through 2014 period through its BRRBA."[39] For the period after 2014, the costs of this program will be considered in SCE's General Rate Cases.

For the period through 2014, SCE testimony states:

> Each month, SCE will record its actual capital-related revenue requirement and the actual incremental O&M costs in the distribution subaccount of the BRRBA. The recorded O&M costs will be expenses associated with the ESPI activities authorized by the Commission in this proceeding. The capital-related revenue requirement will consist of depreciation, taxes and authorized return based on actual recorded rate base, including plant additions, accumulated depreciation reserve and accumulated deferred taxes, associated with the ESPI platform activities authorized by the Commission in this proceeding.[40]

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[37] *Id*. at 30.

[38] *Id*.

[39] *Id*. at 33.

[40] *Id*. at 34.

Concerning the issue of whether a subsequent "reasonableness review" is necessary. SCE argues that no reasonableness review is needed. SCE argues that:

> SCE's incurred costs that are consistent with the scope and the costs as adopted by the Commission should not be subject to an after-the-fact reasonableness review. The Commission will presumably perform a full review of forecasted costs in this Application. Thus, no further reasonableness review should occur. However, if the scope of activities differs from what the Commission approves, then SCE will file an Application, a Petition for Modification of the decision approving this Application, or use other appropriate procedural vehicles, to request approval of the activities and recovery of the additional costs associated with these activities.[41]

This recommendation, in SCE's view, does not mean that the sums will not be subject to Commission review. SCE explains:

> Pursuant to the Commission-adopted process for reviewing SCE's BRRBA activity, the recorded entries associated with the ESPI platform will be reviewed by the Commission in SCE's annual Energy Resource Recovery Account (ERRA) review applications. This review will ensure that all ESPI-related program cost entries into the account are stated correctly and are consistent with Commission decision(s).[42]

No party to this proceeding has raised objection to SCE's estimates of costs or its proposed ratemaking treatment of booking the costs into a subaccount of the BRRBA, which include recorded incremental operating and maintenance costs and capital related revenue requirements and limit the reasonableness review of ESPI-related entries in the BRRBA to ensure all recorded costs are associated with the ESPI activities as set forth in this decision.

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[41] *Id.* at 36.

[42] *Id.* at 37.

Based on the record in this proceeding and our review of SCE's estimated cost, we conclude that it is reasonable for SCE to increase rates to recover an estimated capital cost of $7.588 million plus operating costs of $1.512 million in 2013 and 2014 for a totals of $9.1 million, with an expected implementation date of twelve months after a final decision.

Based on the record of this proceeding and our understanding of the rate-making process, this decision finds SCE's proposed ratemaking treatment of the costs prior to its 2015 GRC as reasonable. Specifically, it is reasonable for SCE to record revenue requirements in the distribution subaccount of the BRRBA for recovery through the annual ERRA application. It is also reasonable, in light of our review of the proposed costs in this application, to limit the reasonableness review of ESPI-related entries in the BRRBA to ensuring that all recorded costs are associated with the ESPI activities approved in this decision.

For SDG&E, since the funding level for this program was reviewed in its GRC, no further action on costs or rate recovery is needed at this time.[43]

### 5.2. Pricing of Backhaul Services; Prices for Community Choice Aggregators and DA Providers

The Joint Report states that:

> None of the IOUs propose to charge fees for the use of the ESPI [Energy Service Provider Interface] platforms, and this basic feature of the IOUs applications applies equally to IOU customers wishing to obtain automated usage data and to third parties who have obtained the requisite customer authorization. No non-IOU party to this consolidated proceeding has proposed that customers or authorized third parties should be charged a fee to

[43] D.13-05-010 largely approved SDG&E's request to fund this service. In particular see D.13-05-010, Findings of Fact 289-391, at 1068.

> use the ESPI platform. Thus, the parties have reached a consensus that no fees should be assessed for using the ESPI platform.[44]

The Joint Report, however, indicates that the "IOU parties disagree about the relationship, if any, between the lack of fees proposed in this proceeding and the existence of rate schedules that impose fees pursuant to prior Commission decisions in the Community Choice Aggregator and Direct Access contexts."[45] The Joint Report notes that AReM and MEA allege that "the applications provided unfair and inequitable treatment of ESPs and CCAs."[46] The Joint Report notes that "PG&E has agreed to modify its proposal in this proceeding and its applicable DA and CCA tariffs…"[47] PG&E's proposal would provide that:

> If the Commission's decision in this proceeding results in customer usage data being provided to ESPs/Community Choice Aggregators at no cost and that provision of data is largely analogous to the services provided as part of the IOUs' DA and [Community Choice Aggregators] CCA fee tariffs for Meter Data Management Agent (MDMA) services, the DA and CCA MDMA fee shall be reset consistent with the outcome of this proceeding; that is, only the cost of incremental services, if any, above and beyond the services provided at no cost under the decision in this proceeding shall be collected as part of the DA and CCA MDMA fee.[48]

PG&E also states that, alternatively,

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[44] Joint Report at 4.

[45] *Id*. at 4-5.

[46] *Id*. at 5.

[47] *Id*.

[48] *Id*. at 5.

> [T]he Commission in this proceeding could achieve the same result as proposed by PG&E, AReM and MEA without requiring modifications to the DA or CCA tariffs, by authorizing the IOUs to provide the customer energy usage data authorized in this proceeding to ESPs and CCAs without charge and (for CCAs) without the need for customer authorization to the extent that the provision of data is largely analogous to the services provided as part of the IOUs' DA and CCA fee tariffs for Meter Data Management Agent (MDMA) services.[49]

SCE and SDG&E, however, "decline to join PG&E's agreement with AReM and MEA," arguing that the "agreement unnecessarily links the outcome of this consolidated proceeding with DA/CCA issues pending or set for resolution in unrelated proceedings."[50] SCE and SDG&E urge that the Commission "focus its decision in this proceeding on one narrow, undisputed consensus among all parties--that no customers or authorized third parties should be charged fees for using the ESPI platform to obtain usage date from IOUs."[51] SCE and SDG&E argue that "declining to join PG&E's proposal/agreement with AReM and MEA does not give rise to an issue that can or should be litigated in this proceeding…"[52]

#### 5.2.1. Comments and Replies Pertaining to Pricing

No party expressed opposition to the proposal that no fees should be assessed on customers wishing to obtain automated usage data and to third parties who have obtained the requisite customer authorization for using the ESPI platform.

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[49] *Id*. at 5-6.

[50] *Id*. at 6.

[51] *Id*.

[52] *Id*.

AReM reports that it supports the PG&E proposal to provide customer usage data to ESPs or CCAs at no cost as long as the requirements adopted in this proceeding are largely analogous to the service now provided to ESPs and CCAs for a fee. Under this proposal, ESPs and CCAs would receive this information at no costs without obtaining a customer authorization. AReM requests that:

> [T]he Commission direct SCE and SDG&E to adopt the same, simple solution described by AReM, MEA and PG&E in their joint settlement: If the customer usage data being provided pursuant to this proceeding at no cost is 'largely analogous' to the services provided to ESPs and CCAs for a fee, the IOU's fee shall be reset consistent with the outcome of this proceeding.[53]

In Reply Comments, DRA argues strongly against the arguments and positions of AReM, MEA and PG&E. Specifically, DRA argues that

> The joint settlement hardly deals with the "same" issues nor presents a "simple" solution as described by AReM. The focus of this proceeding— the raw ESPI data pulled from the IOU's back-office systems—is a completely different factual issue than the IOU's Direct Access (DA) and CCA fee tariffs for Meter Data Management (MDMA) services to provide "billing quality data." The definition of "billing quality data" is clearly disputed, and should be subject to further review by the Commission.[54]

DRA concludes by urging the Commission to deny the request of PG&E and AReM, asking that the Commission "focus its decision in this proceeding on this one, narrow, undisputed consensus among all parties---that no customers or authorized third parties be charged fees for using the ESPI platform to obtain usage data from the IOUs."[55]

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[53] AReM Comments at 3.

[54] DRA Reply Comments at 5.

[55] *Id.*

In Reply Comments, SDG&E argues that neither SCE nor SDG&E were parties to the settlement between PG&E and AReM and therefore "should not be held to any agreements made therein."[56] SDG&E, however, states:

> Because SDG&E does not plan to charge third parties a fee to access information via the ESPI platform, SDG&E agrees that the "same" information which can be accessed for free by third parties should be free for all third parties including CCAs and ESPs. SDG&E has no desire to discriminate against CCAs and ESPs for the "same" information.[57]

SDG&E, however, argues that

> "Largely analogous" information, on the other hand, is different. First, the term "largely analogous" is not clearly defined in the record of these proceedings. Secondly, said "largely analogous" information may conceivably drive up cost for the utility to gather and process. This becomes an even greater issue if the CCA and ESP are envisaging billing quality data. The information accessed via the ESPI platform is not necessarily billing quality.[58]

SDG&E concludes its argument stating that "SDG&E should not be required to abide or be bound by an application proceeding or negotiated settlement which they were not a party."[59]

#### 5.2.2. Further Comments

Following the filing of the stipulation on February 21, 2013, parties were provided an opportunity to opening, reply and sur-reply comments or briefs.

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[56] SDG&E Reply Comments at 2.

[57] SDG&E Reply Comments at 2.

[58] *Id.* at 2.

[59] *Id.*

In an Opening Brief,[60] DRA argues "The Commission should reject at this stage the proposed PG&E settlement identified in the parties' Joint Report filed July 30, 2012 to provide customer energy usage data to DA providers and Community Choice Aggregators (CCA) at no cost."[61]

PG&E, in response,[62] argues that DRA misunderstands the PG&E proposal. PG&E states:

> PG&E, MEA and AReM are not proposing that the scope or costs of the Customer Data Access Project be expanded to cover special, customized data needs of CCAs or DA providers. Instead, all that is being proposed is that if the Customer Data Access Project makes available data to third-parties at no cost that is largely analogous to the data that is provided under the CCA and DA fee tariffs for Meter Data Management Agent services, then the CCAs and DA providers should be entitled to that same data at no cost under the CCA and DA fee tariffs.[63]

DRA, in its sur-reply brief, states that it "withdraws its objection to the joint proposed settlement of MEA, AReM and PG&E,"[64] and cites PG&E's clarification that "the data at issue are not broader than that it provides without additional charge to third parties."[65]

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[60] *Opening Brief of the Division of Ratepayer Advocates* (DRA Brief), March 13, 2013.

[61] DRA Brief at 1.

[62] *Reply Comments of Pacific Gas and Electric Company,* April 11, 2013 (PG&E 4/11/13 Reply).

[63] *Id*. at 2.

[64] *Sur-Reply Brief of the Division of Ratepayer Advocates on Pacific Gas and Electric Company's Reply Brief*, April 15, 2013 (DRA Sur-Reply Brief) at 2.

[65] *Id*.

### 5.2.3. Discussion of Pricing-Related Issues

This decision finds that the undisputed consensus between all parties – that no customers or authorized third parties be charged fees for using the ESPI platform to obtain usage data from PG&E, SCE or SDG&E is a reasonable policy and consistent with the filings in this proceeding.

In its subsequent filings, PG&E has clarified that its agreement with AReM and MEA is not a settlement of pricing issues that are the subject of other proceedings but a clarification that they will have equal access to the consumption data provided by PG&E to third parties. There are no objections to PG&E's offering this service to CCAs or DA providers. We find that there is no reason to treat CCAs or DA providers differently from any other third-party.

## 5.3. Timing for Resolution of Outstanding Issues

The Scoping Ruling asked for comments pertaining to "the appropriate schedule for resolving the issues in this proceeding."[66]

The Joint Report states that "[p]arties agree that the issues in this proceeding should be resolved in an expedited manner."[67] The Joint Report asks for "a Final Decision in this proceeding in the third quarter of 2012."[68] The Joint Report also reports

> SDG&E has begun project planning to implement its Customer Energy Network (CEN) ESPI platform with a potential implementation date of late 2012. SCE does not plan to begin developing its ESPI platform until the Commission issues a Final Decision in this proceeding. SCE will be able to deploy its EPSI platform within approximately 12 months of a Final Decision. (In

[66] Scoping Memo at 5.

[67] Joint Report at 7.

[68] *Id.*

> its Application, SCE assumed a Final Decision in the third quarter of 2012, resulting in an implementation date in July 2013. PG&E assumed a Final Decision in the first quarter of 2013, which would enable implementation of Phase 1 of PG&E's Customer Data Access (CDA) ESPI platform in the third quarter of 2014.[69]

PG&E expected that its usage data would be available to all customer classes simultaneously. SCE anticipated that it would be available to residential and to small and medium business customers by July 2013, with the availability to large non-residential customers (demand above 200 kilowatt (kW)) not yet determined.[70] SDG&E anticipated that it could make the data available to residential and to small and medium business customers by December 2012, with the availability to large non-residential customers (demand above 200 kW) not yet determined.[71]

#### 5.3.1. Comments and Replies Pertaining to Timing

Several parties commented on timing issues.

EnerNOC commented that "some of the detail" concerning the types of data and timing failed to make the Joint Report.[72] EnerNOC specifically sought clarity on issues pertaining to "whether the data is, or is not, billing quality data."[73]

OPEN asks that the Commission require the three electric utilities "to provide more detail in their implementation plans with respect to the rollout of

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[69] *Id*. at 8, footnotes omitted.

[70] *Id*. at 9.

[71] *Id*. at 9.

[72] EnerNOC Comments at 5.

[73] *Id*. at 5.

the ESPI platform to specific customer classes."[74] OPEN argues that "[t]o effectively enable private sector innovation, third parties need to know, for each customer class, which customers will be eligible for GreenButton/ESPI services and when the data sharing platform will be rolled out."[75]

In reply, SCE argues that EnerNOC's comments are not relevant, arguing:

> This information [pertaining to the different types of data] was not included in the Joint IOU Report because the provision of data other than usage data, from smart meters, is outside the scope of D.11-07-056 and is thus not required by the IOUs' ESPI applications. Ordering Paragraph 8 of D.11-07-056 required each of the IOUs to "file an application that includes tariff changes which will provide third parties access to a customer's usage data via the utility's backhaul when authorized by the customer."[76]

In a similar vein, SCE notes that "customers with demands equal to or above 200 kW do not have Edison … smart meters" and therefor are "outside the scope of this proceeding."[77]

In reply to OPEN, SCE notes that "[v]irtually all commercial customers with demands less that 200 kW will have a SmartConnect meter and, therefore, will have data available through SCE's ESPI platform when it gets deployed."[78]

In reply to EnerNOC, SDG&E states:

> There are technical and customer requirements that must be met before this service can be provided to a given customer (for example, the customer must have a smart meter for the

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[74] OPEN Comments at 5.

[75] *Id.*

[76] SCE Reply Comments at 5.

[77] *Id.*

[78] *Id.* at 6.

information to be retrieved in a timely manner). In general terms, the service will be largely available by the end of 2012.[79]

### 5.3.2. Discussion of Issues Related to Timing

The press of Commission work has caused more time to have passed since the filing of the report, comments and replies. SDG&E's proposed implementation date has already passed.

SCE rightly points out that this proceeding concerns the data generated by Smart Meters, which do not serve customers with demand above 200 kW. Thus, issues concerning the rollout of a service to these customers fall outside the scope of this proceeding. In addition, the focus of this proceeding is to provide information on "usage data" as quickly as possible, and the utilities are not required to provide other data at this time.

The request of parties for more information on the timing of the availability the backhaul service to residential and business customer with demand lower than 200 kW is, however, reasonable. Therefore, this decision will require that the advice letters filed to tariff these services, which are due within 180 days of the adoption of this decision, state the expected date at which the service will be available.

## 5.4. Relationship of Applications to Other Proceedings

The Joint Report explored the relationship of these applications to other proceedings that would result from D.11-07-056. The Joint Report identified two proceedings whose resolution need not be resolved before issuance of this decision and those that may need resolution. Concerning proceedings whose resolution need not be resolved, the Joint Report states:

[79] SDG&E Reply Comments at 4.

> The parties agreed that the following advice filings, ordered in D.11-07-056, need not be resolved before issuance of a Final Decision in this proceeding:
>
> - Advice Letters on the Provision of Price, Usage and Cost Information, and results of "methodological discussions [with CAISO] and a proposal for providing wholesale prices" (OP # 5, 6, and 7 of D.11-07-056); and
> - Home Area Network (HAN) Implementation Plan Advice Letters (OP # 11).
>
> The parties also agreed that the Commission need not approve the wholly unrelated Rule 24 (which has not yet been fully drafted or litigated, and which awaits resolution in Phase IV of the Demand Response Order Instituting Rulemaking, R.07-01-041) before it issues a Final Decision in this proceeding. Finally, the Parties agreed that the question whether the privacy rules adopted by the Commission in D.11-07-056 apply to ESPs and CCAs is being determined in Phase 2 of R.08-12-009, not in this proceeding. It is unclear whether the result of that proceeding will have an impact on this one.[80]

All of the parties "agreed that the only filings upon which the outcome of this proceeding *may* be dependent are the Advice Letters each IOU filed on October 27, 2011 … pursuant to Ordering Paragraph #1 of D.11-07-056…"[81] Specifically, the Joint Report states:

> Because the IOUs' ESPI platforms will be used to transmit AMI usage data (i.e., "Covered Information") to customer authorized third parties (i.e., "Covered Entities"), the tariff rules proposed in the Data Privacy Advice Filings are relevant to this proceeding, even if those proposed rules do not specifically address

[80] Joint Report at 9-10, footnotes omitted.

[81] Joint Report at 10, emphasis in original. The Joint Report states that "all of the Parties other that EnerNOC"(at 10) hold this position, but the EnerNOC Opening Comments (at 6) clarify that EnerNOC holds this position as well.

> additional tariff requirements that are implicated in the context of automated data transmission, including third-party eligibility and "registration" with the IOUs, etc. Moreover, to the extent that the new tariff rules resulting from resolution of this proceeding—regarding automated data transmission—refer to, or are based on, the final tariff rules adopted in the pending Data Privacy Advice Filings, it would, as a practical matter and from an efficiency perspective, be beneficial for the Commission to have resolved the first set of Advice Filings before it considers the next.[82]

The Joint Report, however, argues:

> [T]he parties concluded that it may not necessarily be improper or unwise for the Commission to issue a Final Decision in this proceeding without first resolving the pending Data Privacy Advice Filings. Rather, a Final Decision in this proceeding could simply direct that the IOUs' ESPI platforms be consistent with the privacy rules adopted in D.11-07-056, as implemented in the Data Privacy Advice Filings. This is because OP #1 of D.11-07-056 already adopted Attachment D to the same decision, i.e., the Rules Regarding Privacy and Security Protections for Energy Usage Data, which rules already govern the treatment of Covered Information by the ESPI platforms proposed in this proceeding.[83]

The Joint Report summarizes that while it would be "preferable" that tariff filings resulting from this application refer to or be based on "*final* tariff rules" adopted in the Privacy Advice Letters, it is "not necessary" to hold up resolution.[84]

#### 5.4.1. Comments and Replies of Parties

DRA Comments urge the Commission to "resolve the pending IOUs advice letter filings on privacy."[85] DRA argues that "[u]ntil the IOUs'

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[82] Joint Report at 10, footnote omitted.

[83] *Id.* at 11.

[84] *Id.*

Tier 2 Advice Letter filings are adopted, the current tariffs do not address the Privacy Rules."[86] DRA also states that "the common third-party eligibility criteria outlined in the Joint IOU Report conflicts with the conclusion that the IOUs' proposed Privacy Rule tariff changes are not necessary for a final decision in this proceeding."[87] And further, DRA points out that "'third parties could not acknowledge receipt of utility tariffs" [a proposed requirement] absent a resolution of the IOU Privacy tariffs."[88] DRA, however, points out that Attachment D of D.11-07-056, not tariff rules, "is the principal governing document."[89] Instead, "DRA recommends that the Commission require a third party to provide confirmation that it has reviewed and will comply with the Attachment D of D.11-07-056."[90]

No other party provided comments or replies on this matter.

#### 5.4.2. Discussion of Issues Related to the Relationship of the Applications to Other Outstanding Proceedings

At this point in time, the Commission anticipates that the advice letters filed pursuant to the Commission's Privacy Decision, D.11-07-056, will be adopted prior to the filing of advice letters implementing this decision. These tariffs, when adopted, should provide helpful guidance in drafting the advice letters needed to implement this decision.

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85 DRA Comments at 2.

86 *Id*. footnotes omitted.

87 *Id*. footnotes omitted.

88 *Id*. at 3.

89 *Id*. at 4.

90 *Id*.

Parties are right to point out the tariffs will be helpful, but not necessary to the filing of advice letters in this proceeding. Nevertheless, the adoption of advice letters by the Commission should both render concerns on this matter moot and provide the requested guidance.

Moreover, DRA has it exactly correct on the legal issues associated with this proceeding – Attachment D of D.11-07-056 sets the privacy policies, the tariffs proposed in the advice letters should follow the privacy policies adopted in Attachment D.

In summary, there is no reason to postpone adoption of this decision.

### 5.5. What Policies Should Apply to Recipients of Data? What Liability Issues Arise for Utilities in the Transmission of Customer Data?

The Joint Report noted that parties agreed that certain policies and principles should apply to customer-authorized third parties receiving data via the IOUs' ESPI platforms:

- Third-party eligibility criteria should be common across the IOUs;
- For purposes of the privacy rules, Conclusion of Law #9 of D.11-07-056 establishes that the Commission has oversight over "any third party, when authorized by the customer, that accesses, collects, stores, uses, or discloses covered information relating to 11 or more customers who obtains this information from an electrical corporation";
- Consistent with the Commission's oversight of Covered Entities, a third party will not be "eligible" to receive automated data from the IOUs' ESPI platforms to the extent that the Commission directs the IOU(s) to stop transmitting data to that third party; and
- The Commission, not the IOUs, bears responsibility for exercising regulatory oversight of Covered Entities to resolve formal complaints or conduct investigations into allegations or

suspicions of potential or actual misuse of customer data by Covered Entities.[91]

In addition, the Joint Report noted that parties agreed to common "third-party eligibility criteria" that should apply across the three applicants. These include:

- *Provision of basic company information*: The third party must provide to the utility basic information about its company and how to contact its company. This information should include: company name; mailing address; and the names, telephones numbers, mailing addresses, and email addresses for any key business and technical contacts at the company.
- *Demonstrate technical ability to connect to and access data from the utility's ESPI platform*: The third party will work with the utility to verify that the third party can technically access and obtain data from the utility's ESPI platform.
- *Acknowledge receipt of the utility's tariff(s) governing customer usage data privacy, and the automated transmission of usage data to customer-authorized third parties*: Parties expect that when the Commission resolves the Data Privacy Advice Filings, each utility will have a tariff rule governing customer usage data privacy. Parties also expect that upon the conclusion of this proceeding, each utility's tariff rules will be updated (either with a new rule or modifications to existing rules) to govern the provision of automated customer usage data to authorized third parties. Each utility will provide its relevant tariff rule(s) to any third party registering to access the utility's ESPI platform and the third party must acknowledge receipt of the tariff rules(s) before it can receive the automated data transmission.
- *Absence from Commission's prohibited list:* Should the Commission include a third party's name on a list of parties prohibited from receiving automated data, that party will not be

[91] Joint Report at 12.

> "eligible" to receive data unless the Commission orders otherwise.[92]

Concerning the process by which a third party registers with a utility in order to receive ESPI data, the Joint Report notes that the parties have agreed to a process characterized as "wait-and-see," where parties are eligible to receive ESPI data provided that they meet four conditions: "(a) they obtain the requisite customer authorization; (b) they meet the technical eligibility requirements; (c) they acknowledge receipt of the relevant tariff rule(s); and (d) they are not otherwise prohibited by the Commission from receiving such data."[93] The Joint Report also acknowledges "that the Commission may elect at a later date, in the exercise of its jurisdiction, to revise the registration criteria."[94]

There was less agreement concerning what actions should lead to a suspension or revocation of a third party's access to data, or who should take responsibility for such action. The Joint Report identified three different scenarios that would cause suspension or revocation:

> (1) the customer requests that the IOU discontinue providing their data to the third party, (2) the Commission orders one or more IOUs to suspend or revoke a third party's access to customer data via the ESPI platform, and (3) the IOU reasonably suspects that the third party is or may be violating the Commission's data privacy rules.[95]

The Joint Report states that when a customer requests that the utility discontinue providing data to a third party, the utility should "immediately

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[92] *Id.* at 12-13.

[93] *Id.* at 13.

[94] *Id.* at 13-14.

[95] *Id.* at 14-15, footnotes omitted.

terminate the third party's automated access to the data of the customer who revoked the authorization."[96] Parties also agreed "that the IOU should notify the third party of the suspension or revocation of access."[97]

The Joint Report also states that when the Commission orders the suspension or revocation of a third party's access to customer data via the ESPI platform, the parties agreed that "it would be appropriate and necessary for the IOU(s) to comply with the Commission's order if it has not been stayed or enjoined by the appropriate court or agency."[98] As with the first case, parties also agreed "that the IOU should notify the third-party of the suspension or revocation of access."[99]

Concerning the third case, where a utility elects to suspend a third party's access based on the utility's reasonable suspicion that the third party violated terms of the data privacy tariffs, the Joint Report indicated no agreement among that parties, and instead reported positions and who supported them. The Joint Report begins with the position of SCE and SDG&E, which links its position to D.11-07-056 statement that the "limitation on liability does not apply when the utility has acted recklessly."[100] SCE and SDG&E state that "it is appropriate to temporarily suspend transmission of customer usage data to any third party reasonably suspected of violating the utility's Commission-approved data

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[96] *Id*. at 15.

[97] *Id*.

[98] *Id*.

[99] *Id*.

[100] D.11-07-056 at 35.

privacy practices."[101] In addition, SDG&E states that "utilities must have discretionary ability to revoke the third party's access to the customer's data in the event of an obvious and egregious violation to assure compliance with other state and federal laws, which could impose liability or expose the IOUs to potential facilitation claims if the utility fails to take appropriate and timely corrective action regarding any known violation of customer privacy."[102] In the case of "suspected violations," SDG&E proposed to report the matter "to the Commission for input" before acting.[103]

The Joint Report states that EnerNOC, OPEN and TechNet (Third Parties) "understand and acknowledge that while the IOUs are not responsible for the use or misuse of customer data once it has been securely transferred to a customer-authorized third party, … the IOUs may still be liable … for reckless transmission."[104] The Third Parties, however, argue "that any suspension or revocation of data access must be Commission-directed after the third party has had an opportunity to respond to the concerns being raised by the customer."[105] The Third parties also oppose the suspension of access to customer data by a utility upon suspicion because, in their view, such action would constitute an enforcement action "before the proper enforcement authority, the Commission, has done so."[106] The Third Parties argue that suspension of access to customer

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[101] Joint Report at 16.

[102] *Id*.

[103] *Id*.

[104] *Id*. at 17.

[105] *Id*.

[106] *Id*.

data without an opportunity to address complaints and suspicions "would amount to a denial of the third parties' due process rights."[107]

SCE proposes that "when it reasonably suspects that a third party may be violating tariffs, it will notify the affected customer(s) and the third party that data access will temporarily be suspended pending an order directing otherwise form the Commission."[108] SCE proposes an expedited proceeding before an ALJ within 5 business days of the decision to cut off data access, at which the third party

> … bears the burden to demonstrate that: (1) there is a serious risk of irreparable harm to the customer(s) absent an order to reinstate transmission; (2) the third party is likely to prevail on the merits of the underlying controversy; and (3) a comparison of the harm to the customer(s) versus the harm to the third party, on balance, favors the third party.[109]

SCE argues that such a speedy proceeding "is not without precedent."[110] SCE also recommends that the Commission monitor the frequency of such a proceeding and, if needed, reassess "whether it is appropriate for the Commission to undertake a registration process for third parties before they will be permitted to receive automated usage via the ESPI platform."[111]

PG&E approaches the issue of acting "recklessly" in overseeing the activities of a third party and argues that this standard may conflict with § 8380(f), which, PG&E asserts, "places the responsibility for protecting

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[107] *Id*.

[108] *Id*.

[109] *Id*. at 18.

[110] *Id*.

[111] *Id*. at 18-19.

customer-authorized third party access squarely on the customer and the third party, consistent with customer choice."[112] PG&E also raises questions concerning a utility's suspension of data access, and asks that the Commission define the "reckless" standard so that a utility was not "reckless" where a customer authorized third-party access to energy usage data. In that case, PG&E states that:

> PG&E would support deleting the utility suspension right proposed by SCE if the Commission modifies D.11-07-056 to remove the liability of the utility for "reckless" actions where the customer has authorized the third party to access customer energy usage data via the utility's backhaul consistent with Public Utilities Code Section 8380(f).[113]

On this topic, the Third Parties state that they "want the Commission to be the authority that determines whether third parties are acting in violation of the Privacy Decision and whether data access should be rescinded."[114] The Third Parties also argue that the proposal of SCE and SD&E could have a number of negative impacts. They argue that a default position of suspension or termination "could lead to frequent interruptions to third parties' businesses," that the Commission may lack "sufficient resources to decide 'expedited' proceedings within five days, " and that with a unclear notion of reckless action, utilities will "err on the side of caution."[115] The Third Parties conclude that this

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[112] *Id*. at 19.

[113] *Id*.

[114] *Id*. at 20.

[115] *Id*. at 21.

approach "would result in an unworkable framework that puts the third parties' businesses at risk at all times."[116]

After providing this detailed discussion, the Joint Report concludes that there are two options for the Commission:

> Option #1: Permit the IOUs to temporarily suspend a third party's access to the ESPI platform if the IOUs have a reasonable suspicion that the third party may have violated the Commission's privacy rules, unless and until the Commission orders otherwise. A secondary consideration for this Option #1 is whether the Commission could implement an expedited (5-day) process for resolving the threshold question about whether transmission should resume pending a fuller investigation into the allegations. Under this Option #1, the IOUs would notify the customers and the third party about its intention to suspend the third party's access to the ESPI platform.
>
> Option #2: If an IOU reasonably suspects that a third party may have violated the Commission's privacy rules, it will be absolved of liability under its tariffs if it continues to transmit data to the authorized third party provided that the IOU expeditiously informs the customer and the third party of any information regarding possible wrongdoing so that either can seek remedies under their contract or at the Commission. In other words, the Commission should clarify the IOUs' potential liability for acting "recklessly" and affirmatively state that continuing to transmit data to a third party after prompt notification of a potential violation of the Commission's privacy rules to the Commission will not be deemed a reckless transmission of data. The Commission retains authority at all times to investigate the issue on its own motion or pursuant to a complaint by the customer, consistent with evidentiary and other procedures that preserve the third party's due process rights, to determine the appropriate remedy, if necessary.[117]

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[116] *Id*.

[117] *Id*. at 21-22.

Finally, the Joint Report states that "all parties agreed that … the proposed third-party eligibility and registration criteria are adequate and reasonable."[118] This process is also called SCE's self-certification process.

### 5.5.1. Comments and Replies of Parties

EnerNOC Comments state that it supports SCE's self-certification process, desires "an easy, electronic or paper authorization process for the customer," "a reasonably short processing time … of that authorization."[119] EnerNOC also asks for "a Safe Harbor period before terminating third-party data access upon notification by the customer to ensure that the customer understands that its services provided by the third party will co-terminate with the data access."[120]

In addition, EnerNOC points out that until the Commission adopts tariffs implementing privacy rules, "third parties could not acknowledge receipt of utility tariffs that address customer data privacy rules."[121] EnerNOC asks that the Commission clarify "if acknowledgement of Attachment D to the Privacy Decision is a substitution for utility tariffs until the advice letters are approved."[122]

OPEN supports "a simple registration process for third party service provides" as proposed in the Joint Report.[123] OPEN argues that:

> Imposing additional hurdles to participation in the early stages of ESPI implementation, when the marketplace for data-driven

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[118] *Id*. at 22.

[119] EnerNOC Comments at 2.

[120] *Id*. at 3.

[121] *Id*. at 6.

[122] *Id*.

[123] OPEN at 6.

> efficiency services is immature, will discourage experimentation and creativity at precisely the moment when California seeks to foster innovation.[124]

OPEN also asks that the customer authorization process be "free of barriers to participation."[125] Specifically, OPEN "supports SCE's suggestion that the online authorization forms be pre-populated with certain account-specific information, and that its website will be updated to show the range of authorized third party service providers."[126]

OPEN argues:

> [T]hat the Commission should clarify the concept of recklessness to make clear that an IOU will not be deemed liable for continuing to transmit data to an authorized third party if the IOU timely reports to the Commission, the customer, and the third party a documented claim or concern regarding compliance with the Commission's rules. In other words, the IOU may not suspend or terminate the transmission of data to a customer-authorized third party unless and until the Commission orders the IOU to take such remedial action or the customer withdraws its authorization.[127]

OPEN expresses concern regarding the proposal of SCE and SDG&E, which it characterizes as a proposal to "suspend or terminate data access as a proactive measures to avoid the potential for liability when there have been no factual findings," which OPEN argues "would lead to frequent interruptions to third parties' businesses and cause irreparable financial and reputational harm."

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[124] *Id*. at 7.

[125] *Id*.

[126] *Id*.

[127] *Id*., underline in original.

TechNet argues that "the Commission should ensure that the customer authorization process remains simple and convenient."[128] TechNet also endorses "pre-populating the form with information already in the utility's possession" as "vital to eliminate many of the errors that will otherwise slow the authorization process."[129] TechNet, however, request that "the Commission and other parties … have an opportunity to review the customer authorization process and forms prior to their use."[130] TechNet cites the example of PayPal, and argues that if "third parties develop and wish to institute a third-party-led authorization process, the utilities will expeditiously act upon such a request."[131]

TechNet also recommends

> [T]hat the utilities not have a fact-finding role or the ability to unilaterally terminate access, unless directed by the Commission. If a utility expeditiously turns over credible evidence of significant third party violations to the Commission for investigation that should establish the presumption that the utility has not acted recklessly, leaving the Commission to exercise its role to determine the appropriate remedy. The credible evidence should be provided to the third party and the customer coincident with the information being provided to the Commission. The third party should have an opportunity in any Commission action to dispute or challenge the charges and, depending upon the severity of the charge, should have an opportunity to remedy the situation within a reasonable period of time determined by the Commission. The Commission should have a process that allows it to act in exigent circumstances.[132]

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[128] TechNet Comments at 4.

[129] *Id*. at 4.

[130] *Id*. at 5.

[131] *Id*. at 5-6.

[132] *Id*. at 8-9.

DECA also argues that the decision to terminate or suspend a third party should reside in the Commission. DECA recommends:

> [T]he Commission should instead require utilities to receive approval from Energy Division staff for terminating or suspending third party access to customer data where the utility believes a violation of Commission rules has occurred. This process can be authorized in a decision in this proceeding to occur after a formal letter to the Energy Division is drafted by a utility.[133]

Alternatively, DECA recommends "the use of an advice letter as a mechanism for addressing suspension of access to customer data by third parties."[134] In all cases, however, DECA recommends that the Commission "clarify that the term 'reckless', as used in D.11-06-056, does not apply to utility inaction while the utility is waiting for Commission staff to approve or deny a utility's request to terminate or suspend third party access to customer data or during a reasonable time period while the utility is preparing such a request."[135]

In reply comments, PG&E supports TechNet's proposal for permitting "customers … to obtain the on-line authorization form to fill out from other sources in addition to the utility" but that PG&E must "retain the ability to process, verify and authenticate the customer's authorization of a third party."[136]

PG&E opposes EnerNOC's request for a "safe harbor," arguing that:

> If a customer terminates third-party access in a manner inconsistent with the agreement between the customer and the third party, that is a matter for the customer and the third party

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[133] DECA Comments at 4.

[134] *Id*.

[135] *Id*. at 5.

[136] PG&E Reply Comments at 2.

> to resolve consistent with their agreement, not a matter for the Commission to dictate or arbitrate.[137]

In Reply Comments, SCE argues that "TechNet's request for a third-party-led authorization is unripe."[138] In addition, SCE argues that EnerNOC's safe harbor proposal is "unreasonable."[139]

SDG&E, in Reply Comments, also argues against EnerNOC's safe harbor proposal. Arguing from the perspective of customer service, SDG&E states that "if ultimately the customer requests the termination of data transfer, SDG&E must promptly honor that request to terminate the flow of unauthorized personal information."[140]

#### 5.5.2. Further Comments on Policies Applicable to Data Recipients, Liability, and Consent Forms

DRA argues that "IOUs should have discretion to suspend provision of customer energy usage data to any third party reasonably suspected of violating the Privacy Rules in order to protect customer privacy."[141] DRA holds that:

> The IOUs must have discretion to temporarily suspend third party access to customer usage data when they have a reasonable suspicion that a third party is violating the Privacy Rules. Without such discretion, the privacy protections lack substance. Prohibiting the IOUs from taking action on possible violations would expose customers to privacy threats from potential bad actors.[142]

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137 *Id*. at 3.

138 SCE Reply Comments at 8.

139 *Id*. at 4.

140 SDG&E Reply Comments at 2.

141 DRA Brief at 5.

142 *Id*. at 7.

In addition, DRA argues that the IOU consent forms filed with advice letters should disclose the purpose for each third-party use of the customer's energy usage data and require the third parties to provide annual notices to the customer with an option to revoke authorization.

EnerNOC argues against allowing IOUs to suspend third-party access to data based on suspicion. EnerNOC contends that "[s]uspension or termination of data access would be the remedy for a *finding* that a third party had not acted in compliance with the Privacy Rules."[143] EnerNOC instead supports the Third Parties' Proposal, in which

> [T]he utility would have to submit its information to support its "reasonable suspicion" to the attention of this Commission. If the IOUs do that in a timely manner, they should not be found to have acted recklessly because they will have alerted the Commission of their suspicion of a potential breach of customer privacy and requested the Commission to investigate their claim. In such a process, the third party, consistent with due process, would have notice and an opportunity to be heard to address or remedy the allegations before an objective body.[144]

EnerNOC points out that D.11-07-056, which envisions covered entities acting when they conclude that there is a "pattern or practice" of violative behavior that is a material breach of a contract is very different from a "reasonable suspicion" of a tariff violation by an IOU. In particular, EnerNOC notes that "customer data access … may not [involve] a contractual relationship with a utility."[145]

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143 *Reply Brief of EnerNOC*, April 11, 2013, at 4.

144 *Id*. at 5.

145 *Id*. at 7.

Finally, EnerNOC opposes DRA's request for revisions to the consent form and an annual notice. EnerNOC argues that:

> [I]f those … items were included on the consent form, … the third party would be demonstrating compliance to the IOUs. However, the Privacy Rules designate the Commission as the authority for determining compliance with their Privacy Rules.[146]

PG&E states that it agrees "that if the utilities are liable for third-party violations of the Commission's privacy rules even where the third-party access is authorized and controlled by the customer, then the utilities should and must have authority to suspend such access upon a reasonable belief that the privacy rules are being violated by the third party."[147] PG&E also points out that "Section 8380(f) expressly exempts a utility from liability for the security, use or misuse of customer energy usage data by a third party where the customer chooses to disclose the data to the third party."[148]

Finally, PG&E argues that DRA's objection to the utilities' privacy tariff advice letters is outside the scope of this proceeding, which PG&E contends "deals solely with the utilities' Customer Data Access Project applications."[149]

SCE, in its April 11, 2013 Reply, supports the DRA position that IOUs should have the discretion to temporarily suspend provision of customer energy usage data to any third party reasonably suspected of violating the privacy

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146 *Id*. at 8.

147 PG&E 4/11/13 Reply at 4.

148 *Id*.

149 *Id*. at 5.

rules.[150] SCE, however, argues that DRA's concerns about the contents of the customer consent form are outside the scope of this proceeding.[151]

### 5.5.3. Discussion

This decision finds that the third-party eligibility criteria that are proposed in the Joint Report are reasonable and consistent with the law because they ensure that a third party provides the basic information by which it can be accountable for the customer's data which it receives and has the technical competence to process the data. In addition, the utility is required to provide the third party with both a copy of the tariffs implementing the privacy rules along with Attachment D of D.11-07-056, which contain the privacy rules.[152] Finally, the proposed policies reasonably prevent the provision of consumer data to any third party on the Commission's list of prohibited companies. Finally, for CCAs and ESPs, D.12-08-045 adopts privacy protections that parallel those that apply to utilities.

As a result, this decision adopts the following as eligibility criteria, which were included in the Joint Report:

- *Provision of basic company information*: The third party must provide to the utility basic information about its company and how to contact its company. This information should include: company name; mailing address; and the names, telephone numbers, mailing addresses, and email addresses for any key business and technical contacts at the company.

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[150] *Southern California Edison Company's Reply Comments to the March 13, 20113 Opening Comments of the Division of Ratepayer Advocates*, April 11, 2013 (SCE 4/11/13 Reply) at 3.

[151] *Id*. at 4.

[152] D.12-08-045 requires that CCAs and ESPs act in the same way.

- *Demonstrate technical ability to connect to and access data from the utility's ESPI platform*: The third party will work with the utility to verify that the third party can technically access and obtain data from the utility's ESPI platform.
- Acknowledge receipt of the utility's tariff(s) and Attachment D of governing customer usage data privacy, and the automated transmission of usage data to customer-authorized third parties and Attachment D of D.11-07-056: Parties expect that when the Commission resolves the Data Privacy Advice Filings, each utility will have a tariff rule governing customer usage data privacy. Parties also expect that upon the conclusion of this proceeding, each utility's tariff rules will be updated (either with a new rule or modifications to existing rules) to govern the provision of automated customer usage data to authorized third parties. Each utility will provide its relevant tariff rule(s) to any third party registering to access the utility's ESPI platform and the third party must acknowledge receipt of the tariff rules(s) before it can receive the automated data transmission. In addition, each utility will provide Attachment D of D.11-07-056 to the third party, since this is the source of the tariffs.
- Absence from Commission's prohibited list: Should the Commission include a third party's name on a list of parties prohibited from receiving automated data, that party will not be "eligible" to receive data unless the Commission orders otherwise.[153]

These criteria are reasonable and serve to protect a customer's privacy from unwanted or inadvertent disclosure of personal data associated with smart meters.

Concerning the process by which a third party registers with a utility in order to receive ESPI data, we find it reasonable to adopt the process agreed to by the parties in this process that is characterized as "wait-and-see." Parties are

[153] Joint Report at 12-13.

eligible to receive ESPI data provided that they meet four conditions: (a) they obtain the requisite customer authorization; (b) they meet the technical eligibility requirements; (c) they acknowledge receipt of the relevant tariff rule(s) and Attachment D; and (d) they are not otherwise prohibited by the Commission from receiving such data. This approach creates a reasonable process whereby responsible parties who acknowledge the privacy rules can rapidly obtain access to data when authorized by a customer, yet it is a process that can also prohibit the provision of data to companies prohibited by the Commission.

The decision next turns to the major issues of concern to parties in this proceeding, the definition of "reckless" and the process for suspending a third party's access to the ESPI platform.

Based on the arguments of the parties and our considerations of the public interest, this decision adopts a policy based on a consideration of both options presented in the Joint Report. Specifically, if a utility reasonably suspects that a third party has violated the Commission's privacy rules, it will be absolved of liability under its tariffs if it continues to transmit data to the authorized third party provided that the utility expeditiously informs the third party and Commission's Energy Division with a notice of the suspected tariff violation along with any information regarding possible wrongdoing and that the utility seeks to resolve the suspected tariff violations with the third party. The utility and the third party will have a 21-day period in which to resolve the suspected violations, during which time the utility will continue transmission of data. At its discretion, Energy Division staff may facilitate resolution of the issues between the utility and the third party, and may grant an additional 21-day for resolving the matter.

If the matter is not resolved during the period set for resolution, the utility shall file a Tier 2 advice letter that seeks to move the third party to the list of entities ineligible to receive customer data. Notice of this filing should also be provided to all customers who have selected that third party to receive their usage data. The utility will continue transmission of data until Commission action resolves the matter. A utility who acts in this fashion will be deemed not to have made a reckless transmission of data.

In other words, the Commission clarifies that if a utility company continues to transmit data to a third party after prompt notification of a potential violation of the Commission's privacy rules to the third party, and to the Commission's Energy Division, seeks to resolve the matter, and, upon the end of the resolution period files a Tier 2 advice letter with the Commission that seeks to move the third party to a list of companies that are no longer eligible to receive data, then the utility will not be deemed to have made a reckless transmission of data.

Under the Tier 2 advice letter process, the Commission retains authority to address the advice letter in an expedited way administratively, the authority to investigate the issue on its own motion, the authority to address a complaint by the customer, and the authority to determine the appropriate remedy, if necessary, for any tariff violation. Following this procedure absolves the utility of liability concerning the continued transmission of data, ensures that the customer receives empowering information, and enables the Commission to respond to alleged misuses of customer information in a prompt fashion. The advice letter review process, moreover, does not place the utilities in a fact-finding role but does enable the Commission to terminate access

expeditiously should the Commission find that credible evidence warrants such action.

This decision rejects PG&E's request that the Commission modify D.11-07-056 to remove the liability of the utility for "reckless" actions whenever the customer has authorized the third party to access customer usage data. Instead, this decision makes clear that a utility that responds to indications of tariff abuses by a third party consistent with the procedures adopted in this decision is not reckless.

To clarify further, it is reasonable for the Commission, in its oversight of the utilities and smart meters, to take responsibility for ordering the suspension of third-party access to customer data. Under the procedures adopted in this decision, it is not necessary nor is it reasonable for a utility to suspend access to customer data based on *suspicion* that a third party may be violating tariffs.

Concerning SCE's suggestion that online authorization forms be "prepopulated with certain account specific information," this decision finds that this is in the customer's interest, and an appropriate thing to do. Prepopulating can reduce error rates and transaction costs.

Concerning the proposal that EnerNOC calls a "safe harbor," this decision finds that there is no need to force a utility to delay action on any customer's request to terminate the flow of information to a third party. There are two relationships at issue in such a request: the relationship between the customer and the utility and the relationship between the customer and the third party. It is unwise for regulatory policy to conflate these two relationships. The utility owes prime responsibility to its customer and the customer expects that the Commission will exercise its regulatory authority to maintain the customer's

interest in this relationship. It is the obligation of the third party to maintain and/or repair its relationship with the customer.

Concerning DRA's objection to the utilities' privacy tariff advice letters, we find that this issue is outside the scope of this proceeding, which deals solely with the utilities' CDA Project applications.

### 5.6. Other Matters

The Joint Report also included a list of details concerning the ESPI platforms that had the support of the parties to this proceeding. The Joint Report lists the following details:

- The customer will initiate authorization by selecting a registered third party from a drop-down list and indicating the accounts for which it is providing data access;
- After the customer submits the appropriate written authorization (hard copy or online), the IOUs will begin to provide third-party access to historical data within anywhere from 24 hours to 5 days.
    - Subsequent access will include updates of data on a lagged basis of up to 24 hours with the prescribed interval information (either hourly for residential or 15-minute for non-residential).[154]

The consensus details on how to provide the ESPI platform described above are reasonable.

It is good for California that all three utilities propose to implement this program through the use of a common data platform, ESPI. To the extent possible the utilities should implement this program in a uniform way, including standard feature sets, user interface and available data. To promote this

[155] *Id*. at 24.

outcome, the three utilities should collaborate with each other, with third parties and relevant standards-related organizations as to develop common requirements for the ESPI platforms to promote uniformity in system implementation with respect to access to the system by third parties (such as, but not limited to, standards version, user interface and features, data types and formats, registration and security processes, authorization forms, etc.). The common requirements shall be published by the utilities in a joint Advice Letter (Tier 1) filing to be made within 180 days of the adoption of this decision.

The Joint Report also states that there are two issues that need resolution:

> (1) whether and how the CCA and DA fee schedules should be modified consistent with the "no fee" structure agreed upon here, and (2) the process by which the IOUs can reasonably mitigate their liability for reckless transmission of customer data.[155]

Concerning the CCA and DA fee schedule, this is an issue beyond the scope of this proceeding. Although PG&E, SCE and SDG&E must provide information to CCAs and DAs on an equal footing with any other third party, as discussed above, it is beyond the scope of this proceeding to adopt a fee schedule for providing data to CCAs and DAs. That is an issue for the proceedings concerned with CCAs and DAs.

Concerning the IOUs' concern for reasonably mitigating their liability for reckless transmission of customer data, the process outlined above addresses and resolves this matter.

## 6. Categorization and Need for Hearing

Resolution ALJ 176-3290 categorized these proceedings as ratesetting and preliminarily determined that hearings would be necessary. The Scoping Memo

[155] *Id*. at 24.

affirmed that this proceeding was ratesetting, but, after noting that parties were exploring whether it was possible to settle outstanding issues, stated that it was "unable to either affirm or reverse" the preliminary determination that hearings would be necessary.

Due to the Stipulation filed in this proceeding on February 21, 2013, we determine that there are no outstanding factual issues, and hearings are not necessary.

## 7. Comments on Proposed Decision, Late Motions, and Revisions

The PD of ALJ Sullivan in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure.

Comments were filed on August 6, 2013 by EnerNOC, MEA, TechNet and OPEN (filing jointly), AReM, SCE, PG&E, SDG&E, SolarCity, and DRA. Reply comments were filed on August 12, 2013 by PG&E, SCE EnerNOC, and DRA.

On August 23, 2013, PG&E filed a Motion to supplement its comments and to correct a numerical error.[156] The Motion identified that the proposed decision, picked up cost numbers that PG&E had transposed in its application. Fortunately, the transposition of the numbers was not repeated in PG&E's testimony, and the transposition has no implications for revenue requirement – which was the sum of expense-related and capital-related costs. On August 27, 2013, via an e-mail to the service list, the ALJ set August 30, 2013, as the deadline for responding to the PG&E Motion. There were no responses. We grant

[156] Motion of Pacific Gas and Electric Company (U 39 E) to Supplement Comments on Proposed Decision in Order to Correct Numerical Error, August 23, 2013.

PG&E's Motion and we have corrected the transposed numbers in this proposed decision.

SCE argues that the PD should "make clear that the ED [Energy Division] has the authority to reduce or eliminate the 21-day resolution period, at its discretion, in cases where the initial IOU notice of a third party's violation of the tariff rules is readily apparent or egregious on its face."[157] SCE requests clarification stating that "the PD inadvertently excludes information about how the Commission will make the list [of prohibited parties] available to the IOUs."[158] SCE also points out that procedural delays require a revision permitting SCE to incur capital costs in 2014[159] and requests that "implementing tariffs should be comparable, but not 'identical.'"[160]

In response, we clarify that the Commission has authority to reduce or eliminate the 21-day resolution period following notification of a tariff violation by a utility. The Commission retains, pursuant to its statutory authority to "do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction."[161] Concerning the list of prohibited parties, the Commission concurs that the most efficient approach is for the Commission to update the list on the Commission's website and require that the utilities include the location, in the form of an internet webpage address, in their tariffs. We also revise the

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[157] SCE Comments on PD at 3.

[158] *Id*. at 4.

[159] *Id*. at 5.

[160] *Id*.

[161] § 701.

period in which SCE may incur capital costs and require that tariffs be "comparable" but not necessarily "identical."

PG&E states that it "supports the PD, provided minor changes and clarifications are made."[162] PG&E asks for 180 days to make a tariff filing – not the proposed 90 days – and states that longer period should not "impact the availability of CDA service."[163] PG&E, like SCE, also asks for Commission acceptance of "comparable" – not "identical" – tariffs.

PG&E argues further that the oversight process in the PD is "too cumbersome" and claims that the process is at odds with the D.11-07-056, and asks that the Commission "provide that if a utility reasonably suspects that a third-party has violated the Commission's privacy rules and/or the terms of the tariff, the utility shall inform the third-party and the affected customer regarding the suspected tariff violation."[164] PG&E also requests that the PD, in light of its cost cap, delete the revenue requirement cap and clarify that provision of information under CDA to CCA and DA customers at no cost is permitted.

In response, the PD now requires the filing of tariffs within 180 days of the adoption of the decision and no longer requires "identical" tariffs. The PD also relies on the cost cap, rather than a revenue requirement cap, and clarifies that the CDA is available to CCA and DA customers at no cost. We do not, however, change the oversight to require utilities to notify customers of suspected tariff violations prior to a Commission determination. A customer is free to halt the provision of customer data at any time, but it is not appropriate for the utility to

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[162] PG&E Comments on PD at 1.

[163] *Id*.

[164] *Id*. at 2

interfere in the relationship between the customer and an entity that the customer chooses to receive the data.

SDG&E expresses support for the PD, but asks for clarifications concerning the terms "ESPI" and "Open ADE" and asks further that the Commission not constrain web design for third party access to "drop-down" lists.

TechNet and OPEN (filing jointly) argue that the "proposed decision implements critical policies needed to ensure customers convenient access to their energy usage data in an automated format."[165] They also ask clarification that energy usage data covered by this decision also include natural gas data."

In reply comments, PG&E notes that neither the utility applications nor D.11-07-056 included gas usage data "within their scope or their cost estmates" and argues that TechNet and OPEN"s requires should be rejected without prejudice.[166]

In response, the PD finds that gas data is beyond the scope of the current application and proceeding. The Commission, however, would welcome considering applications that would provide gas usage data as well.

EnerNOC "supports moving as quickly as possible toward implementing the OpenADE/ESPI platform."[167] EnerNOC, however, asks for a series of modifications "to require the greatest consistency possible among the utilities in the data provided through ESPI."[168] EnerNOC states that it is "important to

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[165] TechNet and OPEN Comments on PD at 2.

[166] PG&E Reply Comments on PD at 3-4.

[167] EnerNOC Comments on PD at 2.

[168] *Id*. at 3.

know whether the data is revenue quality or not."[169] EnerNOC renews its request for "data access above 200 kW." Finally, EnerNOC asks that the third party "receive notification from the utility of the customer's election to revoke data access."

In response, we have modified the requirement to promote consistency, require n notification of whether the data is of "revenue quality," and to provide notification to the third party when a customer elects to revoke data access. Data access above 200 kW, however, is beyond the scope of this proceeding. We encourage utilities to offer this service and would welcome applications on this matter. These changes are consistent with the goals of the decision and should reduce confusion.

MEA points out that the privacy rules applicable to CCAs derive from D.12-08-045. MEA requests that that PD cite to this decision, where applicable. On the other hand, MEA argues that the PD "commits legal error analogizing CCAs to third parties."[170] MEA also asks that the PD authorize CCAs access to consumption data without a request from the customer.

In response, the revised PD adds references to D.12-08-045 and makes clear that the CCAs and ESPs have a special legal status. The issue of whether to ordering utilities to provide CCAs and ESPs access to consumption data generated by Smart Meters without customer consent and at no cost is beyond the scope of this proceeding.

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[169] *Id*.

[170] MEA Comments on PD at 3.

DRA argues that the PD "errs by delegating authority to Energy Division for dispute resolution of privacy rule violations."[171] DRA asks that the PD state that it is the ALJ Division's "duty to resolve complaints."[172]

In response, we find that DRA misinterprets the dispute resolution procedure. Energy Division does not have authority over privacy rule violations: it has authority to mediate disputes over alleged violations of privacy rules. In addition, ultimate resolution of disputes that parties cannot resolve by themselves rests with the Commission. Moreover, if a complaint is filed with the Commission, that will be resolved through the normal complaint process.

AReM states that it "supports the PD's determination that ESPs and CCAs should not be treated differently from third parties in paying for customer energy data."[173] In addition, AReM seeks modifications of certain Findings of Fact and Conclusions of Law.

In response, we have reviewed the Findings of Fact and Conclusions of Law and revised them as we deemed appropriate.

SolarCity "encourages the Commission to adopt the PD in its entirety and to require the IOUs to move forward with their respective programs expeditiously."[174]

Finally, we note that we have reviewed all the comments and reply comments on the PD, even when not explicitly referenced. In addition to the

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171 DRA Comments on PD at 2.

172 *Id*. at 4.

173 AReM Comments on PD at 1.

174 SolarCity Comments on PD at 2.

major changes discussed above, we have the revised the PD to improve clarity and to correct typographical errors that have come to our attention.

## 8. Assignment of Proceeding

Commissioner Michael R. Peevey is the assigned Commissioner and Timothy J. Sullivan is the assigned ALJ in this proceeding.

## Findings of Fact

1. On March 5, 2012, PG&E timely filed A.12-03-002, SDG&E timely filed A.12-03-003, and SCE timely filed A.12-03-004.

2. To facilitate the management of this proceeding, the ALJ consolidated the separate applications into one proceeding on April 17, 2012.

3. The Joint Report filed in this proceeding on July 30, 2012 demonstrated substantial consensus on policies associated with the provision of third-party access to customer usage data with the authorization of the customer.

4. The Stipulation of February 21, 2013 indicated that all parties agreed to move into the record of this proceeding all pleadings by parties to the proceeding, the transcript and the testimony served in connection with each utility's application.

5. The Stipulation of February 21, 2012 indicated that all parties agreed that evidentiary hearings on issues identified in the Scoping Memo were not needed.

6. Since there are no objections by any party, it is reasonable to identify *Pacific Gas and Electric Company, Smart Grid Customer Data Access (CDA) Project, Prepared Testimony* (March 5, 2012) as Exhibit PG&E-1 and move it into the record of this proceeding as evidence.

7. Since there are no objections by any party, it is reasonable to identify *Testimony of Southern California Edison Company in Support of Its Application for Approval of Proposal to Enable Automated Access of Customer Usage Data To*

*Authorized Third Parties and Approval of Cost Recovery Mechanism* (March 5, 2012) as Exhibit SCE-1 and move it into the record of this proceeding as evidence.

8. Since there are no objections by any party, it is reasonable identify *Prepared Direct Testimony of Ted M. Reguly On Behalf of San Diego Gas & Electric Company* (March 5, 2012) as Exhibit SDG&E-1 and we identify *Prepared Direct Testimony of Brendan Blockowicz on Behalf of San Diego Gas & Electric Company* (March 5, 2012) as Exhibit SDG&E-2 and move both exhibits into the record of this proceeding as evidence.

9. Since there are no objections by any party, it is reasonable to move into the record of this proceeding as evidence without further identification the applications, protests and responses to the applications; the motions for party status; the Joint IOU Report; and opening and reply comments to the Joint IOU Report, and the transcript of the May 14, 2012 PHC.

10. PG&E's CDA Project, if authorized, would share customer electric meter interval data using a standardized format knows as EPSI, when authorized by the customer.

11. SCE seeks approval to share customer electric meter interval data using the ESPI standard with third parties when authorized by the customer.

12. SDG&E currently provides third-party access to data when authorized by customers in a program called CEN.

13. SDG&E seeks authority to evolve the current program to adopt an Energy Services Provider Interface standard and to support web-based user interface and in other ways that enhance its usability.

14. The evidentiary record in this proceeding that the reasonable costs associated with PG&E CDA Project for the next four years amount to a total of $19.4 million ($ 8.91 million expense-related and $10.45 million capital-related).

PG&E estimates project costs of $6,965,548 in 2013, $6,421,314 in 2014, $2,880,926 in 2015 and $3,085,833 in 2016, for a total of $19,353,621 over this four-year period.

15. The evidentiary record in this proceeding indicates that the trajectory of capital and other costs associated with PG&E's CDA for the next four years will require an increase in revenue requirement that amounts to over $9 million over this same period.

16. It is reasonable for PG&E to establish a CDABA to record and recover the actual costs of the CDA project from 2013-2016. The CDABA would be a one-way balancing account, which would allow PG&E to record the revenue requirement associated with the actual O&M expense and capital cost incurred to implement the CDA Project.

17. It is reasonable for PG&E to recover funds booked to the CDABA by transferring the year-end balance of the CDABA, up to the amount as authorized by the Commission, to DRAM, and to consolidate the transferred amount with other DRAM revenue as part of the AET process.

18. It is also reasonable to require that if PG&E spends more than the authorized amount. PG&E must obtain Commission authorization to recover the difference in rates.

19. It is reasonable that PG&E's costs associated with this program in years beyond 2016 should be considered in PG&E's Test Year 2016 GRC.

20. It is reasonable for SCE to incur capital costs associated with developing a computer process for both this program to total $7,588,000 over the years "pre-2012," 2012, 2013 and 2014.

21. It is reasonable for SCE to incur labor costs associated with operating its ESPI program up to a total of $1,035 million over 2013 and 2014.

22. It is reasonable for SCE to incur non-labor expenses associated with communications, IT licensing and other matters associated with this programs totaling $477,000 over 2013 and 2014.

23. It is reasonable to consider SCE's costs of this program beyond 2014 in SCE's next GRC.

24. It is reasonable for SCE to recover recorded revenue requirements associated with its ESPI program in the distribution subaccount of the BRRBA and for the Commission to review these costs in SCE's annual ERRA proceeding. The review of costs does not include a general "reasonableness review," but instead should ensure that all ESPI-related program costs entries into the account are stated correctly and are consistent with Commission decisions.

25. Because SDG&E's costs associated with its ESPI program to provide third-party access to consumption data, when authorized, were reviewed in the SDG&E's GRC and approved in D.13-05-010, Findings of Fact 289-391, at 1068, D, it is not necessary to review them in this proceeding.

26. PG&E, SCE, and SDG&E plan to offer third-party access to customer interval data, when authorized by the customer and consistent with the privacy rules adopted in D.11-07-056, for no charge to either the customer or to the third party.

27. Because of the nature of the costs associated with providing third-party access to customer consumption data, it is reasonable to offer access at a fee of zero.

28. PG&E has clarified that its agreement with AReM and MEA is not a settlement of pricing issues that are the subject of other proceedings, but recognition that AReM and MES will have equal access at no cost to the

consumption data provided by PG&E at the request of a customer to a third-party.

29. Because of the passage of time, it is reasonable for PG&E, SCE, and SDG&E to implement the proposed services as soon as possible upon the adoption of this decision and to make a tariff filing within 180 days of the adoption of this decision.

30. There are no other proceedings that would deter implementation of these proposed services.

31. It is reasonable to require that the ESPI platforms have the following features:

- The customer will initiate authorization by selecting a registered third party from a drop-down (or other user-convenient) list and indicating the accounts for which it is providing data access;
- After the customer submits the appropriate written authorization (hard copy or online), the IOUs will begin to provide third-party access to historical data within anywhere from 24 hours to 5 days; and
- Subsequent access will include updates of data on a lagged basis of up to 24 hours with the prescribed interval information (either hourly for residential or 15-minute for non-residential);

32. It is reasonable to require that third-party eligibility criteria should be common across SDG&E, SCE and PG&E.

33. It is reasonable to require the provision of basic company information by all third parties who will receive customer data to the utility from which it seeks data.

34. It is reasonable to require that a third party receiving customer data must provide to the utility basic information about its company and how to contact its company. This information should include: company name; mailing address;

and the names, telephones numbers, mailing addresses, and email addresses for any key business and technical contacts at the company.

35. It is reasonable to require that a third party seeking access to data demonstrate technical ability to connect to and access data from the utility's ESPI platform. It is also reasonable to require that the third party work with the utility to verify that the third party can technically access and obtain data from the utility's ESPI platform.

36. It is reasonable to require that a third party seeking access to data acknowledge receipt of the utility's tariffs governing customer usage data privacy and the automated transmission of usage data to customer-authorized third parties.

37. It is reasonable for the Commission to create a list of third parties who are prohibited from receiving customer usage data from a utility, even when authorized by customers, and to make that list available conspicuously on its website.

38. It is reasonable to require that any third party seeking access to data not be on the list of third parties prohibited from receiving customer usage data.

39. It is reasonable to require that each utility offering third-party access to usage data consistent with the privacy rules adopted in D.11-07-056 and D.12-08-045 toinclude in its tariff sheets the web address for the Commission-adopted list of third parties prohibited from receiving customer usage data.

40. It is reasonable for the Commission to authorize utilities to use a registration process characterized as "wait-and-see," where parties are eligible to receive ESPI data provided that they meet four conditions: (a) they obtain the requisite customer authorization; (b) they meet the technical eligibility

requirements; (c) they acknowledge receipt of the relevant tariff rule(s); and (d) they are not otherwise prohibited by the Commission from receiving such data.

41. It is reasonable and consistent with Privacy Rule 6(e)(2) adopted in D.11-07-056 to require that when a customer requests that the utility discontinue providing data to a third party, that the utility immediately terminate the third party's automated access to the data of the customer who revoked the authorization. It is also reasonable that the utility notify the third party of the customer's revocation of data access.

42. It is reasonable to permit utilities providing the service authorized in this decision to pre-populate certain account-specific information in online authorization forms.

43. It is reasonable to require that a utility update its website to show the range of authorized third-party service providers.

44. It is reasonable to require that if a utility reasonably suspects that a third party has violated the Commission's privacy rules, that the utility expeditiously informs the third party and the Commission's Energy Division with a notice of the suspected tariff violation, along with any information regarding possible wrongdoing and that the utility seeks to resolve the suspected tariff violations with the third party.

45. It is reasonable to afford the utility and the third party a 21-day period in which to resolve the suspected violations, during which time the utility will continue transmission of data.

46. It is also reasonable that Energy Division staff, at their discretion, work to facilitate resolution of the issues between the utility and the third party, and for Energy Division staff to grant an additional 21 days for resolving the matter.

47. If the matter is not resolved during the period set for resolution, it is reasonable to require the utility to file a Tier 2 advice letter that seeks to move the third party to the list of entities ineligible to receive customer data. Notice of this filing should also be provided to all customers who have selected that third party to receive their usage data.

48. It is reasonable for the utility to continue transmission of data until Commission action resolves the matter, unless the customer revokes the authorization to transmit.

49. It is reasonable that a utility who acts consistent with the steps in findings 44 through 48 should not be deemed to have made a reckless transmission of data from the time of the notice until Commission action resolving the matter.

50. It is reasonable for the Commission, in its oversight of the utilities and smart meters, to take responsibility for ordering the suspension of third-party access to customer data. Under the procedures adopted in this decision, it is not necessary nor is it reasonable for a utility to suspend access to customer data based on *suspicion* that a third party may be violating tariffs.

51. It is not reasonable to require a utility to delay action on a customer's request to terminate the flow of information to a third party.

52. It is reasonable to require the utilities, to the extent possible, to implement this data service in a uniform way though through the use of a common data platform, ESPI. To the extent possible the utilities should implement this program in a uniform way, including standard feature sets, user interface and available data.

53. It is reasonable to require the utilities to identify the data provided as being "billing or revenue quality" or not.

54. It is reasonable for the Commission to require the utilities to file a Tier 1 Advice Letter within 180 days of the adoption of this decision to tariff this service. The advice letter review process will permit the Commission to promote common requirements for the ESPI platforms and to promote uniformity in system implementation with respect to access to the system by third parties and customers.

55. PG&E filed a motion on August 23, 2013, identifying certain numbers that were transposed in previous filings and in the proposed decision.

## Conclusions of Law

1. D.11-07-056 required PG&E, SCE and SDG&E to propose tariff changes to provide third parties access to a customer's usage data via the utility's backhaul when authorized by the customer and set forth criteria that the Commission applies to determine if the proposed services comply with the privacy policies adopted by the Commission.

2. The Commission jurisdiction over the tariffing of these service flows from § 701, which gives the Commission broad regulatory jurisdiction over public utilities.

3. Section 454 requires that the Commission find rates and services justified.

4. There is no legal reason to charge CCAs or DA providers differently from a third party who, with customer consent, seeks access to customer consumption data.

5. Because of the passage of time, it is reasonable for PG&E, SCE, and SDG&E to implement this program upon adoption by the Commission.

6. Conclusion of Law #9 of D.11-07-056 establishes that the Commission has oversight over "any third party, when authorized by the customer, that accesses,

collects, stores, uses, or discloses covered information relating to 11 or more customers who obtains this information from an electrical corporation."

7. Consistent with the Commission's oversight of Covered Entities, a third party will not be "eligible" to receive automated data from the IOUs' ESPI platforms to the extent that the Commission directs the IOU(s) to stop transmitting data to that third party.

8. The Commission bears responsibility for exercising regulatory oversight of Covered Entities to resolve formal complaints or conduct investigations into allegations or suspicions of potential or actual misuse of customer data by Covered Entities.

9. The Commission should create and post on its website a list of third parties who are not eligible to receive customer usage data from utilities.

10. Pursuant to Privacy Rule 6(e)(2) adopted in D.11-07-056, when a customer requests that the utility discontinue providing data to a third party, that the utility should immediately terminate the third party's automated access to the data of that customer.

11. If a third party's access to customer data is suspended or revoked by the Commission in any way, or if the Commission places a third party on the list of third parties who are not eligible to receive customer data, then it is appropriate and necessary for utilities to comply with the Commission's actions, unless these actions are stayed or enjoined by the appropriate court or agency.

12. A utility that responds to indications of tariff abuses by a third party consistent with the procedures adopted in this decision is not reckless. Specifically, a utility has not acted recklessly if it provides notice to, the third party and the Commission, seeks to resolve the matter with the third party, and,

absent a resolution, files an advice letter seeking to move the third party to the list of entities ineligible to receive customer data.

13. DRA's objections to the utilities' privacy tariff advice letters are outside the scope of this proceeding, which deals solely with the utilities' CDA Project applications.

14. Hearings are not necessary in this proceeding.

15. PG&E should be authorized to provide third parties access to customer data when requested by the customer.

16. SCE should be authorized to provide third parties access to customer data when requested by the customer.

17. SDG&E should be authorized to provide third parties access customer data when requested by the customer.

18. This proceeding should be closed.

## O R D E R

**IT IS ORDERED** that:

1. The document titled Pacific Gas and Electric Company, Smart Grid Customer Data Access Project, Prepared Testimony (March 5, 2012) is identified as Exhibit PG&E-1 and moved into the record of this proceeding as evidence.

2. The document titled Testimony of Southern California Edison Company in Support of Its Application for Approval of Proposal to Enable Automated Access of Customer Usage Data To Authorized Third Parties and Approval of Cost Recovery Mechanism (March 5, 2012) is identified as Exhibit SCE-1 and moved into the record of this proceeding as evidence.

3. The document titled Prepared Direct Testimony of Ted M. Reguly On Behalf of San Diego Gas & Electric Company (March 5, 2012) is identified as Exhibit SDG&E-1 and the document titled Prepared Direct Testimony of Brendan Blockowicz on Behalf of San Diego Gas & Electric Company (March 5, 2012) is identified as Exhibit SDG&E-2 and both exhibits are moved into the record of this proceeding as evidence.

4. The evidentiary record of this proceeding shall include, without further identification, the applications of the three utilities, the protests and responses to the applications; the motions for party status; the Joint Investor-Owned Utilities (IOU) Report; and opening and reply comments to the Joint IOU Report, and the transcript of the May 14, 2012 Prehearing Conference.

5. The Motion of Pacific Gas and Electric Company to Supplement Comments on Proposed Decision in Order to Correct Numerical Error (August 23, 2013) is granted.

6. Pacific Gas and Electric Company is authorized to offer its Data Access Project subject to the conditions in Ordering Paragraphs 17-20 below.

7. Pacific Gas and Electric Company is authorized to increase rates and charges over the next four years to meet the costs associated with the Customer Data Access Project, which total of $19.4 million ($8.91 million expense-related and $10.45 million capital-related) over four years. If Pacific Gas and Electric Company spends more than this authorized amount, Pacific Gas and Electric Company must obtain Commission approval to recover additional costs in rates

8. Pacific Gas and Electric Company is authorized to establish a Customer Data Access Balancing Account (CDABA) to record and recover the actual costs of the Customer Data Access Project from 2013-2016. The CDABA would be a one-way balancing account, which would allow Pacific Gas and Electric to record

the revenue requirement associated with the actual operations and maintenance expense and capital cost incurred to implement the Customer Data Access Project.

9. Pacific Gas and Electric is authorized to recover funds booked to the Customer Data Access Balancing Account (CDABA) by transferring the year-end balance of the CDABA, up to the amount as authorized by the Commission, to Distribution Revenue Adjustment Mechanism (DRAM), and to consolidate the transferred amount with other DRAM revenue as part of the Annual Electric True-Up process.

10. Pacific Gas and Electric Company's (PG&E) costs and revenue requirements associated with this program beyond 2016 shall be considered in PG&E's future General Rate Case proceedings.

11. Southern California Electric Company is authorized to offer third-party access to customer data consistent with the privacy rules adopted in Decision (D.) 11-07-056 and D.12-08-045 using the Energy Service Provider Interface data platform, as requested, subject to the conditions in Ordering Paragraphs 17-20 below.

12. Southern California Electric Company (SCE) is authorized to increase rates and charges to meet the costs associated with this service to recover capital costs associated with developing a computer process for both these tasks to total $7,588,000 over the years pre-2012, 2012 and 2013 and to recover labor costs that total $1,035 million over 2013 and 2014 and to recover non-labor expenses totaling $477,000 over 2013 and 2014. If SCE spends more than this authorized amount, SCE must obtain Commission approval to recover additional costs in rates.

13. For the period through 2014, Southern California Edison Company is authorized to record capital related revenue requirement and increment operating and maintenance costs associated with this new service in the distribution subaccount of its Base Revenue Requirement Balancing Account. Following standard regulatory practice, the capital-related revenue requirement will consist of depreciation, taxes and authorized return based on actual recorded rate base, including plant additions, accumulated depreciation reserve and accumulated deferred taxes, associated with the Energy Service Provider Interface data platform activities authorized by the Commission in this proceeding.

14. Pursuant to the Commission-adopted process for reviewing Southern California Edison Company (SCE) activities recorded in the Base Revenue Requirement Balancing Account, the recorded entries associated with this service will be reviewed by the Commission in SCE's annual Energy Resource Recover Account review applications. The scope of this review is limited to ensure that the cost entries into the account are stated correctly and consistently with Commission decisions. The scope does not include a further reasonableness review of this service and its costs.

15. Southern California Electric Company's (SCE) costs and revenue requirements associated with this program beyond 2014 shall be considered in SCE's future General Rate Case proceedings.

16. San Diego Gas & Electric Company (SDG&E) is authorized to modify its Customer Energy Network service to evolve into an Energy Service Provider Interface data platform as requested. SDG&E does not request additional rate changes to recover costs of evolving its current service.

17. To the extent possible, Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) shall offer a service that provides third parties access to customer usage data when authorized by the customer consistent with the privacy rules adopted in D.11-07-056 and D.12-08-045, under substantially similar terms and conditions. The Energy Service Provider Interface platforms of PG&E, SCE and SDG&E shall have the following features:

- The customer will initiate authorization by selecting a registered third party from a drop-down (or other user-convenient) list and indicating the accounts for which it is providing data access;
- After the customer submits the appropriate written authorization (hard copy or online), the utility will begin to provide third-party access to historical data within anywhere from 24 hours to 5 days; and
- Subsequent access will include updates of data on a lagged basis of up to 24 hours with the prescribed interval information (either hourly for residential or 15-minute for non-residential).

18. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) are authorized to file a Tier 1 advice letter seeking approval of tariffs offering the proposed data access services within 180 days of the adoption of this decision. PG&E, SCE, and SDG&E shall collaborate with each other, with third parties seeking the data, and with relevant standards-related organizations to develop common tariffs that, to the extent possible, are substantially similar in terms of standards, data platforms, data types, procedures for access to data by third parties, and methods of interacting with customers.

19. The tariffs offering third parties access to customer usage data consistent with the privacy rules adopted in D.11-07-056 and D.12-08-045 shall have the following characteristics:

- The tariffs must have a price of zero for both customers and third parties
- The service offered by the tariff must use a common Energy Service Provider Interface data platform.
- The utility providing the data access must, when requested by the third party, indicate whether the data is of "revenue quality."
- The tariffs shall require that to receive customer usage data when authorized by the customer and consistent with the privacy rules adopted in Decision (D.) 11-07-056 and D.12-08-045, a third party must do the following:
    - Provide to the utility basic information about its company and how to contact its company. This information should include: company name; mailing address; and the names, telephones numbers, mailing addresses, and email addresses for any key business and technical contacts at the company.
    - Demonstrate technical ability to connect to and access data from the utility's Energy Service Provider Interface data platform. It is also reasonable to require that the third party work with the utility to verify that the third party can technically access and obtain data from the utility's Energy Service Provider Interface data platform.
    - Acknowledge receipt of the utility's tariffs governing customer usage data privacy and the automated transmission of usage data to customer-authorized third-parties.
    - Not be on list of third parties whom the Commission has prohibited from receiving customer usage data, even when authorized by customers.
- The tariffs shall include the web link to the Commission's website where customers can access a list of third parties whom

the Commission has prohibited from receiving customer usage data, even when authorized by customers.

- The tariffs shall provide that when a customer requests that the utility discontinue providing data to a third party, that the utility immediately terminate the third party's automated access to the data of the customer who revoked the authorization, and provide the third party with notice of the customer's revocation.
- As a condition of tariffing, the utility must utility update its website to show the range of authorized third-party service providers.

20. Any utility providing the tariff services approved in this decision may pre-populate certain account-specific information in online authorization forms.

21. Any utility providing the tariff services approved in this decision must, if the utility reasonably suspects that a third party has violated the Commission's privacy rules and/or the terms of this tariff to inform the third party and Commission's Energy Division with a notice of the suspected tariff violation along with any information regarding possible wrongdoing. The utility shall seek to resolve the suspected tariff violations with the third party. The utility and the third party will have a 21-day period in which to resolve the suspected violations, during which time the utility will continue transmission of data. At its discretion, Energy Division staff may facilitated resolution of the issues between the utility and the third party, and may grant an additional 21 days for resolving the matter. If the matter is not resolved during the period set for resolution, the utility shall file a Tier 2 advice letter that seeks to move the third party to the list of entities ineligible to receive customer data. Notice of this filing should also be provided to all customers who have selected that third party to receive their usage data. The utility will continue transmission of data until Commission action resolves the matter. A utility who acts in this fashion will be deemed not to have made a reckless transmission of data.

22. Notwithstanding the process described in the previous paragraph, the Commission may shorten or eliminate the 21-day resolution period and order the utility to place a third party on the list of forbidden service providers in the event that the Commission determines that such action is warranted.

23. Hearings are not necessary in this proceeding.

24. Application (A.) 12-03-002, A.12-03-003 and A.12-03-004 are closed.

This order is effective today.

Dated September 19, 2013, at San Francisco, California.

MICHAEL R. PEEVEY
President
MICHEL PETER FLORIO
CATHERINE J.K. SANDOVAL
MARK J. FERRON
CARLA J. PETERMAN
Commissioners

# Exhibit I

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

**ENERGY DIVISION** **RESOLUTION E-4868**
**August 24, 2017**

# R E S O L U T I O N

Resolution E-4868. Approves, with modifications, the Utilities' Click-Through Authorization Process which releases Customer Data to Third-Party Demand Response Providers.

PROPOSED OUTCOME:

- This Resolution approves with modifications, the click-through authorization processes proposed by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) (together, Utilities) that streamlines, simplifies and automates the process for customers to authorize the Utility to share their data with a third-party Demand Response Provider(s).
- Resolves technical issues to increase customer choice in accordance with the principles outlined in Decision 16-09-056.
- Forms the Customer Data Access Committee to address ongoing issues.
- Requires the Utilities to file future Advice Letters to make additional improvements and an application for improvements beyond what is possible within the Advice Letter funding caps, including expanding the solution(s) to other distributed energy resource providers.

SAFETY CONSIDERATIONS:

- There is no impact on safety.

ESTIMATED COST:

- This Resolution approves funding for PG&E, SCE, and SDG&E in the amount of $12 million authorized in Decision 17-06-005.

By Advice Letter (AL) 4992-E (Pacific Gas and Electric Company), AL 3541-E (Southern California Edison Company), and AL 3030-E (San Diego Gas & Electric Company), Filed on January 3, 2017.

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## SUMMARY

This Resolution approves with modifications, the click-through authorization processes proposed by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) (together, Utilities) that streamlines, simplifies and automates the process for customers to authorize the Utility to share their energy related data with a third-party demand response provider, an essential step in enrolling in a third-party retail program. Specifically, this Resolution resolves many technical and policy issues needed to implement the authorization solutions. Further, this Resolution orders the creation of a stakeholder Customer Data Access Committee to address ongoing implementation issues. This Resolution also orders the Utilities to file future advice letters and an application to make further improvements to the click-through authorization process(es).

This Resolution addresses PG&E Advice Letter (AL) 4992-E, SCE AL 3451-E, and SDG&E AL 3030-E, filed on January 3, 2017 ("the Advice Letters"). We address the Advice Letters together to ensure consistent review and approval of the Utilities click-through authorization processes, which adds clarity for customers and third-party demand response providers in the marketplace.

We approve with modifications the click-through authorization processes proposed in the Advice Letters. We order the Utilities to:

1) Expand the data set that customers may authorize the Utility to share with third-party demand response providers in order to support a customer's right to choose service from a third-party;
2) Develop websites for reporting performance metrics with consistent metrics across the Utilities, and report metrics in real-time or near real-time, but no less frequently than daily;
3) Incorporate flexibility in the design of the click-through to accommodate future expansion of the click-through to other Distributed Energy Resource providers;
4) Form the Customer Data Access Committee with guidance from the Commission's Energy Division with any other interested stakeholders to

address improvements, ongoing implementation issues, and informal dispute resolution;

5) Begin developing the business requirements for API Solution 1 and file an application with a cost estimate for this and other improvements within fifteen months;

6) Implement various technical and functional specifications including among others: using alternative authentication measures; providing dual authorization; design the click-through using two screens and four clicks for the "quick path"; incorporating timely feedback from stakeholders when designing the display of the terms and conditions; ensuring that the click-through solutions are optimized for mobile devices; allowing an "indefinite" timeframe for customer authorization; sending an automatically generated notification such as email after authorization is completed; providing multiple pathways for customer revocation; delivering a shorter or summarized data set within ninety seconds on average after the Demand Response Provider requests the information ; and delivering the complete expanded data set within two days;

7) File a one or more Tier 3 Advice Letter(s) to request funding for improvements to the click-through authorization solution(s) described herein, beyond what was included in the extant Utility Advice Letters; and

8) File an application(s) within fifteen months to request funding for improvements beyond what is possible within the Advice Letter funding cap, including expanding the click-through authorization solution(s) to other distributed energy resource and energy management providers.

## BACKGROUND

I. What is Click-Through?

Decision 16-06-008 ordered PG&E, SCE and SDG&E to meet with the Commission's Energy Division and interested stakeholders to reach a consensus proposal on the click-through authorization process. This process enables a

customer to authorize the Utility to share the customer's data with a third-party Demand Response Provider[1] by completing a consent agreement electronically.[2] Authorizing data sharing is an essential step in the process of enrolling in and beginning a third-party program because the provider needs access to a customer's data in order to provide demand response services. The data is also necessary to bid and settle the customer's load drop into the California Independent System Operator's (CAISO) wholesale energy market.

Currently, third-party demand response providers are authorized to receive customer data from the Utility through a paper or PDF[3] Customer Information Service Request Demand Response Provider form (CISR-DRP Request Form) that the customer signs. The Utility must verify the identity of the customer through a review of the CISR-DRP Request Form before the data is released. Several third-party demand response providers argued in the proceeding that the current CISR-DRP Request Form process has led to reductions in enrollments because the process is time-consuming and difficult to complete.[4]

The Decision ordered the Utilities and stakeholders to develop a process that begins and ends on a third-party website, and verifies the customer's identity.[5] The Decision allows the process to "pre-populate" fields in the authorization

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[1] Demand Response Provider refers to a CPUC Demand Response Provider defined in Electric Rule 24 (PG&E, SCE) and 32 (SDG&E) (together, Rule 24/32):

> "An entity which is responsible for performing any or all of the functions associated with either a CAISO DRP and/or an Aggregator. DRPs must register with the CPUC and CAISO DRPs must also register with the CAISO. Unless otherwise specifically stated, all references to "DRP" herein shall refer to this definition."

[2] Decision (D.) 16-06-008, at Ordering Paragraph 1 and 9.

[3] Portable Document Format (PDF) is a file format used to present and exchange documents reliably, independent of software, hardware, or operating system.

[4] D.16-06-008 at 20-23, especially footnote 35 describing customer fatigue due to unsuccessful attempts at entering a login and password.

[5] D.16-06-008 at 12-14.

process, but clarifies that the customer must complete the click-through, "not a third party on behalf of the customer."[6]

In developing the click-through process, the Commission tasked Utilities and stakeholders to:

> "streamline and simplify the direct participation enrollment process, including adding more automation, mitigating enrollment fatigue, and resolving any remaining electronic signature issues."[7]

The Decision explained that in order to streamline, simplify, automate, mitigate enrollment fatigue and address electronic signature issues, stakeholders should:

> "attempt to identify unnecessary steps in the enrollment process and determine options to eliminate these steps. Parties should also discuss approaches to coordinate the Applicants' enrollment systems with those of the providers and/or aggregators and address any remaining issues with electronic signatures."[8]

Finally, the Commission ordered the Utilities to develop a consensus proposal in a stakeholder working group process and file it by November 1, 2016.[9]

## II. Working Group Development of Solutions

PG&E, SCE and SDG&E worked with the Commission's Energy Division and held more than sixteen working group meetings in person and on the phone over a six-month period. In addition to representatives from the Utilities and Energy Division, participants included the Office of Ratepayer Advocates (ORA), Advanced MicroGrid, the California Efficiency and Demand Management Council (formerly the California Energy Efficiency Industry Council), Chai

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[6] D.16-06-008 at 13-14.

[7] *Id.* at Ordering Paragraph 9.

[8] *Id*. at 22-23.

[9] The Commission's Executive Director granted the Utilities' request to file the consensus proposal on January 3, 2017.

Energy, CPower, eMotorWerks, EnergyHub, EnerNOC, Mission:Data, NRG, OhmConnect, Olivine, SolarCity, Stem, Sunrun, UtilityAPI, and Earth Networks (formerly WeatherBug), and others. The Assigned Commissioner's office also attended several meetings.

Over the course of the working group meetings, the stakeholders developed two different click-through frameworks for consideration. These frameworks, named Solution 3 and Solution 1 are fully described and compared in an Informal Status Report that the stakeholders served to the service list in application proceeding 14-06-001 et. al.[10] In the report, stakeholders also state their preference between the two frameworks and justification for their preference.

In Solution 3 or "OAuth Solution 3," the customer starts on the third-party Demand Response Provider's website, but then the customer is redirected to the Utility website via a 'pop up' window or iFrame window within the provider webpage. There the customer enters his credentials – either a Utility login and password or other identifying information to verify or authenticate their identity. Then the customer selects several options including how long the third-party will be able to access the data and authorizes the data sharing. After finalizing the authorization, the customer is re-directed back to the third-party Demand Response Provider's website. Solution 3 uses Open Authorization (OAuth) technology, similar to what many website service providers use to allow customers to create an account on website such as the New York Times using credentials from another service, such as Google or Facebook. In this way, a customer is able to use their credentials from one service and pass certain information on to the other provider. The other provider receives a limited amount of information and does not gain access to customer credentials.

Solution 1 or "API Solution 1" allows the customer to stay on the third-party website for the entire process. The customer enters information to verify or authenticate their identity and that is sent to the Utility to be processed by its

[10] *See* Informal Status Report at 1 and Appendix B, available on the Commission Demand Response Workshop page at: http://www.cpuc.ca.gov/General.aspx?id=7032.

back-end IT system. If the information is correct, then the utility returns information to pre-populate the authorization screens on the third-party provider's website. The customer completes and electronically signs the authorization and allows the Utility to share the customer's data with the third-party demand response provider. The third-party returns an electronic record to the utility indicating the authorization was completed. Solution 1 uses a type of Application Program Interface (API) technology.

On October 18 and November 5, 2016, Energy Division provided guidance on what the Utilities should include in their Advice Letter filings:[11]

1) Plans for implementing Solution 3 & proposed budget (w/DRP conditions)
2) A schedule for developing Solution 1 and a plan for cost recovery.
3) A transparent system to track the utility Green Button Connect performance for Solution 3
4) Improvements worked on in sub groups (CISR, Data Set)
5) Status of spending on Green Button Connect (D.13-09-025)

Finally, on January 3, 2017, PG&E, SCE and SDG&E each submitted an Advice Letter with proposals for OAuth Solution 3 and other improvements to the click-through authorization process.

## III. Policy Considerations for Improvements to the Click-Through Process

While D.16-06-008 ordered stakeholders to streamline and simplify the click-through authorization process, later Commission policies support directing the Utilities to pursue further improvements to the click-through processes, beyond what was filed in the Advice Letters. In D.16-09-056, the Commission established a goal and a set of principles for future demand response. These principles support making improvements to the click-through authorization process to increase customer choice, eliminate barriers to customer data access,

[11] Energy Division Advice Letter Guidance, October 18 and November 5, 2016, available at: http://www.cpuc.ca.gov/General.aspx?id=7032.

and develop a competitive market with a preference for third-party demand response providers.

The Commission established the principle that,

> "Demand response customers shall have the right to provide demand response through a service provider of their choice and Utilities shall support their choice by eliminating barriers to data access;"[12]

The Commission explained that demand response should be customer-focused. Customers should be able to enroll in any available demand response program of their choosing, regardless of the provider. Further, Utility and third-party demand response providers must educate customers and offer just compensation for the services customers provide.[13] To facilitate customer choice, Utilities must remove barriers to third-party access to customer data, while complying with Commission Privacy Rules.[14]

Further, the Commission established the principle that,

> "Demand response shall be market-driven leading to a competitive, technology-neutral, open-market in California with a preference for services provided by third-parties…"[15]

The Commission affirmed that all types of demand response programs should compete on a level playing field; but that some carve outs are still necessary given that the playing field is not level for all types of demand response.[16] To

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[12] D.16-09-056 at 46 and Ordering Paragraph 8.

[13] *Id.* at 50.

[14] Commission Privacy Rules refers to the "Rules Regarding Privacy and Security Protections for Energy Usage Data" established in D.11-07-056 and D.12-08-045 as part of the Smart Grid Rulemaking 08-12-009. These rules are repeated in each Utility's privacy rules – Electric Rule 25 for SCE, Rule 27 for PG&E and Rule 33 for SDG&E.

[15] *Ibid.*

[16] *Id.* at 50-51.

facilitate an increasingly competitive market, third-party demand response must be preferred.

Utilities and third-party providers are not currently on a level playing field because of the years of ratepayer investments in Utility programs, and because the Utility has access to the base of potential customers and their data. The playing field is made slightly more "level" with an improved click-through which creates a process by which third-party providers can direct their customers to grant them access to customer data. These third-parties may never have a completely level playing field because they do not have the same type of access to the customers as the Utilities. However, an improved click-through will make progress and help the development of a robust, competitive market.

Decision 16-09-056 further recognized the competition and inherent tension between third-party providers and the Utilities, finding that ultimately, customers will decide what the role of the Utility should be in the future.[17] The Commission emphasized customer choice and competitive neutrality by encouraging "the use of fair competition between the Utilities and third-party providers..." While the Commission recognized the importance of Utility experience and years of ratepayer investments in Utility programs, the Commission also separated third-party provider and Utility roles in the demand response auction mechanism in order to "improve competition for third-party providers."[18] Commission policy supports measures to improve competition for third-party demand response providers, and improving click-through beyond what was proposed in the Utility Advice Letters is consistent with this policy.

## NOTICE

Notice of PG&E Advice Letter (AL) 4992-E, SCE AL 3541-E and SDG&E 3030-E were made by publication in the Commission's Daily Calendar on January 5 and 6, 2017. PG&E, SCE and SDG&E state that a copy of the Advice

[17] *Id.* at 55-56.

[18] *Id.* at 56 and 70.

Letters were mailed and distributed in accordance with Section 4 of General Order 96-B.

## PROTESTS

PG&E AL 4992-E, SCE AL 3541-E, and SDG&E AL 3030-E were protested by the Joint Protesting Parties,[19] OhmConnect, Inc. ("OhmConnect"), Olivine, Inc. ("Olivine"), and UtilityAPI, Inc. ("UtilityAPI") on January 23, 2017.

The Utilities filed replies to the protests on January 30, 2017.

The following Section provides details of the issues raised in the protests and other issues that need clarification.

## DISCUSSION

1. Alternative Authentication Credentials

Decision 16-06-008 resolved the issue of authentication or verification in that it determined that the click-through authorization process sufficiently verifies the customer's identity. The Commission stated that the click-through authorization process, "provides reasonable verification that the customer completed the form," because of "the nature of the information requested, e.g., the service account number, address, and name demonstrates that the customer completed the form."[20] This means that the identity of the customer has been authenticated or verified because of the type of information the customer is required to include in the form.

[19] The Joint Protesting Parties include the Joint Demand Response Parties (Comverge, CPower, EnerNOC, and EnergyHub), the California Energy Efficiency Industry Council (now the California Efficiency and Demand Management Council), and Mission:Data Coalition. In comments to the Draft Resolution, the Joint Protesting Parties became the Joint Commenting Parties, where Comverge did not contribute and Olivine joined in contributing, instead of submitting separate comments.

[20] D.16-06-008 at 12 and footnote 20.

Both OAuth Solution 3 and API Solution 1 anticipate a system where the customer first enters some identifying information. The Utility then verifies the customer identity based on that information, and provides customer information to pre-populate data fields.[21] When the Utility provides this information, the customer is relieved of the work of finding all of their account information. This is consistent with the goals of the Decision to "streamline and simplify the direct participation enrollment process, including adding more automation, [and] mitigating enrollment fatigue."[22]

While the D.16-06-008 determined that the click-through process verifies or authenticates the customer identity, the Decision did not resolve the issue of how much identifying information is needed before releasing the type of information that would be used to pre-populate the click-through authorization screen(s). SCE expressed concern about releasing data needed to pre-populate the authorization screen(s) because it could conflict with data minimization principles in Commission Privacy Rules. PG&E explained that it could only release this information once it verifies the customer, after the completion of the authorization process.[23] Among other reasons, Utilities expressed a preference for OAuth because it uses the customer login and password for the Utility account to pre-populate the authorization screens. The Utility login is viewed as more secure because the Utility has already verified the customer identity in order to establish the online account.[24]

Stakeholders however, advocated for alternative authentication credentials because the use of utility login and password presents a problem for many customer classes.[25] Requiring the use of utility login and password is

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[21] PG&E Advice Letter 4992-E at 4-5, SCE Advice Letter 3451-E at 4, SDG&E Advice Letter 3030-E at 3-4, and Informal Status Report at 1 (Attachment A to this Resolution).

[22] *Id.* at Ordering Paragraph 9.

[23] Click-Through Working Group Notes at 15-18, Part 3: September 13, 2016, available at: http://www.cpuc.ca.gov/General.aspx?id=7032.

[24] Click-Through Working Group Notes at 19-20, Part 2: August 24, 2018, available at: http://www.cpuc.ca.gov/General.aspx?id=7032.

[25] Informal Status Report at 4, 8, 10-11, 14 and Appendix E.

problematic for customers who do not have online accounts,[26] customers who have forgotten their login or password (or have trouble resetting it), and representatives of commercial customers who do not have access to the utility account on behalf of the company.[27] Many stakeholders preferred the use of static credentials such as the customer service account number and zip code,[28] while the Utilities asserted the need for these credentials to evolve as industry best practices evolve.[29]

The majority of the stakeholders agreed that the pieces of identifying information or credentials that the customer must enter in order to pre-populate and initiate the click-through authorization process should be limited to information that is easily available to the customer. The specific credentials may evolve over time as industry best practices evolve, but the credentials should be no more onerous than a similar online utility transaction.[30]

### 1.1. Utility Click-Through Proposals for Alternative Authentication

Consistent with working group discussions, the Utilities agreed with the general principle that alternative authentication should be no more onerous than similar Utility processes.[31] PG&E noted that static fields such as name, address, and service account identification number are less secure than what PG&E requires currently. For some Utility transactions, PG&E requires last name, zip code, and

[26] *Id.* at Page 10 citing Utilities Smart Grid Annual Reports, Metric #9 from October 2015 showing that over half of California ratepayers do not have online utility accounts.

[27] Joint Protesting Parties Protest at 13 explaining that the need for alternative authentication for commercial customers was discussed many times during the stakeholder process.

[28] Informal Status Report at 4, 8, 10-11, 14 and Appendix E.

[29] PG&E Advice Letter 4992-E at 11-12, SCE Advice Letter 3451-E at 9-10, SDG&E Advice Letter 3030-E at 5.

[30] *Id.* and Informal Status Report at 11 stating that the "authentication process must not require anything of the customer above and beyond what is needed to authenticate at a utility's website directly."

[31] PG&E Advice Letter 4992-E at 11-12, SCE Advice Letter 3451-E at 9-10, SDG&E Advice Letter 3030-E at 5.

the last four digits of a customer's social security number or tax identification number.[32] Initially, SCE stated that it would not allow for ongoing data transfer for customers who decline to create a My Account or use alternative authentication. Instead, SCE would "provide a one-time data transfer for the purposes of determining a customer's eligibility."[33] However, in reply comments, SCE re-examined the issue and determined that ongoing data will be provided with "guest" logins or alternative authentication credentials. SCE maintains its commitment to provide a summarized data set to facilitate a determination of eligibility.[34] Similarly, SDG&E agreed to provide ongoing data to the Demand Response Provider for customers that enter alternative authentication credentials. SDG&E proposed however, to provide alternative authentication credentials for residential customers only and not commercial customers so it could focus its efforts.[35] The credentials SDG&E proposes using include the ten-digit SDG&E bill account number, the zip code for the account service address, and the last four digits of the social security number or federal tax identification number.

### 1.2. Protests to Utility Proposals for Alternative Authentication

Olivine, OhmConnect, and the Joint Protesting Parties addressed alternative authentication credentials in their protests. Olivine believes that SCE should implement a solution that provides ongoing access to data when alternative credentials are used. Olivine states that SCE's proposal for a one-time data transfer may be relevant to some use cases, but it does not meet the requirements for Electric Rule 24/32 Direct Participation.[36] OhmConnect supports the general principle discussed in the working group that the click-through authorization process developed here should be no more onerous than similar utility transactions.[37] OhmConnect believes adopting this general principle will help to

[32] PG&E Reply to Protests at 3-4.

[33] SCE Advice Letter 3451-E at 9-10.

[34] SCE Reply to Protests at 5.

[35] SDG&E Advice Letter 3030-E at 5 and Attachment A to the Advice Letter at 3-4.

[36] Olivine Protest to the Advice Letters at 2.

[37] OhmConnect Comments on Draft Resolution E-4868 (Draft Resolution) at 10.

achieve the demand response described in D.16-09-056[38] because this principle eliminates barriers to data access and supports market-driven demand response.[39]

The Joint Protesting Parties oppose the proposals of all three Utilities. During working group meetings, the Joint Protesting Parties agreed to prioritize OAuth Solution 3 with conditions. One condition included alternative credentials to verify customer identity as well as to finalize the authorization.[40] The Joint Protesting Parties oppose PG&E's refusal to use static credentials because many Utility programs only require the customer to enter the name, address and account number, which is less information than may be required under PG&E's proposal. The Joint Protesting Parties argue that to achieve a level playing field, all demand response programs should have parallel customer authentication requirements.[41] Like Olivine, the Joint Protesting Parties oppose SCE's refusal to allow ongoing data access with alternative credentials. Finally, the Joint Protesting Parties oppose SDG&E's proposal because it incorrectly assumes that commercial customers will be able to manage a single user name and single set of credentials. This issue was addressed many times throughout the stakeholder process and the Joint Protesting Parties believe that OAuth Solution 3 is not viable without alternative authentication for all customer classes.[42]

### 1.3. Discussion

It is reasonable to adopt an alternative authentication principle. The alternative authentication credentials shall be limited to information that is easily available to the customer and the specific credentials should be no more onerous than

[38] *See* D.16-09-056 at 46 and Ordering Paragraph 8.

[39] OhmConnect Protest to the PG&E and SCE Advice Letters at 2-3, and OhmConnect Protest to the SDG&E Advice Letter at 2-3.

[40] Joint Protesting Parties Protest to the Advice Letters at 9.

[41] *Id.* at 10.

[42] *Id.* at 13.

those required for a similar online utility transaction.[43] Taking this approach removes the barrier of opening a utility account[44] consistent with the principles established in D.16-09-056, and the goal of reducing customer fatigue established in D.16-06-008.

We find however, that the use of social security numbers as suggested by PG&E and SDG&E to be unreasonable due to the burden placed on customers by being asked to provide such sensitive information. The social security number is a sensitive piece of information that many customers prefer not to enter because it is tied to other highly confidential processes, such as bank accounts, credit, and employment records. Further, not all ratepayers are eligible for social security numbers or federal tax identification numbers.[45] Thus, requiring customers to enter a social security number in order to share their data as part of the enrollment process would create additional barriers for joining third-party demand response programs. The alternative authentication credentials shall not include any part of the social security or federal tax identification number.

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[43] PG&E Advice Letter 4992-E at 11-12, SCE Advice Letter 3451-E at 9-10, SDG&E Advice Letter 3030-E at 5, Informal Status Report at 11, Joint Protesting Parties Protest to Advice Letters at 9-10, OhmConnect Protest to PG&E and SCE Advice Letters at 2-3, and OhmConnect Protest to SDG&E Advice Letter at 2-3.

[44] *See* Informal Status Report at Page 10 citing IOU's smart grid annual reports, Metric #9 from October 2015 showing that over half of California ratepayers do not have online utility accounts.

[45] *See* Robert Warren, *Democratizing Data about Unauthorized Residents in the United States: Estimates and Public-Use Data, 2010-2013*, 2 JMHS no. 4, available at: http://cmsny.org/democratizing-data-about-unauthorized-residents-in-the-united-states-estimates-and-public-use-data-2010-to-2013/ (accessed July 8, 2017), showing that California has between 2.5 and 2.9 million undocumented immigrant residents.

*See also* U.S. DEPT. OF TREASURY, INTERNAL REVENUE SERVICE, PUB. 1915, UNDERSTANDING YOUR IRS INDIVIDUAL TAXPAYER IDENTIFICATION NUMBER, (Nov. 2014), available at: https://www.irs.gov/pub/irs-pdf/p1915.pdf (accessed July 8, 2017), showing that undocumented immigrants are ineligible for social security numbers and may apply to obtain an individual taxpayer identification number (ITIN), but only for the purposes of filing taxes.

We agree with the Joint Protesting Parties that the functionality of alternative authentication credentials must be available to all customer classes and must allow customers to authorize ongoing data to the third-party Demand Response Provider of their choice. Including this essential functionality in the click-through authorization process is consistent with the principles defined in D.16-09-056.

2. Dual Authorization

For partnering demand response providers, the ability for a customer to authorize two providers at once is critical to creating a streamlined authorization process.[46] In 2016, Olivine partnered with eight out of the nine providers that won demand response auction mechanism contracts.[47] Olivine provides CAISO Demand Response Provider services like registering customer service accounts and scheduling bids and settling in the market as described in Electric Rule 24/32. Olivine also provides other demand response services including forming bids, and customer facing demand response services.[48] Olivine typically partners with another Demand Response Provider that oversees customer contact such as education, marketing, and notification of events. In this scenario, both Olivine and the partnering provider need access to customer data. Providing an efficient method for the customer to authorize the Utility to simultaneously share their data with both providers creates efficiency for providers and their customers. The ability for the customer to authorize more than one provider in a single authorization is critical to such emerging business models.[49]

[46] *See* Informal Status Report at Appendix E, describing functional requirements needed by third-party demand response providers.

[47] Informal Status Report at 14, footnote 7.

[48] OLIVINE, INC., *DRAM SERVICES*, available at: http://olivineinc.com/dram/ (accessed on May 8, 2017), explaining the services Olivine provides to demand response providers participating in the demand response auction mechanism pilot.

[49] Olivine Protest at 2.

2.1. Utility Click-Through Proposals for Dual Authorization

Currently, PG&E and SDG&E provide dual authorizations in their paper CISR-DRP Request Forms while SCE requires customers to fill out two separate Request Forms.[50] PG&E has included dual authorization functionality on the paper forms since 2016 and plans on adding the functionality to the new click-through authorization process.[51] Similarly, SDG&E will provide dual authorization on both the online and paper authorization processes.[52]

In its advice letter, SCE stated it planned to include dual authorization in its online click-through authorization process, but not on its paper CISR-DRP Request Form. Further, SCE stated dual authorization would be limited to customers who use their Utility login and password, but not to customers who use the alternative authentication credentials described in Section 1.[53]

2.2. Protests to Utility Proposals for Dual Authorization

Olivine protested this issue, urging SCE to allow dual authorization for its on-line click-through authorization process and its paper CISR-DRP Request Form. Additionally, Olivine requested that click-through systems be designed to support "more than one" third-party authorization, not limiting the system to supporting the authorization of two demand response providers at a time. This could allow for future flexibility and the possibility of authorizing three or more Demand Response Providers in one action.[54] In response to Olivine's protest, SCE changed its position and stated it will include dual authorization on both the online and paper authorizations on the condition that, (1) this functionality can roll out at the same time for both processes, and (2) SCE's support for dual

[50] *Compare* CISR-DRP Request Form, PG&E Electric Sample Form 79-1152 and SDG&E Electric Sample Form 144-0820 at 1, with SCE Electric Form 14-941 at 1. All three forms became effective January 1, 2016.

[51] PG&E Advice Letter 4992-E at 10.

[52] SDG&E Advice Letter 3030-E, Attachment A at 10.

[53] SCE Advice Letter 3541-E at 7.

[54] Olivine Protest at 2.

authorization on the CISR-DRP Request Form does not imply support for dual authorization for other types of customer request forms.[55]

2.3. Discussion

We find that dual authorization functionality is reasonable on the paper CISR-DRP Request Forms as well as on the online click-through authorization. Dual authorization shall be incorporated into OAuth Solution 3 and any future improvements to the click-through process(es). Further, dual authorization shall be available to both customers who complete the click-through authorization using Utility credentials or alternative authentication credentials. Dual authorization reduces customer fatigue and streamlines the process as intended in D.16-06-008 by allowing the customer to fill out one form or complete one online process to authorize two providers. Additionally, dual authorization removes the data access barrier of requiring a customer to fill out two forms described in the demand response principles in D.16-09-056.

We find reasonable SCE's request to delay implementation of dual authorization in the paper process until dual authorization for the online process has been developed. It is reasonable because SCE will be implementing dual authorization for the first time and may need additional time to change its internal processes. We make no determination about requirements for other customer information service request forms or the functionality preferred by SCE for those forms and processes. We also find that Olivine's suggestion of allowing for flexibility to potentially allow for more than two providers on one form is novel, however no information was provided to indicate that such functionality is needed. If the Utilities are able to include this functionality for future system flexibility at minimal additional cost, they are encouraged to do so, but should not delay implementation of the first phase of OAuth Solution 3.

3. Design: Number of Clicks/Screens

The working group discussed the number of screens a customer sees and the number of clicks a customer must execute in order to complete the authorization.

[55] SCE Reply to Protests at 9-10.

The greater the number of screens and clicks, the greater the likelihood that the customer will quit the process. Many stakeholders advocated for limiting the number of screens to two and the number of clicks to four, while the Utilities emphasized that this would not be possible for all use cases.[56]

### 3.1. Utility Proposals for Number of Clicks/Screens

All three Utilities believe that limiting the number of screens to two is possible with one screen for authentication and one screen for authorization. The Utilities are incorporating this requirement into their plans.[57] However, SDG&E departed from that position slightly stating that authentication would include an additional screen, presenting customers with linked accounts and service addresses.[58] In response to protests, SDG&E decided to eliminate this step in the process, thereby removing any additional clicks or screens.[59]

Regarding the number of clicks needed, all three Utilities expressed a commitment to reducing the number of clicks. PG&E and SDG&E agree with stakeholders that the number of clicks should be minimized and four may be enough for the majority of use cases. There are cases however, where more clicks will be needed including additional authentication measures like a click box or "captcha," where multiple service agreements exist and need to be unchecked, as well as when the customer needs to change options like the length of authorization.[60] SDG&E also mentioned that it would include an additional check box to finalize the authorization, which would result in an extra click.[61] In response to protests, SDG&E further reviewed its position and eliminated this extra click.[62] SCE explained in its Advice Letter that it is committed to

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[56] Informal Status Report at Appendix E.

[57] PG&E Advice Letter 4992-E at 10, SCE Advice Letter 3541-E at 7, and SDG&E Advice Letter at 3030-E at 5.

[58] SDG&E Advice Letter at 3030-E, Attachment A at 2.

[59] SDG&E Reply at 2.

[60] PG&E Advice Letter 4992-E at 11, and SDG&E Advice Letter at 3030-E at 5.

[61] SDG&E Advice Letter at 3030-E, Attachment A at 6.

[62] SDG&E Reply at 5.

minimizing the number of clicks and incorporating Demand Response Provider feedback, but it is too early to determine the number of clicks needed.[63] In response to protests, SCE explained that it would endeavor to limit the number of clicks to four for all use cases, but that may not be possible.[64]
Finally, in its Advice Letter, SDG&E describes the design of the customer authorization platform as, "a web page with a CISR-DRP form web application widget 'mashed up' into it."[65] Many at the January 9, 2017 workshop understood this to mean that the CISR-DRP Request Form would be embedded in its entirety on a web page. In response to protests, SDG&E clarified that "form" and "mashed up" were technical terms of art and SDG&E's solution will include summarized information and will not require customers to input text fields.[66]

3.2. Protests to Utility Proposals for Number of Clicks/Screens

Olivine, OhmConnect, and the Joint Protesting Parties protested this issue. Olivine argues that without design mock-ups, it is difficult for parties to judge the Utilities' implementation plans. Olivine raises concerns about SDG&E's "mashed up" widget embedded form, but believes PG&E and SCE solutions to be simplified and streamlined.[67] OhmConnect raises concerns that the Advice Letters failed to provide specific language or layouts for the solutions. OhmConnect also urges PG&E and SCE to commit to two screens.[68] OhmConnect opposes the additional screens and clicks in SDG&Es solution.[69] Further, OhmConnect urges the Utilities to pre-populate all the elements of the click-through authorization so that customers can complete the process as quickly as possible.[70] The Joint Protesting Parties argue that the Utilities should limit the number of clicks to no more than four. The Joint Protesting Parties raise

[63] SCE Advice Letter 3541-E at 9.

[64] SCE Reply at 9.

[65] SDG&E Advice Letter at 3030-E, Attachment A at 4.

[66] SDG&E Reply at 2-3.

[67] Olivine Protest at 5.

[68] OhmConnect Protest to PG&E and SCE at 3-4.

[69] OhmConnect Protest to SDG&E at 3 and 5.

[70] OhmConnect Protest to SCE and PG&E at 3; and OhmConnect Protest to SDG&E at 4-5.

concerns about SDG&E's solution because the idea of a form being incorporated into a webpage seems to contravene working group progress, and would not provide a customer friendly experience. A solution like this could lead to customers falling out of the authorization flow and becoming stranded on SDG&Es website.[71]

3.3. Discussion

We find the Utility proposals as clarified in the reply comments to be reasonable. Indeed, there seems to be a consensus on this issue, despite the protests. The concerns about the extra clicks or screens in SDG&E's solution and the need for a firmer commitment to minimizing clicks and screens from SCE were resolved in reply comments. In the Informal Status Report, the demand response providers and stakeholders describe the user experience in terms of the "quick path." There are many cases where a customer would need to use extra clicks or be directed to additional screens like forgetting a password to the Utility account. Because the parameters in the Informal Status Report indicate that the proposal to have four clicks maximum and two screens maximum only applies in the "quick path," we find the requirements in Appendix E of the report reasonable. We also find that minimizing clicks and screens is essential to creating a streamlined process as required by D.16-06-008. In their comments on the Draft Resolution, the Joint Commenting Parties request that the Commission further define the "quick path" in order to avoid doubt and ensure the timely implementation of OAuth Solution 3.[72] PG&E, SCE, and SDG&E shall ensure that in the "quick path," the click-through authorization OAuth Solution 3 can be completed with a maximum of four clicks and only two screens. The "quick path" shall be defined as a user flow in which the customer:

(1) Was not already logged into the utility account;
(2) Does not click the "forgot your password" link;
(3) Does not initiate a new online Utility account registration;
(4) Has a single service account, or intends to authorize all service accounts;
(5) Accepts the default timeframe for authorization;

[71] Joint Protesting Parties Protest at 13-14.

[72] Joint Commenting Parties Comments on Draft Resolution at 5-6.

(6) Does not click to read the detailed terms and conditions; and
(7) Uses either utility login credentials or alternative authentication. credentials.

Further, in all cases except for when the customer clicks the "forgot your password" link or initiates a new online Utility account registration, the click-through authorization process shall be completed in two screens.[73]

Regarding additional design concerns, we agree with the Joint Protesting Parties that there must be a clear path back to the authorization flow wherever possible[74] for cases where a customer somehow leaves the flow. For example, if a customer fails at resetting their password, a clear path should exist to begin the authorization process again. Finally, we agree with OhmConnect that the elements in the click-through process should be pre-populated to minimize customer fatigue and prevent drop off. PG&E, SCE, and SDG&E shall work with parties and any interested stakeholders to address these and any other design issues in the Customer Data Access Committee as described in Section 18 of this Resolution.

4. Display of Terms and Conditions

The terms and conditions that will be displayed within the authorization screens include the legal language from the paper CISR-DRP Request Form.[75] During the working group process, a consensus was formed that the OAuth Solution 3 should have summarized terms and conditions information on the authentication and authorization screens. Reducing the formal legal language on the click-through authorization would likely reduce customer confusion and

[73] *Id*.

[74] *See* SCE Comments on Draft Resolution at 4, and Appendix A at A-3. Further, if a question arises about whether a path back to the authorization flow is possible, parties should take the issue to the Customer Data Access Committee as described in Section 18.

[75] Such as the full list of data points that a customer will authorize the Utility to share with the Demand Response Provider, an explanation of the relationship between the provider and the customer, and a release of liability for the Utility.

fatigue.[76] Instead, the complete terms and conditions could be available through a link. During the working group, stakeholders expressed concern about the customer confusion that a scroll bar or pop-up tab could cause. For example, a scroll bar could be difficult to manage on a mobile device given the small screen space. A pop-out screen or tab could also be difficult to manage because many users may not know how to return to the authorization screen. These types of challenges would likely cause a customer to "drop off" or abandon the authorization.

4.1. Utility Proposals for Display of Terms and Conditions

Each Utility takes a different approach. PG&E states it will provide a link to the terms and conditions. SCE does not commit to the exact design, but states SCE states it will provide a link to the full list of data points that customers will authorize. SDG&E will provide a link to the terms and conditions, but the authorization button will be greyed out or unusable until a customer clicks on the link.[77] No parties protested this issue.

4.2. Discussion

We find that reducing the formal legal language and ensuring that the authorization screens are written in clear and concise language, is an effective way to reduce customer fatigue in accordance with D.16-06-008. While we decline to order a specific method for accessing the complete terms and conditions, we stress the importance of reducing the likelihood of customer abandonment resulting from user experience problems. We do however find that customer fatigue and abandonment is especially likely in the case of scroll bars and requiring customers to click on a link before approving the authorization.[78] Therefore, the terms and conditions shall be summarized, preferably, with a link to the full terms and conditions, and shall not make use of a scroll bar, or pop-out that the customer is required to view before approving

[76] Informal Status Report, Appendix E at 2, Requirements for the User Experience points 8-9.

[77] PG&E Advice Letter 4992-E at 9-11, SCE Advice Letter 3541-E at 7, SDG&E Advice Letter 3030-E at 5 and SDG&E Reply at 3.

[78] Joint Commenting Parties Comments on Draft Resolution at 6-7.

the authorization. We encourage customers to be informed, but leave it up to the customer to decide whether they would like to read the full terms and conditions. Additionally, the Utilities shall provide a clear path back to the authorization screen after the customer has completed reading the terms and conditions. The display of terms and conditions shall accommodate positive customer experiences on both mobile and desktop devices. The Utilities shall work with parties and all interested stakeholders as part of the Customer Data Access Committee, described in further detail in Section 18, to ensure that the method for accessing the terms and conditions in OAuth Solution 3 or other solution avoids or minimizes customer fatigue. The Utilities shall incorporate stakeholder feedback.

5. Emphasis on Mobile Applications

5.1 Utility Proposals for Mobile Applications

PG&E and SCE explain that their OAuth Solution 3 will be compatible with mobile applications, but little detail is given. PG&E explains that the authentication and authorization process will be optimized for mobile devices and the design will be responsive to accommodate mobile applications.[79] Similarly, SCE explains that mobile access will be available for OAuth Solution 3 as it is for Green Button Connect.[80] As explained below in Section 18, PG&E proposes to invite stakeholders to focus groups to provide feedback on the issues of mobile design and others. SCE explained that it is "open to sharing content" with stakeholders. SDG&E did not specifically address mobile applications in its Advice Letter or Reply.

5.2 Protests to Utility Proposals for Mobile Applications

The Joint Protesting Parties, OhmConnect, and Olivine protested how OAuth Solution 3 will work on mobile devices. The Joint Protesting Parties objected to the lack of detail provided regarding the design of OAuth Solution 3 on mobile devices and requested that the Utilities file additional advice letters. The Joint

[79] PG&E Advice Letter 4992-E at 9, and Appendix B.

[80] SCE Reply at 10.

Protesting Parties are concerned that the mobile user experience will not be streamlined and seamless, which could lead to many customers "dropping off" or failing to complete the authorization process. The Joint Protesting Parties believe that 65% of enrollments from residential customers are likely to be mobile users.[81]

OhmConnect and Olivine raise concerns that SDG&E's solution will be unworkable on mobile devices because it would be structured like a "form" embedded onto a webpage.[82] Further, OhmConnect and the Joint Commenting Parties distinguish between websites that are "mobile capable" and websites that are "optimized" for mobile devices.[83]

### 5.3 Discussion

The existing PG&E ShareMyData and SCE Green Button platforms are mobile device capable;[84] however, customer fatigue in the authorization process was a principle impetus for the Commission to order the Utilities to develop the click-through authorization process.[85] While the existing platforms for customer authorization may be mobile capable, past customer experience does not indicate a seamless experience. We agree with OhmConnect, the Joint Protesting and Joint Commenting Parties.[86] Here we must distinguish between a process that is capable of being displayed on mobile devices, to a process that is optimized for mobile devices. Any website is capable of being displayed on a mobile device, even websites that merely display a smaller version of a full webpage where users must zoom in to read the text displayed. Therefore, without additional

[81] Joint Protesting Parties Protest at 10-11.

[82] Olivine Protest at 3 and OhmConnect Protest to SDG&E at 5.

[83] OhmConnect Comments on the Draft Resolution at 8-9, and Joint Commenting Parties Comments on the Draft Resolution at 7.

[84] PG&E Advice Letter 4992-E at 8 and SCE Advice Letter 3541-E at 10.

[85] D.16-06-008 at Ordering Paragraph 1 and 9.

[86] OhmConnect Comments on the Draft Resolution at 8-9, and Joint Commenting Parties Comments on the Draft Resolution at 7.

design specifications, stakeholders remain uncertain about the requirements for mobile optimization.

The parties concern about the mobile user experience is reasonable. However, we decline to order additional changes through advice letter filings and instead establish the Customer Data Access Committee to address this issue as described in Section 18 of this Resolution. Focus groups and merely sharing content is not enough. The Committee will serve as a place for third-party providers and other interested parties to provide meaningful and timely input into the design, look, and feel of how the solution(s) integrate with mobile devices. The Utilities must optimize how the click-through authorization solution(s) perform on mobile devices. As a starting point, Utility click-through solution(s) shall "be visible and interactable above 600 pixels below the top of the screen (or similar as dimensions may change and screen height/width ratios change)."[87] Further, even when the text being displayed on the click-through authorization solution(s) fits within those 600 pixels, the solution(s) may not be "optimized." For example, if the click-through process were displayed with a wall of text, customers may not be able to easily decipher how to proceed. The Utilities shall incorporate timely input from participants in the Customer Data Access Committee when determining if the solutions are sufficiently optimized for mobile devices.

### 6 Length of Authorization

Within the working group, demand response providers and other stakeholders proposed enhancements to streamline the customer options for the length of time that data will be provided from Utilities to third-parties. A key objective was to align authorization timeframes consistent with the programs offered by the demand response provider. Stakeholders proposed allowing demand response providers to pre-register with their preferences so that the customer can only choose from authorization timeframes actually offered. The customer would always retain the option to cancel the operation and not accept the authorization or revoke authorization at any time in the future.

[87] Informal Status Report, Appendix E at 2.

6.1 Utility Proposals for Length of Authorization

PG&E and SCE took a similar approach, while SDG&E's approach is unclear. In their Advice Letters, PG&E and SCE agreed to the Demand Response Provider proposal and will allow the Demand Response Provider to pre-register and choose a minimum end date, a preferred end date, or indefinite.[88] However, in PG&E's comments on the Draft Resolution, it describes a completely new proposal, where at registration, Demand Response Providers will choose one timeframe to present to customers, either one, three, or five years, or indefinite.[89]

SDG&E's Advice Letter however, did not make it clear whether SDG&E would incorporate the indefinite option. SDG&E seems to be describing two different proposals. First, SDG&E explained that the current form allows an indefinite option, but only up to a maximum of three years. SDG&E then states that it would incorporate the Demand Response Provider proposal without indefinite timelines, "unless SDG&E determines that indefinite timelines best serve the customer."[90] Further SDG&E would add language to make it clear to the customer that they may revoke authorization at any time. In SDG&E's Reply, it points to Attachment A where indefinite timeline is included as an option, but only "if SDG&E determines it best serves the customer."[91]

Second, unlike SDG&E making a determination on which timeframe best suits the customer, SDG&E explained in detail an approach that seems to align with the approach discussed in working group meetings. SDG&E defined the following steps for specifying authorization time frames:

"1) allow the [Demand Response Provider (DRP)] to specify a preferred end date (or indefinite timeline) on the CISR DRP, which will be pre-populated and presented to the customer as part of the customer's affirmative online choices and preferences;
2) allow the DRP to specify a minimum end date;

[88] PG&E Advice Letter 4992-E at 13, SCE Advice Letter 3541-E at 10-11, and SCE Reply at 8.

[89] PG&E Comment on the Draft Resolution at 4.

[90] SDG&E Advice Letter 3030-E at 6.

[91] *Id.*, Attachment A at 5, and SDG&E Reply at 6.

3) allow the customer to choose only between the minimum date and any date after the minimum end date;
4) prohibit the customer from choosing an authorization period shorter than such minimum end date; and allow[sic] the DRP to revoke the authorization in addition to the customer."[92]

6.2 Protests to Utility Proposals for Length of Authorization

Olivine, OhmConnect and the Joint Protesting Parties protested this issue. Olivine commends PG&E and SCE for supporting indefinite authorization timelines. Olivine is opposed to SDG&E's position and notes that Rule 24/32 does not limit "indefinite" to a period of three years.[93] OhmConnect also supports PG&E and SCE's approach and opposes SDG&E's approach of determining what timeframe best suits the customer. However, OhmConnect does support SDG&E's approach that seems to align with the approach discussed in working group meetings.[94] OhmConnect also clarifies that all components of the OAuth Solution 3 should be pre-populated, not only the length of authorization.[95] The Joint Protesting Parties believe the length of authorization must include the indefinite option because requesting that a customer renew annually or every three years would be onerous, especially compared to Utility programs where customers remain enrolled automatically.[96]

6.3 Discussion

The current CISR-DRP Request form allows the customer to enter the start and end date for the authorization timeframe that the Utility will release data to the third-party demand response provider.[97] SDG&E provided no explanation for why choosing an indefinite timeframe might not "best serve the customer."

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[92] SDG&E Advice Letter 3030-E at 6.

[93] Olivine Protest at 2-3.

[94] OhmConnect Comment on the Draft Resolution at 5-6.

[95] OhmConnect Protest to PG&E and SCE at 3, and OhmConnect Protest to SDG&E at 4.

[96] Joint Protesting Parties Protest at 12-13.

[97] *See* Utility CISR-DRP Request Forms, § C. *Timeframe of Authorization* at 3 (79-1152 for PG&E, 14-941 for SCE, and 144-0820 for SDG&E).

SDG&E's approach of allowing "indefinite" authorization timeframe, but only up to three years was not explained and is inconsistent with the plain meaning of 'indefinite.'[98] We find that the customer, not SDG&E is in the best position to determine whether the length of authorization offered by the Demand Response Provider best suits their needs.

Further, we find that offering an indefinite timeframe removes barriers to customer data access and puts third-party demand response providers on a more level footing with Utility programs because customers do not have to renew authorization periodically. An indefinite timeframe also helps achieve the policy goals of increased customer choice, and showing a preference for third-party providers as described in D.16-09-056.

Therefore, we order all three Utilities to allow demand response providers to choose an indefinite timeframe for authorization to present to customers, both on the paper CISR-DRP Request Form and the electronic click-through solution(s). We find that SDG&E's description of the timeframe options described herein most coincide with the options discussed in the working group. All three Utilities shall allow demand response providers to pre-register or pre-select their preferred timeframe which may include a minimum end date and a preferred end date. Either end date can include a specification of an indefinite timeframe. PG&E shall provide the options described herein by Phase 3.

## 7 Notification After Completion of Authorization

### 7.1 Utility Proposals for Completion of Authorization

In its Advice Letter, SDG&E explained that customers and third-party demand response providers will be notified by a system generated email after completion of the click-through authorization process.[99] Additionally, SDG&E will send the Demand Response Provider an access token that includes information about the date and time of authorization, the provider authorized, the service account

[98] Merriam-Webster defines "indefinite" as, "having no exact limits." Available at: https://www.merriam-webster.com/dictionary/indefinite (accessed July 8, 2017).
[99] SDG&E Advice Letter 3030-E, Attachment A at 8.

authorized, and the end date of authorization.[100] PG&E and SCE indicated that the customer would be redirected back to the third-party provider's website upon completion of the authorization.[101] Further, PG&E will send an authorization code and an access token/refresh token pair when the authorization is complete or an error code if the customer declines to authorize.[102] Finally, SCE stated in its reply that demand response providers will be notified with a system generated email.[103]

### 7.2 Protests to Utility Proposals for Completion of Authorization

In its protest, OhmConnect requested that PG&E and SCE explain how the demand response providers will be notified of successful completion of the click-through authorization process. OhmConnect also requested notification if customers have made changes to the authorization preferences including the length of authorization.[104]

### 7.3 Discussion

Third-party demand response providers shall be notified after the successful completion of authorization, and if any changes are later made to the parameters of the authorization. However, accepting three different forms of notification of successful authorizations could be confusing and burdensome for the demand response providers. Therefore, to ensure consistency among the Utilities and to allow for efficient third-party Demand Response Provider operations, we order PG&E to send a system generated email to demand response providers in addition to the authorization code and token or refresh code.

Additionally, we find reasonable SDG&E's proposal to send system generated emails to the customer after completion of the authorization. Throughout the

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[100] SDG&E Reply at 5.

[101] PG&E Advice Letter 4992-E at 4, and SCE Advice Letter 3541-E at 4.

[102] PG&E Reply at 10, and Attachment A at 1.

[103] SCE Reply at 1.

[104] OhmConnect Protest to PG&E and SCE at 4.

Advice Letters, all three Utilities expressed concern about compliance with Commission Privacy Rules, and protection of customer data from potential cybersecurity threats, fraud and abuse.[105] However, only SDG&E proposed to send an email notification to the customer once the authorization is received by the Utility.[106] A system generated email serves the purpose of preventing errors, fraud, or security threats. The customer is notified of the change to the use of their data and can contact the utility if the customer did not themselves complete the authorization or if the authorization was completed in error. The customer should not be required to respond to the email as part of the authentication process unless a similar utility transaction requires this type of verification as described in Section 1 of this Resolution.

Therefore, we order PG&E and SCE to send an automatically generated electronic notification such as email, to the customer and to the third-party demand response provider(s) after successful completion of the authorization process. Further, a system generated email shall also be sent to both the demand response provider(s) and the customer, if the parameters of the authorization are modified later. Note however, that the third-party Demand Response Provider is not relieved of its notification obligations under Rule 24, especially the Commission approved Customer Notification Letter described in § C.7.

8 Revocation

No party protested the issue of revocation; however, clarification is needed regarding where revocation must occur and whether the third-party Demand Response Provider may revoke authorization. Commission Privacy Rules § 6(e)(2) require a customer be able to revoke an authorization at any time. Indeed, Rule 24/32 puts the responsibility of providing a means to revoke on the Utility.[107] In the event a demand response program is canceled, the third-party

[105] PG&E Advice Letter 4992-E at 16-17, SCE Advice Letter 3451-E at 18-19, SDG&E Advice Letter 3030-E at 8, Informal Status Report at 11

[106] SDG&E Advice Letter 3030-E, Attachment A at 8.

[107] These rules are repeated in each Utility's privacy rules – Electric Rule 25 for SCE, Rule 27 for PG&E and Rule 33 for SDG&E.

demand response providers must notify customers "that they should contact [the Utility] to revoke the authorization for the non-Utility [demand response provider] to receive their usage data."[108] Rule 24/32 is silent on any further responsibility of the third-party provider to assist the customer in revoking the authorization. While the Utility must provide the customer with the means to revoke authorization, Rule 24/32 does not specify whether this must be available in an online format like the click-through authorization process.

Clarification is also needed regarding whether the third-party Demand Response Provider may revoke authorization. As part of the two solutions, demand response providers and other stakeholders proposed that a provider be able to stop receiving customer data.[109] Among other reasons, a provider may not want to take on any liability associated with receiving confidential data for a customer who no longer receives demand response services. The current paper CISR-DRP Request Form requires that customers pre-authorize a Demand Response Provider to have the ability to revoke their authorization.[110] This becomes a burden because a Demand Response Provider may not be able to reach the customer, and are obligated to continue receiving their data.

### 8.1 Utility Proposals for Revocation

PG&E and SDG&E take similar approaches and have planned for revocation through existing infrastructure, while SCE does not provide for customer revocation on the Utility website. PG&E plans on allowing demand response providers to revoke through a portal on ShareMyData, PG&E's Green Button platform.[111] Customer will be able to revoke authorization through the online MyAccount portal, where they could also manage and even extend the

[108] PG&E Electric Rule 24 § G.3.d.

[109] PG&E Advice Letter 4992-E at 13.

[110] PG&E Advice Letter 4992-E at 12 and PG&E Customer Information Service Request form for Demand Response Provider Demand Response Provider (CISR-DRP), Electric Sample Form 79-1152 Effective January 1, 2016 at 4.

[111] PG&E Advice Letter 4992-E at 9, 12-13, 18 and Appendix B.

timeframe of an authorization.[112] Similarly, SDG&E provides for customer revocation on the current Customer Authorization Platform, its Green Button platform, where customers will also be able to manage their authorizations.[113] SDG&E will further provide a method for customers to revoke authorization through the click-through OAuth Solution 3. A customer will be able to access the click-through process through the demand response provider's website. The system will recognize that the customer has already completed an authorization and then presents the customer with the ability to revoke authorization or manage the authorization. SDG&E will also provide for Demand Response Provider revocation. Finally, SCE provides for either customer or demand response providers to revoke authorization. Demand response providers can revoke using the Green Button Connect platform, but customers may only revoke authorization on the demand response providers' website.[114]

8.2 Discussion

We find that SDG&E's approach is reasonable because customers will have the option of easily revoking authorization through their online Utility account or through OAuth Solution 3. This effectively streamlines the authorization process as directed by the Commission in D.16-06-008 and provides for additional customer choice as emphasized in D.16-09-056. For example, if a customer would like to choose a different provider, or re-enroll in a Utility program, the customer will be able to revoke their authorization in a variety of ways. We encourage PG&E and SCE to follow SDG&E's model and include revocation as an option in the click-through OAuth Solution 3 in subsequent phases of click-through implementation. We order all three Utilities to provide for customer revocation through existing infrastructure, the Utility MyAccount and/or the Utility Green Button platform. If additional funding is needed, the Utilities shall request funds for this improvement as described in Section 19 of this Resolution.

[112] PG&E Reply, Attachment A at 3.

[113] SDG&E Advice Letter Attachment A at 4, and 9-10.

[114] SCE Advice Letter 3451-E at 15.

Further, any third-party Demand Response Provider that makes use of OAuth Solution 3 or API Solution 1, shall provide their customers with a link to the Utility Green Button platform or MyAccount revocation section and instructions on how to revoke online with the Utility. The customer starts the click-through authorization process online with the third-party demand response provider, so it follows that the customer should be able to learn how to revoke authorization on the providers' website. The instructions shall be subject to Energy Division review because ensuring clear communication to the customer about revocation is a customer protection issue within the authority and jurisdiction of the Commission.

Finally, we conclude that third-party demand response providers should be able to revoke authorization both online and on the paper CISR-DRP Request Form. Any changes needed to Rule 24/32 or the CISR-DRP Request Form to allow Demand Response Provider revocation shall be filed in a Tier 2 Advice letter no later than 45 days after the adoption of this Resolution.

## 9 Other Technical Features Protested by Parties

OhmConnect addressed several additional technical issues and requests for added functionality in its protest. Additionally, the Joint Commenting Parties addressed the issue of compliance with the OAuth 2.0 standard in their comments on the Draft Resolution. Some of these issues are addressed throughout the resolution. Here, we discuss issues that PG&E addressed in its reply. The other two Utilities did not address the following issues.

*Directing the Authentication Flow*: OhmConnect requests the ability to present its customers with only one authentication option, to enter Utility credentials, and not alternative credentials.[115] PG&E opposes limiting customers' choices and notes that this issue was not brought up in the working group.[116] We agree that this issue was not explored in the working group and therefore additional work would be needed to determine the need and feasibility of this option.

[115] OhmConncet SDG&E Protest at 5-6, and OhmConnect Protest to PG&E and SCE at 4.
[116] PG&E Reply, Attachment A at 2.

Stakeholders should raise this issue in the Customer Data Access Committee (CDAC) established herein.

*Exiting the Authorization and the OAuth 2.0 Standard*: OhmConnect asks how a customer exits the authorization flow if they do not wish to continue with the authorization.[117] The Joint Commenting Parties recommend that the Utilities follow the OAuth 2.0 standard in implementing alternative authentication and where customers exit the authorization flow.[118] In OAuth 2.0, a user is redirected to a designated URL whenever there is: (1) an error; (2) a declination by the user; or (3) a reauthorization.[119] PG&E plans on using a cancel button and will notify the Demand Response Provider with an error message.[120] PG&E's approach is reasonable, but in addition to the Demand Response Provider receiving a notification, the customer should be re-directed to the provider's website as specified in the OAuth 2.0 standard. The Utilities shall adhere to the OAuth 2.0 standard or subsequent standard agreed upon by the Customer Data Access Committee. This will provide all parties with a standard approach which will allow third-party Demand Response Providers to more efficiently utilize the click-through authorization process. If further clarification is needed, stakeholders should raise this issue in the CDAC.

*Refresh tokens for errors or updates*: OhmConnect suggests using refresh tokens to address data errors, revisions, or updates in customer information.[121] PG&E did not address this issue in its reply. If this functionality has not been built into OAuth Solution 3, stakeholders should raise this issue in the CDAC.

*Re-authorization*: OhmConnect asks what happens when a customer re-authorizes the same Demand Response Provider or authorizes one and then another.[122] PG&E explains in its response that it can explore solutions for this scenario, especially where a customer authorizes one Demand Response Provider twice

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[117] OhmConnect Protest to PG&E and SCE at 4-5.

[118] Joint Commenting Parties comments on the Draft Resolution at 5 and 9.

[119] *Id.* at 9.

[120] PG&E Reply, Attachment A at 2.

[121] OhmConncet SDG&E Protest at 7, and OhmConnect Protest to PG&E and SCE at 6.

[122] OhmConnect Protest to PG&E and SCE at 7.

with different service accounts selected each time.[123] We recognize that many different scenarios were not explored. Online solutions like the click-through are dynamic and future improvements may be needed. Therefore, it is appropriate for the CDAC to address these issues and recommend any further improvements in a subsequent Advice Letter filing(s).

*Individually Customizing the Length of Authorization*: Finally, OhmConnect requested the ability to change the length of authorization parameters for any particular customer.[124] PG&E shall provide this functionality by Phase 2.[125] A Demand Response Provider would be able to update the timeframe of authorization and then send a customer a link to update its individual authorization.[126] This functionality is useful. SCE and SDG&E shall develop a similar feature by Phase 3. If additional funding is needed, SCE & SDG&E may file a Tier 3 Advice Letter as described in Section 19.

10 Expansion of the Rule 24/32 Data Set

The amount and type of data that the Utility provides to the third-party Demand Response Provider gets to the heart of the click-through authorization process. More often than not, the Utility is the Meter Data Management Agent (MDMA) that receives the data from customers' meters, then collects, stores, and manages the data. The Utility then uses the data to provide a number of services to the customer including, sometimes, demand response services. The third-party demand response providers also need this data to provide demand response services to customers.

The tension here is the amount and type of customer's data that the Utility should provide to the third-party Demand Response Provider. Throughout the click-through working group meetings, third-party providers expressed the need for a wider range of data points. In the original proposal for Solution 1 and 3,

[123] PG&E Replay, Attachment A at 3, and PG&E Comments on the Draft Resolution at 4.

[124] OhmConnect Protest to PG&E and SCE at 7.

[125] PG&E Reply, Attachment A at 4; and PG&E Comment on the Draft Resolution at 4 and Appendix B.

[126] *Id*.

third-party providers include list of the data points they believe constitute a "Full Data Set."[127] Demand Response Providers need a full data set in order to bid customer's load drop into the wholesale market, as well as in order to run effective demand response programs. PG&E and SCE have agreed to provide most of the specific data points, while SDG&E objects to providing any additional data beyond what is currently provided.

### 10.1 PG&E and SCE Proposals for the Expanded Rule 24/32 Data Set

PG&E proposed to provide many of the additional data points in the "Full Data Set," except for PDF copies of bills and the Customer Class Indicator.[128] PG&E explained in its reply that providing PDF bills would disclose information that is not needed like gas data, or not authorized like payment information. Payment information may not be authorized for all service accounts. This could occur where a commercial customer enrolls in a demand response program for one site, and the customer representative has the authority to enroll in a demand response program for a number of service accounts, but may not have the authority to disclose payment information used with multiple accounts. PG&E further explained it its reply that it does not currently store the Customer Class Indicator data point, however with the information that is already provided to third-parties, those numbers can be calculated.[129]

SCE took a very similar approach, however the data points that it prefers not to release are slightly different. SCE will provide all of the data requested by third-party demand response providers, except the number of meters per account, the standby rate, and PDF copies of the bill. Like PG&E, SCE objects to providing PDF copies of the bill because it includes customer payment information. SCE prefers not to provide the standby rate as a separate data point. This information is included in the service tariff data because the standby rate is marked with an "S" in the tariff schedule such as TOU-8-S or TOU-8-RTP-S. Finally, providing

[127] Informal Status Report at Appendix B, the original PowerPoint presentation that describes the proposed solutions as well as the "Rule 24 Data Set" or "Full Data Set."

[128] PG&E Advice Letter 4992-E at 14-15 and Appendix C, Footnote 5 and 6.

[129] PG&E Reply at 7-9.

the number of meters per account would be costly because that information is not typically stored.[130]

### 10.2 SDG&E Proposal for the Expanded Rule 24/32 Data Set

Unlike PG&E and SCE, SDG&E objected to providing any additional data points beyond what is currently released under Rule 24/32.[131] In its Advice Letter, SDG&E cited privacy and cost concerns, questioning whether the requested expanded data set is necessary to support demand response direct participation. Further, SDG&E believes that third-party demand response providers should obtain the requested data on their own, and not at a cost to the ratepayers. Finally, SDG&E urged the Commission to consider the "wider implications" of providing an expanded data set.[132]

SDG&E offered additional clarification in its reply, objecting to providing the data at a cost to the ratepayer and questioning the process by which the Commission could approve an expanded data set.[133] SDG&E believes the issue should be considered in a broader forum with other distributed energy resource providers and other interested stakeholders. While SDG&E understands the principle described in Decision 16-09-056 of "eliminating barriers to data access," it points out that that decision did not define any data fields. Further, SDG&E believes the data set permitted under Rule 24/32 is limited to only "customer usage data" because prior decisions drew a line around what IOUs should provide at ratepayer expense. SDG&E objects to enabling demand response provider's business practices at a cost to the ratepayer, because it believes that data is available from other sources. SDG&E suggests that demand response providers may already have access to IOU program information and other data that the Utility has.

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[130] SCE Advice Letter 3541 at 11-12 and Appendix A.

[131] See Attachment A to this Resolution, showing the current and expanded data sets for PG&E and SCE. The current Rule 24 data varies slightly between PG&E and SCE.

[132] SDG&E Advice Letter 3030-E at 8.

[133] SDG&E Reply at 6-7.

Finally, SDG&E gave two examples of specific data points that raise concerns – PDF bills and data not related to demand response. First, like PG&E and SCE, SDG&E was concerned that PDF bills contain sensitive information.[134] SDG&E pointed out that PDF bills contain data that customers may not realize is there including on-bill financing. Second, SDG&E noted that PDF bills could include data about other rebates, program enrollments and other activity that does not relate to demand response.

### 10.3 Protests to Utility Proposals for the Expanded Rule 24/32 Data Set

Olivine, OhmConnect, the Joint Protesting Parties, and UtilityAPI protested the issue of the expanded data set, with the majority of the protests addressing SDG&E. Olivine was pleased that PG&E and SCE have agreed to expand the data set, but finds that SDG&E's position is troubling.[135] Olivine mentions SDG&E's position expressed in the working group meetings that data beyond what is currently provided is proprietary and third-parties should acquire the data from other sources. UtilityAPI believes that all three Utilities should provide the same data set to meet the UtilityAPI Guiding Principles.[136]

OhmConnect believes that providing an expanded data set helps achieve the Commission goal of "enable[ing] customers to meet their energy needs at a reduced cost," as well as the principles of "provid[ing] demand response through a service provider of their choice" and "eliminating barriers to data access."[137] OhmConnect believes that SDG&E failed to explain what data points it believes are "reasonably necessary" to support demand response direct participation. OhmConnect believes the IOUs should release data that is: (1) necessary for direct participation (wholesale market integration), (2) necessary for essential DRP business practices, and (3) recommended for providing a successful customer experience. Appendix A in OhmConnect's

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[134] *Id.* at 7.

[135] Olivine Protest at 3-5.

[136] UtilityAPI Protest at 5-6. *See also* Section 15 discussing the UtilityAPI Guiding Principles.

[137] OhmConnect Protest to SDG&E at 6 and Appendix A.

protest lists the data that it believes is necessary or recommended to run a successful DR program.

Lastly, the Joint Protesting Parties believe that the ability to easily share data would effectively utilize Advance Metering Infrastructure that ratepayers have invested in.[138] The Joint Protesting Parties disagree with SDG&E's position that the demand response providers should get the data from the customers because it misses the point of the development of the click-through authorization process – to reduce customer "friction." The Joint Protesting Parties believe that the cost of expanding the data set is minute compared to SDG&E's total budget of $4.9 million. Finally, the Joint Commenting Parties noted that the Utilities currently provide data beyond the statutorily required "usage data" to customers through the Green Button Connect infrastructure.[139] Therefore, the Resolution should affirm that "usage data" means "usage and related information necessary for increasing customer participation in EE or DR."[140]

### 10.4 Discussion

We find that the benefits of increasing customer choice and providing successful customer experiences outweigh the likely minor costs of releasing an expanded data set. We find that an expanded data set[141] is needed to run effective demand response programs and not easily available elsewhere. Further, providing the expanded data set is within the scope of the Rule 24/32 Application 14-06-001 et. al. and subsequent implementation.

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[138] Joint Protesting Parties Protest at 7-9.

[139] Public Utilities Code § 8380(a) defining, "'electrical or gas consumption data' [as] data about a customer's electrical or natural gas usage…"

[140] Joint Commenting Parties Comments on the Draft Resolution at 9-10.

[141] The expanded data set includes the "Full Data Set" described in the Informal Status Report at Appendix B, as well as the data sets described in the PG&E and SCE Advice Letters. Attachment 1 to this Resolution reproduces the data sets proposed by PG&E and SCE. The expanded data set excludes PDF copies of the bill, payment information, data that is not typically stored, and data relating to gas service.

We approve PG&E's and SCE's proposed expanded data sets because it will facilitate increased third-party Demand Response Provider participation in the market. We find it reasonable to exclude PDF copies of the bill, payment information, data that is not typically stored, and data relating to gas service. However, in their comments on the Draft Resolution, OhmConnect explained that the ability to determine whether a customer is residential or commercial is necessary in order to comply with the rules set out in D.16-09-056 and Resolution E-4838 for the treatment of prohibited resources, as well as complying with Demand Response Auction Mechanism agreements.[142] We find this approach reasonable. Even if third-parties are able to perform calculations to determine the customer class, they should not be required to guess. Further, complying with rules regarding prohibited resources will reduce greenhouse gas emissions. All three Utilities must include the Customer Class Indicator in the expanded data set. If PG&E or SDG&E need additional funding, they may file a Tier 3 Advice Letter as described in Section 19.

Since PG&E and SCE agree to provide an expanded data set, we primarily discuss SDG&E's approach here. We order SDG&E to deliver an expanded data set, on an ongoing basis to third-party demand response providers after a customer provides their consent using the click-through authorization process. The data set SDG&E shall deliver to the third-party Demand Response Provider is described in Attachment 1. Like PG&E and SCE, SDG&E will not be required to deliver historical PDF copies of bills, or payment information. If SDG&E needs additional funding, it shall file a Tier 3 Advice Letter. Otherwise, SDG&E may use the $173,000 listed in its Advice Letter to expand the data set.[143] If SDG&E needs to deviate from the data set in Attachment 1, it shall file a Tier 2 Advice Letter. The Commission will only consider excluding data that is not typically stored or data relating to gas service. However, all three Utilities must include the Customer Class Indicator in the expanded data set.

[142] OhmConnect Comments on the Draft Resolution at 4-5.

[143] SDG&E Advice Letter 3030-E at 8.

*Customer Interest in Their Own Data.* SDG&E staff participating via phone at a January 9, 2017 workshop said that data beyond "customer usage data"[144] is proprietary.[145] SDG&E suggests that the Utility, not the customer, owns data beyond customer usage data. This position ignores the customer's own interest in their energy related data.

In comments on the Draft Resolution, all three Utilities expressed concern about how the Draft Resolution defined the Utility and customer interest in data by finding that only the customer has a proprietary interest in their data because of the Public Utilities Code § 8380 ("the statute") prohibition on the sale of data.[146] We do not define interests here or exclude the Utility from having an interest(s) in customer data, but we do recognize that the customer has an interest in their own data. Releasing only "usage data" could limit the customer's interest in accessing and determining to whom their energy-related data should be disclosed.[147]

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[144] "Customer usage data" or "consumption data" refers to data about a customer's energy usage that comes from the meter and does not include information like tariff schedules, other Utility program information, billing data, or location data. *See* Public Utilities Code § 8380(a), Stats. 2011, Ch. 255, Sec. 3, defining "consumption data" as "data about a customer's electrical or natural gas usage that is made available as part of an advanced metering infrastructure." *See also* Commission Privacy Rules § 1(b) defining "covered information" as "electrical or gas usage information."

[145] *See* Olivine Protest at 4, and the Joint Protesting Parties Protest at 9.

[146] All three Utilities oppose the Draft Resolution's conclusions about proprietary interests and believe that the issue of ownership is not in scope of this proceeding. *See* SCE Comments on the Draft Resolution at 6-10, distinguishing between different types of property interests and requesting that the Commission remove all language that implies that only the customer has a legal interest in their data; SDG&E Comments on the Draft Resolution at 3-4, defining property interests in customer data that are not related to the sale of data; and PG&E Comments on the Draft Resolution at 5-6, stating that Utility data about their customers are intangible Utility assets.

[147] *See* SCE Comments on the Draft Resolution at 7, describing bundled rights of "integrity, use, disclosure, copy, access, transmission, and transfer;" associating privacy rights with the right to determine to whom the information is disclosed; and stating that Public Utilities Code § 8380 and Commission Privacy Rules "create rights for the customer, or data subject." *See also* SCE Comments on the Draft Resolution at 9

*Footnote continued on next page*

As part of Smart Grid Proceeding, Decisions 11-07-056 and 12-08-045 adopted the Commission Privacy Rules creating the current framework for the protection of customer data.[148] These rules, including the requirement that the Utilities receive authorization from a customer before releasing data[149] were developed because of the legislative directive in the statute. In addition to requiring customer consent to release data, the statute makes clear that the Utility "shall not share, disclose, or otherwise make accessible to any third party **a customer's electrical or gas consumption data**" (emphasis added).[150] The grammatical placement of "a customer's" in the statute tends to imply that the customer, has an interest in their energy-related data.[151]

While the statute refers to "consumption data," and not "all data identified with a customer," it does not support a determination that the Utility is not required to make available to the customer, data other than consumption data. Because of the customer's interest in their own data, the Utility should make available to the customer data beyond "consumption" or "usage data."[152]

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explaining that Public Utilities Code § 8380 and Commission Privacy Rules "legally recognize that customers have an interest in data about themselves;" "were meant to create privacy rights for the customer;" and "the customer has an interest in protecting his/her energy-related data." Taken together, SCE's comments define the customer interest as a privacy right which includes the right to access, protect, and determine to whom their energy-related data should be disclosed.

[148] The Commission Privacy Rules are repeated in each Utility's privacy rules – Electric Rule 25 for SCE, Rule 27 for PG&E and Rule 33 for SDG&E.

[149] Commission Privacy Rules § 4(c)(4) requires the "consent of the customer, where the consent is express, in written form, and specific to the purpose and to the person or entity seeking the information," prior to releasing customer data to a third-party for a secondary purpose. Public Utilities Code § 8380(b)(1) allows the Utility to disclose a customer's data only "upon consent of the customer."

[150] Public Utilities Code § 8380(b)(1).

[151] *See* SCE Comments on the Draft Resolution at 9, explaining that "it would be correct for the draft resolution to say that the term "customer's" in the statute tends to imply that the customer has an interest in protecting his/her energy-related data."

[152] The terms "consumption data" and "usage data" are used interchangeably.

*Data Beyond "Customer Usage Data" and Data Needed for Direct Participation.* SDG&E's Advice Letter and Reply imply that the only data that SDG&E must provide to third-party demand response providers under SDG&E Rule 32 is "customer usage data."[153] SDG&E asserts that the issue was already litigated, and therefore SDG&E should not be required to release additional data points. SDG&E notes that D.16-09-056 does not "specifically set forth the data fields which a utility should or must provide" despite requiring that Utilities eliminate barriers to data access. Further, SDG&E believes it should only provide data that is specifically needed to "bid … products into the CAISO market."[154] Olivine, UtilityAPI, the Joint Protesting Parties, and OhmConnect objected to SDG&E's narrow definition of the purposes for which customer data is needed.

We find that Rule 24/32 already requires the Utilities to release data beyond "customer usage data." Currently, Rule 24/32 requires numerous data points beyond "usage" data to be released and defines the data that should be released as "confidential customer-specific information and usage data."[155] Rule 24/32 Sections D.1.a. and D.1.b. require the release of DR programs and tariff schedules, customer service account information, a Unique Customer Identifier, the Meter read cycle letter, and six to twelve months of customer billing data. Rule 24/32 data therefore includes both customer energy "usage data" and other energy related data that can be identified with customer.

The fact that Rule 24/32 has already been litigated should not deter further improvements in the click through authorization process, especially given the Commission finding that "the direct participation enrollment process is an evolving one that can and should be improved."[156] D.16-06-008 ordered parties and stakeholders to work together to develop a click through authorization

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[153] *See* SDG&E Reply at 7, adding emphasis to and labelling customer data as "Customer **Usage** Data."

[154] SDG&E Reply at 7.

[155] SDG&E ignores Rule 24/32 text directly under the heading "Access to Customer Usage Data" in Section D.1.

[156] D.16-06-008 at 25 and Finding of Fact 27.

consensus proposal and advice letter that that would "streamline and simplify the direct participation enrollment process, including adding more automation, mitigating enrollment fatigue, and resolving any remaining electronic signature issues."[157] Expanding the data set is an example of how the direct participation process can evolve. Additionally, it relates to data delivery, which adds more automation. Therefore, we find that expanding the data set is within the scope of the click-through Advice Letters and the Customer Data Access Committee that is ordered in this Resolution. We acknowledge SDG&E's assertion that data access should be discussed in a broader forum however, progress must first be made for demand response use cases before the solution(s) can be expanded to other distributed energy resource and energy management providers. This issue is explored further in Section 15.

SDG&E correctly points out that the Commission did not list data points that must be included in the expanded data set in D.16-09-056. However, that Decision did not address many implementation details: that was left to the working group and advice letter process. The click through working group was the process that allowed stakeholders the opportunity to develop these technical details. Therefore, we find that the adopted principle of "eliminating barriers to data access" necessitates an expanded data set.

The expanded data set provides customer specific energy-related data needed for: (1) direct participation integration into the wholesale market; (2) essential Demand Response Provider business practices; and (3) a successful customer experience.[158] Third-party Demand Response Providers do more than bid demand response into the market; they offer customer oriented programs. Therefore, this additional data is needed to support the customer experience.

*Availability of the Data Elsewhere and the Cost of the Expanded Data Set.* SDG&E argues that third-party demand response providers should obtain the data from other sources such as directly from the customers, and not at the expense of

[157] *Id.* at Ordering Paragraph 9.

[158] OhmConnect Protest to SDG&E at 6 and Appendix A of the Protest.

ratepayers.[159] We find this notion unreasonable and burdensome. This arrangement would be contrary to the purpose of the Commission directive to "streamline and simplify the direct participation enrollment process, including adding more automation…."[160] We agree with the Joint Protesting Parties that SDG&E has missed the point. Customers could provide third-parties with incorrect information. If customers have to provide this information, or provide information multiple times due to errors, they may become fatigued and decide not to enroll in the third-party program. Further, SDG&E seems to suggest that the customer should ask the Utility for the data and then provide that to the third-party demand response provider. Demand response providers, not customers should be responsible for managing this type of data. This extra step would reduce automation, and is therefore contrary to the objective of developing the click-through authorization process.

*Cost of the Expanded Data Set*. Finally, SDG&E raises the concern that the ratepayers should not bear the cost of the provision of the expanded data set.[161] We disagree and find the cost of expanding the data set to be reasonable, especially when compared to the benefit of increased choice. Ratepayers already paid for the Advance Metering Infrastructure (AMI) and for the Utility to collect, store and the manage customer data. Customers should benefit from this investment and be provided with more choices, like demand response offered by third-party providers.

PG&E will provide synchronous Application Program Interface (API) transfers and secure flat file transfers for most of the expanded data set within a budget of $1.2 million.[162] SCE's entire proposed budget including system functionality, user experience design, training, and project team costs is between $500,000 and

[159] SDG&E Reply at 7.

[160] D.16-06-008 at Ordering Paragraph 9.

[161] SDG&E Reply at 7.

[162] PG&E Advice Letter 4992-E at 9, 14-16, and 24.

$1.5 million.[163] We find these costs reasonable. We approve the expanded data sets proposed by PG&E and SCE as described in Attachment 1 to this resolution.

SDG&E lists the cost as $173,000 to expand the data set in its Advice Letter.[164] We find this cost reasonable. Finally, should SDG&E deviate from the expanded data set in Attachment 1, SDG&E may file an advice letter as described in Section 19.

## 11 Synchronous Data Within Ninety Seconds

During the working group process, stakeholders requested that the full Rule 24/32 data set be made available to the Demand Response Provider synchronously or within ninety seconds of completion of authorization in order to meet market needs.[165] These market needs include: ensuring a positive customer experience, registering customers with the CAISO in a timely fashion, and making a determination of customer eligibility for a provider's demand response program.

### 11.1 Utility Proposals for Synchronous Data Within Ninety Seconds

PG&E has committed to providing the current Rule 24/32 data set within ninety seconds, but it cannot provide the complete data set within that timeframe because that would require system upgrades and significant costs.[166] PG&E can provide this data quickly because it is available through ShareMyData, which is integrated into its systems. For the expanded data set, PG&E uses a flat-file Electronic Secure File Transfer (ESFT) process. PG&E notifies the third-party that the data set is available and the third-party retrieves the information. This flat-file ESFT process is usually available within two days, but longer if the data is not available automatically. The expanded data set is not available through

[163] SCE Advice Letter 3541-E at 6, 11-12,

[164] SDG&E Advice Letter 3030-E at 8.

[165] Informal Status Report at 14 and Appendix E.

[166] PG&E Advice Letter 4992-E at 15, 21, and PG&E Reply at 9.

the ShareMyData platform. Delivering the expanded data set in only ninety seconds data would require re-architecting PG&E's backend source systems.[167]

Similarly, SCE cannot provide the full and expanded Rule 24/32 data set within ninety seconds because of the architecture of SCE systems, the large amount of data that would be delivered and the lack of integration of the various databases. However, SCE will provide a summarized data set within ninety seconds that could be used to help determine eligibility in third-party provider programs.[168] SCE further explained that it will be able to provide the full and expanded data set within five business days, and usually within two days. SCE did not complete an estimate of the cost of synchronous, ninety second data for the full data set because it would require a "wholesale redesign of SCE's enterprise systems."[169]

SDG&E was also not able to complete an estimate of synchronous data delivery. However, SDG&E proposes using the $900,000 remaining in its budget to support this requirement.[170]

In comments on the Draft Resolution, both PG&E and SCE requested that flexibility for to the requirement that the shorter data set or the integrated data set be delivered in 90 seconds. PG&E requested the language be changed to "on average 90 seconds from the time the [Demand Response Provider] requests the data, not from the time of the customer's authorization."[171] The provider must send an "API call" to the Utility to request the data. SCE clarified that it will only be able to provide the summarized data set within 90 seconds if the customer has one service account.[172] Data delivery for customers with multiple accounts will take more than 90 seconds.

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[167] *Id*.

[168] SCE Advice Letter 3541-E at 8.

[169] SCE Reply at 5-6.

[170] SDG&E AL 3030-E at 9.

[171] PG&E Comments on the Draft Resolution at 5.

[172] SCE Comments on the Draft Resolution at 4-5.

### 11.2 Protests to the Utility Proposals for Ninety Second Synchronous Data

OhmConnect, the Joint Protesting Parties, and UtilityAPI protested the issue of synchronous or ninety second data delivery. OhmConnect applauded PG&E for providing the ShareMyData data set within ninety seconds. OhmConnect believes that SCE should provide the data needed for wholesale market integration within ninety seconds. OhmConnect urges the Commission to require all three Utilities to provide the complete and expanded data set within two days, not five days in order to ensure that the customer stays engaged. Finally, OhmConnect believes that SDG&E should spend additional budget to provide synchronous data.[173] The Joint Protesting Parties request that SCE provide this summarized data set within 30 seconds instead of ninety seconds because the customer experience requires a faster data delivery. Customers will be watching their screen for ninety seconds and then they will find out that they cannot fully join the program for another five days.[174] UtilityAPI also supports synchronous data delivery within ninety seconds, including the flat file.[175]

### 11.3 Discussion

We clarify that the data delivery discussed in this section relates to the data delivered to third-party providers, not the data used to pre-populate the click-through, which would affect the amount of time a customer watches their computer before finishing the process. Here, we address the data that PG&E and SCE propose to deliver synchronously, within ninety seconds, and the complete, expanded data set that can be delivered within two days.

Given that none of the Utilities included a cost estimate for synchronous data delivery of the complete data set, it is difficult to tell whether this functionality is an efficient use of ratepayer funds. Therefore, we order the Utilities to provide a cost estimate of delivering the entire and expanded data set within ninety

[173] OhmConnect Protest to PG&E and SCE at 5-6, and OhmConnect Protest to SDG&E at 7.

[174] Joint Protesting Parties Protest at 12.

[175] UtilityAPI Protest at 5-6.

seconds. This estimate shall be included in an application for improvements in accordance with Section 19 of this Resolution.

We understand however, that speedy data delivery is necessary to ensure a positive customer experience. Demand response providers may need the current Rule 24/32 data set or a summarized data set to determine eligibility more quickly, and the complete expanded data set two days later to integrate with wholesale market and otherwise provide an effective program. We find that PG&E's approach is reasonable, providing data available through the ShareMyData platform within ninety seconds on average, and the complete expanded data set within two days. The clock starts from the time the Demand Response Provider requests the data. We approve PG&E's approach. We also approve SCE's approach of providing a summarized data set within ninety seconds on average, from the time the Demand Response Provider requests the data. However, we encourage SCE to provide as much data as is possible or available on systems integrated with Green Button Connect. We order SDG&E to file a Tier 2 Advice Letter as described in Section 19 with a proposal for a shorter data set that SDG&E will provide synchronously, within ninety seconds on average from the time the Demand Response Provider requests the data. We approve SDG&E's request to use a portion of the $900,000 for the shorter synchronous data set, funding which was designated for additional requirements ordered in this Resolution.[176] SDG&E should use PG&E and SCE's approaches as a model and provide data that is available on systems that are integrated with the Customer Energy Network platforms.

Further, we order PG&E, SCE, and SDG&E to provide the complete and expanded data set within two business days. If a delay beyond two business days is expected, the Utility must provide an explanation to the demand response provider, with an estimated resolution timeframe. The Commission expects that in the overwhelming majority of cases, data will be delivered within two business days. If parties experience persistent problems, the issue should be

[176] *See* Section 17, supra.

raised in the Customer Data Access Committee described in Section 18.

## 12 Cost of Data

### 12.1 Utility Proposals for Cost of Data

SCE and SDG&E addressed the issue of costs for access to customer data. SCE explained that usually there are no costs for access to the click-through authorization or data delivery. However, SCE may reevaluate costs in the future. Under normal circumstances SCE does not charge third-party demand response providers, but if a third-party does not collect data within five business days, a manual process must be used to reinitiate the data delivery and a fee may be charged.[177] SDG&E believes that the cost of access to data, especially access to the expanded data set should be borne by the demand response providers, not the ratepayers.[178] PG&E did not address this issue in its Advice Letter.

### 12.2 Protests to Utility Proposals for Cost of Data

OhmConnect and the Joint Protesting Parties protested the issue. OhmConnect believes that data should be provided at no additional cost to the customer or the Demand Response Provider because charges to the customer would run counter to the goal of enabling customers to use demand response to meet their energy needs at a low cost, and the principle of eliminating barriers to data access as described in D.16-09-056.[179] The Joint Protesting Parties believe that a full data set should be provided to demand response providers free of charge. Citing D.13-09-025, the Joint Protesting Parties believe that Commission policy requires customer data to be delivered to authorized third-parties at no cost to the third-party.[180] The Joint Protesting Parties believe that the Commission approved the

[177] SCE Advice Letter at 15, and SCE Reply at 9.

[178] Informal Status Report, Appendix E at 2, explaining the need for daily reporting on webpage performance and a list of specific metrics that should be tracked.

[179] OhmConnect Protest to PG&E and SCE at 6, OhmConnect Protest to SDG&E at 7-8, and D.16-09-056 at 46.

[180] Joint Protesting Parties Protest at 9, citing D.13-09-025, at 2 and Ordering Paragraph 19. Among other things, D.13-09-025 authorized funding to establish the Green Button platform.

investment in Advance Metering Infrastructure or Smart Meters in order to provide customers with access to their data and access to value added services like demand response.[181]

12.3 Discussion

The Commission currently permits the Utilities to recover costs from demand response providers under a variety of conditions. These include, but may not be limited to:

- Various provisions from Rule 24/32:
  .1. C.1.f. – KYZ pulse installation for telemetry
  .2. C.9. – CAISO participation related charges detailed in tariffs (below)
  .3. D.1.c. – charges for certain additional data transfers beyond two times a year and ongoing data that is not released electronically
  .4. F.1.b. – costs for installing meters in certain instances
  .5. H.2.a. – cost incurred to Utility for determining a third-party demand response provider's creditworthiness
- Rate schedules (tariffs):
  .1. PG&E – Schedule E-DRP
  .2. SCE – Schedule DRP-SF, Schedule CC-DSF
  .3. SDG&E – Schedule E-DRP

The Commission cannot at this time declare that the Utilities must give third-party demand response providers access to customer data at no charge given the numerous ways that the Commission has already approved costs to be recovered from third-party providers. We do note that this Resolution does not approve any additional fees or charges for third-party demand response providers. Any fees not already formally approved by the Commission, must be reviewed through an advice letter or other Commission process.

[181] Joint Protesting Parties Protest at 9.

13 Reporting Performance Metrics

The working group's Informal Status Report suggested that the OAuth Solution 3 include daily reporting of Utility click-through webpages performance.[182] Third-party demand response providers and other stakeholders believe that the Utilities must "maintain a high-performance, error free customer experience," because fewer customers will enroll in third-party programs if the webpages in the click-through authorization process take a long time to load, or include many errors. The stakeholder proposed performance metrics include:

1. ** The IOUs shall track the following metrics on a per-user basis:
    a. Start Page
    b. Order of pages viewed
    c. Time on each page
    d. Last Page viewed
    e. Authorizations completed
2. These metrics shall be compiled, anonymized, and reported on a daily basis (the IOU could aggregate over 10 users for the purpose of anonymizing the reported metrics).
3. The following aggregated values shall be reported:
    a. Load time per page
    b. Mean and max load time
    c. Standard deviation
    d. 90th percentile load time
4. Time spent between the first step and the last step
    a. Mean and max load time
    b. Standard deviation
    c. 90th percentile load time
5. Number of views per page (tracked daily)

[182] Informal Status Report, Appendix E at 2, explaining the need for daily reporting on webpage performance and a list of specific metrics that should be tracked.

6. Number of unique user views per page (tracked daily)[183]

**Note that these metrics would be tracked on an individual basis, but would then be aggregated to ensure customer anonymity.

13.1 Utility Proposals for Reporting Performance Metrics

PG&E and SCE prefer monthly or quarterly reporting, in a report format. SDG&E considered and began the process for developing a website to report performance.

PG&E provided a list of performance metrics, which did not include metrics tracked on a per user basis, nor did it include the number of authorizations completed.[184] PG&E considered daily reporting of aggregated, Utility-level data on the performance of the OAuth Solution 3, but found the cost to be too high. Instead, PG&E proposes quarterly reporting in a report format.[185]

SCE provided a list of metrics that include the majority of the metrics proposed by stakeholders, but without daily reporting or performance measured on an individual customer basis.[186] SCE opposes daily reporting because it would require collecting, analyzing and transmitting large quantities of data daily. SCE believes implementing a daily reporting website would take four months and need an annual budget of $40,000 to $50,000. Due to the cost and labor required, SCE prefers monthly reporting.[187]

SDG&E was the only Utility to begin the process of planning a publicly accessible website to track the performance of OAuth Solution 3. SDG&E proposes using different software and analytics providers to achieve these goals including Clickfox to measure website navigation, Splunk to measure web

[183] Informal Status Report, Appendix E at 2.

[184] PG&E Advice Letter 4992-E at 20.

[185] *Id.* 4992-E at 13-14. *See also* PG&E Comments on the Draft Resolution at 3.

[186] SCE Advice Letter 3541-E at 8-9.

[187] *See* SCE Comments on the Draft Resolution at 5-6.

service performance, and CA Wily Introscope to measure webpage performance.[188] SDG&E prefers on-demand monitoring because it would be more effective than daily performance reports sent to a distribution list. Due to the time constraints in preparing the Advice Letter, SDG&E did not provide a formal estimate. However, SDG&E believes that performance monitoring can be decoupled or completed in Phase 2 of OAuth Solution 3 implementation.[189]

### 13.2 Protests to Utility Proposals for Reporting Performance Metrics

UtilityAPI opposes the inconsistent manner each of the Utilities proposes to implement the performance metrics. It argues that it would be very difficult for demand response providers, ratepayers, or the Commission to compare the performance of the three solutions if the metrics provided are different for each Utility.[190] UtilityAPI recommends all three Utilities provide the same metrics on a joint webpage or data repository on the Commission website.

### 13.3 Discussion

We find SDG&E's proposal reasonable. A webpage or dashboard would allow the Commission, members of the public, and third-party demand response providers to effectively monitor the performance of OAuth Solution 3. We agree with UtilityAPI that consistent metrics across each Utility are needed.
A webpage would act as an enforcement mechanism because once performance metrics are published, the Utilities would be motivated to resolve any problems quickly. A webpage is reasonable because it would provide performance metrics on a real-time or near real-time basis. Monthly or quarterly reporting would not meet the objective of flagging any performance issues and quickly resolving these problems. A webpage would ensure the ratepayer investment in OAuth Solution 3 is protected because the performance of the solution would be monitored on an ongoing basis.

[188] SDG&E Advice Letter 3030-E, Attachment A at 10.

[189] SDG&E Advice Letter 3030-E at 8.

[190] UtilityAPI Protest at 5.

Therefore, we order PG&E, SCE and SDG&E to develop on their websites a reporting format for performance metrics of the click-through authorization solution(s) and other aspects of Rule 24/32 operations. We find the metrics listed above and in the Informal Status Report to be reasonable, especially given that data on an individual customer journey would be aggregated. The Utilities shall work with stakeholders in the Customer Data Access Committee to determine additional metrics to monitor Rule 24/32 operations. These metrics shall be reported in real-time or near real-time basis, but no less frequently than daily (with a day's delay). As SDG&E described, third-party vendors and software analytics can be used to provide data at a near real-time or daily frequency. The Utilities shall use any remaining funding available through the Tier 3 Advice Letter process described below in Section 19.

In addition to metrics related to the performance of OAuth Solution 3, we find it reasonable to monitor other aspects of Rule 24/32 operations such as delivery time for the full data set, the frequency of ongoing data delivery, and delivery time for missing or gaps in data, among other aspects. We find that monitoring of data delivery times is necessary in order to encourage the Utilities to resolve data delivery issues quickly. There may be additional metrics that need to be monitored here. The Utilities shall work with stakeholders in the Customer Data Access Committee, established herein, to develop a consensus proposal and file an advice letter as described in Section 19 herein.

We also recognize the need to capture performance data over time and therefore find it reasonable to report monthly aggregated performance data on a quarterly basis. This information shall be reported on a quarterly basis, in a format approved by the Energy Division, as part of the Quarterly Report Regarding the Status of Third-Party Demand Response Direct Participation. Further, because D.15-03-042 orders the reports only until the end of 2018, we order the Utilities to continue filing this report through 2020. The report shall be filed in the most current demand response proceedings and service lists.

## 14 API Solution 1

As described earlier, Application Program Interface (API) Solution 1 is an alternative click-through solution that would not require the customer to leave

the third-party DR provider's website to complete authorization. The customer would enter enough customer specific information on the demand response provider's website that would be transmitted directly to the Utility back-end system to verify the customer's identity. The Demand Response Provider is not able to see this information. Once the customer's identity is verified and while still on the demand response provider's website, the customer would authorize the Utility to release the data. An electronic record of the parameters would be sent to the Utility to finalize the transaction.[191]

To build API Solution the Utilities would need to build one or two custom endpoints to verify customer identity and receive the customer's authorization of data release to the demand response provider(s). The Utilities may also need to develop new system functionality and security measures.[192] All three Utilities' argued that developing both OAuth Solution 3 and API Solution 1 at the same time could lead to delay of the click-through in time to help increase third-party provider enrollments in the programs for the Demand Response Auction Mechanism.[193]

On October 18th, the Energy Division in conjunction with the Assigned Commissioner's office directed the working group to first develop and implement OAuth Solution 3 and include plans in the Advice Letter filing. API Solution 1 would be considered for implementation at a later time, so the Utilities were directed to include, "[a] schedule for developing and determining the cost for Solution 1," and "[a] plan for the cost recovery of Solution 1."[194] This understanding was described in PG&E's Advice Letter:

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[191] PG&E Advice Letter 4992-E at 4, SCE Advice Letter 3451-E at 4, SDG&E Advice Letter 3030-E at 3-4, and Informal Status Report at 1 (Attachment A to this Resolution).

[192] *Id.*

[193] PG&E Advice Letter 4992-E at 17, SCE Advice Letter 3451-E at 18, SDG&E Advice Letter 3030-E at 9, and Informal Status Report at 12 (Attachment A to this Resolution).

[194] Energy Division Advice Letter Guidance October 18, 2016, available at: http://www.cpuc.ca.gov/General.aspx?id=7032.

> "[I]t was determined that the solutions would be developed sequentially, with separate Advice Letter processes, rather than to wait for both to be properly scoped with corresponding budget and timeline estimations at a later date."[195]

The Utilities were directed to implement OAuth Solution 3 first in order to help increase customer enrollments in the 2018 Demand Response Auction Mechanism. The Energy Division and the Assigned Office believed that OAuth Solution 3 could be implemented more quickly because it built on existing systems.

### 14.1 Utility Proposals for API Solution 1

The Utilities raised concerns about the privacy implications of API Solution 1. PG&E believes that API Solution 1 would allow the third party to store confidential authentication information on their servers and does not allow PG&E to maintain control over customer authentication.[196] SCE believes that API Solution 1 would violate Commission Privacy Rules because the customer would be authenticated on an API controlled by the third-party DR provider, not the utility.[197]

Further, all three utilities believe that the Commission should not pursue API Solution 1 unless OAuth Solution 3 is determined to be inadequate.[198] PG&E noted that developing both solutions at the same time could "prolong the completion of [OAuth] Solution 3," because both solutions utilize the same staff resources. All three utilities also believe the development of API Solution 1 could take longer to develop than OAuth Solution 3.

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[195] PG&E Advice Letter 4992-E at 22.

[196] *Id.* at 16-17.

[197] SCE Advice Letter 3541-E at 18-19.

[198] PG&E Advice Letter 4992-E at 22-23; SCE Advice Letter 3541-E at 18-19; and SDG&E Advice Letter 3030-E at 9.

The Utilities all believe that the cost recovery method available for API Solution 1 is unclear, especially since by the time API Solution 1 is scoped, the 2018-22 DR portfolio applications would likely be decided. This means that the Tier 3 Advice Letter funding mechanism authorized in D.16-06-008 may be unavailable. SCE pointed out that other options could include the Rule 24/32 mass market application or the 2020-2022 demand response portfolio application for "New Models."[199]

Finally, SCE and PG&E suggest allowing the third-party Demand Response Providers and other non-Utility stakeholders to meet and develop comprehensive business requirements for API Solution 1. The Utilities would only be required to begin work on API Solution 1 after other stakeholders have met separately to develop a detailed list of requirements.[200]

### 14.2 Protests to Utility Proposals for API Solution 1

Olivine, Inc. and the Joint Protesting Parties protested this issue and support the expeditious development of API Solution 1. Olivine objects to the Utilities' suggestion that the Commission should wait until OAuth Solution 3 has been deemed unsuccessful before moving forward with API Solution 1. Olivine points out that all non-IOU stakeholders supported developing API Solution 1 in parallel or subsequently to OAuth Solution 3. The consent agreement was not to develop one solution over the other. Further, Olivine believes that enough information has been provided to the utilities to develop the business requirements of API Solution 1.[201]

The Joint Protesting Parties protest this issue on the basis that the utilities mischaracterize the need for API Solution 1, misunderstand privacy concerns, and have not followed Energy Division guidance.[202] The Joint Protesting Parties

[199] SCE Advice Letter 3541-E at 19.

[200] SCE Comments on the Draft Resolution at 3; and PG&E Comments on the Draft Resolution at 8.

[201] Olivine, Inc. Protest at 3.

[202] Joint Protesting Parties Protest at 5-7.

believe that the three utilities should follow Energy Division guidance and begin stakeholder workshops to scope API Solution 1 after OAuth Solution 3 has been implemented. There is no basis in fact that API Solution 1 would take longer to develop in a working group or in the implementation phase. Further, the development of API Solution 1 technically overlaps OAuth Solution 3 by 50 or 90%, so the work would not be duplicative, it would build upon work already completed by the working group.[203]

The Joint Protesting Parties believe the failure to develop API Solution 1 following the implementation of OAuth Solution 3 goes against Energy Division guidance and the consensus of the working group. Third-party stakeholders agreed to adopt OAuth Solution 3 first and wait, but not abandon the development of API Solution 1. This was a concession made in order to reach a mutual agreement. The Joint Protesting Parties believe that Commission action is needed because it is not a good use of stakeholders' time if the agreements made during a working group are not honored in the Advice Letter filings.[204]

The Joint Protesting Parties further argue that the development of API Solution 1 should not be contingent upon a determination that OAuth Solution 3 is inadequate. The Joint Protesting Parties believe that there is enough evidence to show that API Solution 1 is needed now. They state that OAuth Solution 3 will not result in the successful completion of residential customer authorizations because it does not achieve the same customer experience.[205]

The Joint Protesting Parties argue that the Utilities mischaracterize the features of API Solution 1 and related privacy concerns.[206] The Joint Protesting Parties disagree with the utility contention that third parties should not store authentication information, and that authentication must take place on a utility

[203] *Id.* at 4, footnote 11.

[204] *Id.* at 5.

[205] *Id.* at 3.

[206] *Id.* at 5-7.

site.[207] They cite examples where the customer is not authenticated on the utility website, including where third parties running IOU programs authenticate customers via File Transfer Protocol data exchange not on the IOU website. There, the third party stores the authentication data. Another example is that third party DR providers participating in the demand response auction mechanism often store data that participants enter to submit the paper CISR-DRP forms. Further, the Joint Protesting Parties state that the issue of authentication was already litigated and decided in D.16-06-008.

Finally, the Joint Protesting Parties point out that third party demand response providers are already obligated to follow many rules regarding privacy and the handling of customer data. These include Commission rules, California Independent System Operator rules, contract obligations, as well as federal and state requirements that allow for electronic signatures to provide customer authorization. Privacy concerns used to refute the legitimacy of API Solution 1 should not stand in the way of a customer sharing their data when, where and if they see fit with ease.[208]

### 14.3 Discussion

The Commission finds that it is more prudent to begin evaluating API Solution 1 now instead of waiting until an evaluation of OAuth Solution 3 is complete. The determination of whether Utilities should develop API Solution 1 depends upon many factors including whether the solution makes efficient use of ratepayer funds. The Utility concerns regarding customer privacy are well-intentioned, but stakeholders may be able to develop technical solutions to these concerns in a working group process, the Customer Data Access Committee described in Section 18. Further, without developing the specific business requirements and estimating costs, the Commission does not have enough information to determine whether the development of API Solution 1 would be an efficient use of ratepayer resources.

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[207] *Id.* at 5-6, citing SCE Advice Letter 3541-E at 9-10 (Section IV.G.), and PG&E Advice Letter 4992-E at 11.

[208] *Id.* at 6-7.

*Whether to Wait Until an Evaluation of OAuth Solution 3 is Complete.* All three Utilities propose waiting until OAuth Solution 3 can be evaluated and only pursue API Solution 1 if OAuth Solution 3 is determined to be inadequate. In the hypothetical presented here, the Utilities would only begin planning API Solution 1 once OAuth Solution 3 has been deemed a failure. This fails to recognize the differences between the solutions and the preferences of third-parties. If OAuth Solution 3 is unsuccessful or inadequate, then third-party demand response providers may be in a worse position than they are in now. In the hypothetical, customers would be using a failed system to authorize the Utility to share their data with the third-party with the likely result that program enrollments would be lower than desired. Third-party providers would be forced to wait until the Utilities plan, request funding, and implement API Solution 1.

We find it more prudent to begin planning and developing business requirements for API Solution 1 now instead of waiting. Waiting, as the Utilities propose also fails to consider the reason third-parties advocated for API Solution 1. Generally, third-parties prefer API Solution 1 because the provider can adjust the look and feel of the solution quickly, which allows it to have more control over the user experience. Several third-parties prefer API Solution 1 because of the close link between enrollments, the performance of the click-through solution, and the provider's ability to perform in the market. Because enrollments are so dramatically affected by the customer's ability to easily share data with the third-party demand response provider, several third parties prefer to design the customer experience themselves.[209]

*Customer Privacy Concerns.* The Utilities' assert that API Solution 1 would have detrimental impacts impact on privacy and on ratepayers without the benefit of a stakeholder process to first scope out the business requirements. Even in the October 12, 2016 Informal Status Report, the Utilities recognized that the

[209] *See Id.* at 14, explaining that third-party demand response providers "should be enabled, but not required to design [their] own solution end to end if [they] so desire," because the chosen solution impacts customer enrollments and thus performance of the third-party program.

"inherent lack of detail significantly limits the [U]tilities' ability to assess the full scope of cybersecurity risks."[210] The Commission takes customer privacy seriously. However, without understanding the details or technical specifications of the solution, it is impossible to determine whether API Solution 1 comports with Commission Privacy Rules. Further, stakeholders have already suggested features of API Solution 1 that could alleviate privacy concerns including (a) the potential use of alternative authentication credentials (instead of utility account username and password), and (b) the use of an established architecture similar to credit card processing.[211] During the working group stakeholder process for OAuth Solution 3, both Utilities' and third-parties gained a greater understanding of their respective interests and technical capabilities, and we expect the same will be true for API Solution 1. Therefore, we direct the Utilities to collaborate with stakeholders and other interested parties in the Customer Data Access Committee to evaluate technical solutions to address any privacy concerns.

*Ratepayer Resources.* Finally, the Utilities believe that the cost of building API Solution 1 would be unreasonably high for ratepayers, , but third-parties believe the costs could be low because API Solution 1 could be "added on" to OAuth Solution 3.[212] The Customer Data Access Committee established herein will help the Utilities' scope out the technical requirements for the solution, and only after that process is complete, will the Utilities be able to estimate costs. As described in Section 19, the Utilities shall file an application seeking recovery for API Solution 1. The Commission will determine at that time whether the solution is an efficient use of ratepayer funds.

*Process for Developing API Solution 1.* We find SCE and PG&E's suggestion for conserving staff resources to be reasonable. Non-Utility participants of the Customer Data Access Committee should develop detailed business

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[210] *Id.* at 4 and 6, arguing that API Solution 1 must be "scoped out in technical detail," prior to jumping to conclusions.

[211] *Id.* at 6.

[212] *Id.* at 14.

requirements for API Solution 1. The Utilities need not work on the business requirements for API Solution 1 until the non-Utility stakeholders have developed a detailed list of requirements. This proposal is reasonable because that is similar to the approach taken for developing the requirements for OAuth Solution 3.

## 15 Expanding Solution(s) to Other Distributed Energy Resources

Throughout the Working Group meetings, Commission staff, including the Assigned Commissioner's office discussed the Commission's interest in expanding access of the click-through solution(s) to customers of other third-party distributed energy resource providers such as solar, storage, and energy efficiency. In the October 18, 2016 presentation providing guidance for the Advice Letters, Energy Division stated that, "[f]eatures for streamlining customer access for other Distributed Energy Resources are desirable and will be considered."[213]

### 15.1 Utility Proposals for Expanding Solution(s) to Other Distributed Energy Resources

In their Advice Letter filings, all three Utilities argued that more work is needed in a broader forum before the solutions(s) can be expanded to incorporate additional use cases besides direct participation demand response.[214] All three Utilities explained the uncertainty around whether the Commission will begin to explore these ideas in one of its integrated proceedings. One option is the Distribution Resources Plan proceeding where parties are determining locations throughout the electrical system where distributed resources are needed the most. Customer data access issues remain in scope of the proceeding, but the

[213] Energy Division Advice Letter Guidance October 18, 2016, available at: http://www.cpuc.ca.gov/General.aspx?id=7032.

[214] PG&E Advice Letter 4992-E at 16, SCE Advice Letter 3541-E at 17, and SDG&E Advice Letter 3030-E at 6-7.

Commission has not issued a ruling to determine whether the proceeding will address these issues in the near term.[215]

Despite procedural uncertainty, SDG&E explained that it has incorporated flexibility into the click-through architecture and design. Initially, customers will be able to authorize third-parties for the purpose of receiving demand response services. In the future, SDG&E plans on allowing multiple purposes per provider such that customers could authorize one third-party (or one partnership), that offers a variety of services for example energy efficiency and demand response.[216]

### 15.2 Protests to Utility Proposals for Utility Proposals for Expanding Solution(s) to Other Distributed Energy Resources

OhmConnect and UtilityAPI protested this issue. OhmConnect supports expanding the solution(s) to incorporate other distributed energy resource providers, but not at the expense of ensuring that OAuth Solution 3 is ready in time to impact the demand response auction mechanism customer enrollments.[217] UtilityAPI believes that SCE and SDG&E should provide more detail in the Advice Letters regarding whether OAuth Solution 3 incorporates the UtilityAPI Guiding Principles.[218] UtilityAPI explained that the six UtilityAPI Guiding Principles were developed by a wide range of energy industry leaders, including distributed energy resource providers. By adhering to these principles, UtilityAPI believes that the Utilities will be able to more effectively expand the solution(s) to other distributed energy resource providers in the future.[219] They include:

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[215] *See* Assigned Commissioner Ruling on Track 3 Issues, October 10, 2016 in Rulemaking 14-08-013 at 11, stating "a forthcoming ruling will resume consideration of unresolved data access issues…"

[216] *Id.* at 7.

[217] OhmConnect Protest to SDG&E at 10, and Protest to PG&E and SCE at 10.

[218] UtilityAPI Protest at 4-5.

[219] *Id.* at 4-5.

(1) Full Data Set;
(2) Synchronous Data;
(3) Instant, Digital Authorization;
(4) Instant, Consumer-Centric Authorization;
(5) Seamless Click-Through; and
(6) Strong Security Protocols.[220]

In its reply, SCE responded that the guiding principles have not been adopted by the Commission, so SCE need not incorporate them into the Advice Letter Filing.[221]

### 15.3 Discussion

SDG&E's approach of incorporating flexibility is reasonable. We find that supporting one third-party that provides multiple services is consistent with many of the Commission policies and findings of research studies around resource integration. For example, since 2007 and the Commission's adoption of D.07-10-047 and, subsequently, the California Long-term Energy Efficiency Strategic Plan, [222] which points to the benefits of integrated approaches and lays out strategic priorities. Further, the 2025 California Demand Response Potential Study found that "EE and DR integration could be an overall increase in … DR availability for meeting system capacity needs, with supply DR at a lower cost compared to DR-only technology investments."[223] By integrating demand response and energy efficiency, the potential study found that demand response could be achieved at a lower cost, which could lead to more available demand response.

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[220] *Id.* at 2-3.

[221] SCE Reply at 8.

[222] D.08-09-040 at 11, explaining the importance of demand-side coordination; and Attachment A, the California Long-Term Energy Efficiency Strategic Plan.

[223] 2025 California Demand Response Potential Study at 8-3, available at: http://www.cpuc.ca.gov/General.aspx?id=10622.

We restate the Commission's interest in expanding the click-through solution(s) to other distributed energy resource providers. We find that it is reasonable to take steps to plan for future expansion to other distributed energy resource and energy management providers now, in order to "future-proof" the solution(s) and protect the ratepayer investment. Like SDG&E, SCE and PG&E shall incorporate flexibility into the architecture and design of the solutions(s). These flexibilities are likely easy to plan for since the Utilities already provide customers the opportunity to share their data with third-party distributed energy resource providers through their Green Button platforms.[224]

In addition to SDG&E's approach of allowing multiple use cases per provider, the Utilities shall first ensure that the click-through process accommodates different use cases by customizing the data set that each type of provider would receive. Different providers are approved to receive different data sets; for example, energy efficiency providers may not receive gas data unless they install gas efficiency measures. To receive data through the Green Button platform, distributed energy resource providers must pre-register with the Utility. Section 6 describes how a third-party Demand Response Provider can choose its preferred length of authorization when it pre-registers with the Utility for OAuth Solution 3. In order to "future-proof" the click-through solution(s), the Utilities shall ensure that the different data sets available to each different distributed energy resource can be included as an option in the pre-registration process.

We order the Utilities to hold a meeting open to all distributed energy resource, energy management, and other third-party providers to ensure that the data sets that these resources need are included in the architecture of the solution(s). "Future-proofing" the solution(s) will ensure an efficient use of ratepayer funds by preventing expensive re-architecture of systems. The meeting shall be held no later than ninety days from the approval of this Resolution and shall be noticed

[224] These platforms are the Customer Energy Network for SDG&E, Green Button Connect for SCE, and ShareMyData for PG&E.

to Commission proceeding service lists that addresses distributed energy resources, integration, or third-party service providers.[225]

Beyond "future-proofing" the proposed solution(s), we order the Utilities to include a proposal for expanding the solution(s) to other distributed energy resource and energy management providers in the application for future improvements described in Section 19 below. Allowing other types of providers to utilize the authorization solution(s) will enable their customers to easily share their data, facilitating increased choice. Further, including a proposal to expand the solution(s) to other distributed energy resource providers will alleviate procedural uncertainty. A new application proceeding will provide a broader forum for addressing customer data access issues. Notwithstanding other Commission action, such as potential actions taken in the Distribution Resources Plan proceeding, the Utilities shall work with the Customer Data Access Committee, established herein, and develop a proposal for expanding the solution(s) to other distributed energy resource and energy management providers.

We recognize the importance of ensuring that OAuth Solution 3 remains on schedule, so the click-through authorization process can help to positively impact enrollments in third-party programs for the 2018 demand response auction mechanism. Progress must first be made with demand response use cases. The Utilities shall stick to the schedule of phasing described in Section 17 and implement the solution(s) for demand response use cases.

16 Application of the Click-Through Authorization Process to CCA/DAs

PG&E and SCE propose using the click-through authorization process for Community Choice Aggregation (CCA) or Direct Access (DA) customers when the Utility is the Meter Data Management Agent (MDMA). No party protested

[225] Including but not limited to: R.03-10-003; R.12-11-005; R.1309011; R.13-11-005; R.13-11-007; R.14-07-002; R.14-08-013; R.14-10-003; R.15-02-020; R.15-03-011; R16-02-007; A.17-01-012; ...18, ...19; A.17-01-013, ...14, ...15, ...16, ...17; A.17-01-020; ...21, ...22; and A.17-04-018.

this proposal. This is the status quo because the Utilities currently use the paper CISR-DRP Request Form for customers of this type today. We find this reasonable and allow the Utilities to continue the status quo for the click-through authorization process. Further, CCA and DA customers shall be able to release the expanded data set, including billing elements to third-party Demand Response Providers. Practically, the provision of data may depend upon CCA or Energy Service Provider provision of certain data.[226] However, since no Community Choice Aggregators or Direct Access customers participated in the working group process or protested these Advice Letters, we recognize that this may need to change in the future.

## 17 Budgets and Phasing

Several requests were made in comments on the Draft Resolution for adjustments in Phasing.

### 17.1 Utility Proposals for Budgets and Phasing

Each Utility requests funding within the funding cap as modified by D.17-06-005. There, the Commission found that it was necessary to modify the funding authorized in D.16-06-008 because at the time the original Decision was released, the cost of the click-through authorization process was not known. D.17-06-005 approved click-through funding caps of $5.6 million (m.) for PG&E, $1.5 m. for SCE and $4.9 m. for SDG&E. PG&E requested "flexibility between capital and expense categorization to allow flexibility and reduce implementation delays."[227] PG&E plans to use Generally Acceptable Accounting Principles and internal software capitalization.[228]

The Utility funding requests are as follows:

[226] PG&E Comments on the Draft Resolution at 4-5.

[227] *Id.* at 6.

[228] *Id.,* especially footnote 19.

- PG&E requests $5.6 million total, $1.2 m. for data delivery and $4.4 m. for OAuth Solution 3. PG&E developed these estimates within a 50% margin of error.
- SCE requests $1.5 m., $500,000 for system functionality, $100,000 for user experience design, $150,000 for training and organizational management, $250,000 for the project team, and a $500,000 buffer because the Advice Letter was filed within a 50% confidence level.
- SDG&E requests $4.9 m., including $4 m. for building OAuth Solution 3 and other information technology and data delivery costs, and an additional $900,000 to accommodate additional requirements that may be ordered by this Resolution, or during project development. SDG&E estimated these costs at a 75% confidence level.

In order to accomplish these ambitious improvements to the click-through authorization process, the Utilities are requesting approval to implement OAuth Solution 3 in phases. PG&E believes three phases can be completed within 18 months. PG&E proposes completion of Phase 1 within nine months after the issuance of the Resolution. It would include dual authorization, a streamlined customer authorization flow, a design for mobile and desktop devices, and the ability for the third-party provider to revoke authorization. PG&E estimates Phase 2 can be completed six months following the first phase. It would include alternative authentication, forgot password, redirection page updates, and re-authorization tokens. Finally, PG&E believes Phase 3 can be completed 3 months after the completion of the second phase. It would include basic performance reporting and any outstanding requirements.[229]

SCE believes that the initial implementation of OAuth Solution 3 can be completed by the fourth quarter of 2017; however, this likely took into account a March or April 2017 approval of this Resolution.[230] Therefore, SCE may need to take a phased approach as well.

[229] PG&E Advice Letter 4992-E at 18-19.

[230] SCE Advice Letter 3541-E at 16-17.

SDG&E believes OAuth Solution 3 can be completed within nine months of the approval of the Resolution, but could take a phased approach so that Phase 1 could be completed sooner. Phase 1 would therefore include authentication, authorization and data provisioning. Phase 2 would include performance monitoring and reporting, Rule 32 dataset expansions or enhancements, and alternative authentication.[231]

### 17.2 Protests to Utility Proposals for Budgets and Phasing

No parties protested the budget or funding requested. Only OhmConnect and the Joint Protesting Parties commented on phasing. OhmConnect requests that the Commission clarify that the Utilities are expected to complete implementation by January 1, 2018. The Joint Protesting Parties request that alternative authentication be included as part of Phase 1.

### 17.3 Discussion

We find the requested budgets reasonable given the ambitious improvements that the Utilities will be making in the click-through authorization process. The Utilities shall report the money spent on both OAuth Solution 3 and API Solution 1 in the Quarterly Rule 24/32 Report using Generally Accepted Accounting Principles. Based on PG&E's Comments on the Draft Resolution, we grant all three Utilities the flexibility to account for a portion of the project as a capital expense for software if the applicable requirements under Commission rules are met.[232]

We also find reasonable the proposals for phasing implementation, but we direct the Utilities to complete the work at a faster pace in order to have a sufficient impact on third-party demand response enrollments for the 2018 demand response auction mechanism. We also believe that completing the entire click-through OAuth Solution 3 implementation is possible within fifteen months, especially since Utilities indicated at the January 9, 2017 workshop that work would begin prior to the approval of the Resolution. Therefore, an aggressive

[231] SDG&E Advice Letter 3030-E at 8-9.

[232] PG&E Comments on the Draft Resolution at 6-7, and D.11-05-018.

implementation schedule is needed to ensure that progress is made on the additional improvements ordered in this Resolution.

All three Utilities requested a three-month extension for Phase 3.[233] SCE requested a two-month extension for Phase 2, and PG&E requested a one-month extension for Phase 2.[234] Further, PG&E and SCE requested moving Performance Monitoring Reporting to Phase 3.[235] These requests for more time for Phase 3 are reasonable. PG&E's request for extension of Phase 2 by one month is reasonable. Therefore, we grant a one-month extension for Phase 2 and a three-month extension for Phase 3 for all three Utilities.

SCE proposes to move the complete implementation of Alternative Authentication to Phase 3, but will provide a one-time data transfer functionality to Demand Response Providers by Phase 2. SCE requests this modification because Alternative Authentication implementation depends upon the deployment of its "enterprise software solution."[236] We find that providing a one-time data transfer functionality is not needed at this time, nor did stakeholders in the working group request it.[237] Therefore, SCE shall implement complete Alternative Authentication functionality by Phase 3.

Additional changes are reflected in Table 1, below based on items discussed throughout the Resolution. As described in Section 9, SCE and SDG&E shall build in functionality to OAuth Solution 3, which will allow the third-party Demand Response Provider to customize the length of authorization at an individual customer level. PG&E will complete this functionality by Phase 2.[238]

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[233] PG&E Comments on the Draft Resolution at 7; SCE Comments on the Draft Resolution at 4-5 and Attachment at A-5; and SDG&E Comments on the Draft Resolution at 4.

[234] *Id.*

[235] PG&E Comments on the Draft Resolution at 7; and SCE Comments on the Draft Resolution at 4-6 and Attachment at A-5.

[236] SCE Comments on the Draft Resolution at 4.

[237] *See* Olivine Protest at 2, explaining that "it does not serve the ongoing data requirements of Rule 24[/32] nor was it requested by the non-[Utility] parties in the workshops."

[238] PG&E Comment on the Draft Resolution at 4 and Appendix B.

As discussed in Section 10, PG&E and SDG&E shall provide the Customer Class Indicator by Phase 3. SCE already planned to include the customer Class Indicator by Phase 1 in its original Advice Letter.[239]

In sum, the adoption of this Resolution, Phase 1 shall be completed within six months. Phase 2 shall be completed within ten months. Phase 3 shall be completed within fifteen months. We adopt the Utility proposals for what shall be included in each phase with certain modifications as indicated in Table 1 with an asterisk "*." These modifications include moving the reporting performance metrics activity to Phase 2 instead of Phase 3, adding activities not included in the Advice Letters but ordered herein, and a schedule of phases for SCE. SCE did not originally propose a phased approach.

[239] SCE Advice Letter 3541-E at Appendix A.

**TABLE 1**

*Adopted Implementation Phasing (Months)*

Asterisk * Indicates Modification to Original Utility Proposal

| Phase | PG&E | SCE | SDG&E |
|---|---|---|---|
| **1**<br>**6 mo.** | • Authentication<br>• Authorization with streamlined design<br>• Design with 2 screens & 4 clicks for quick path<br>• Display of Terms & Conditions<br>• Dual Authorization<br>• Expanded Data Set<br>• Mobile friendly design<br>• Shorter Data Set Synchronously<br>• Email Notification*<br>• "Future-Proof" click-through architecture* | • Authentication<br>• Authorization with streamlined design<br>• Demand Response Provider revocation<br>• Design with 2 screens & 4 clicks for quick path<br>• Display of Terms & Conditions<br>• Dual Authorization<br>• Expanded Data Set including Customer Class Indicator<br>• Length of authorization options.<br>• Mobile friendly design<br>• Shorter Data Set Synchronously<br>• Email Notification*<br>• "Future-Proof" click-through architecture* | • Authentication<br>• Authorization with streamlined design<br>• Demand Response Provider revocation<br>• Design with 2 screens & 4 clicks for quick path<br>• Display of Terms & Conditions<br>• Dual Authorization<br>• Length of authorization options.<br>• Mobile friendly design<br>• "Future-Proof" click-through architecture* |
| **2**<br>**10 mo.** | • Alternative Authentication<br>• Demand Response Provider revocation<br>• Individual length of authorization customization | • Customer revocation through SCE MyAccount* | • Alternative Authentication<br>• Expanded Data Set* |
| **3**<br>**15 mo.** | <u>Final Implementation for OAuth Solution 3:</u><br>• Revocation using click-through authorization*<br>• Expanding the click-through authorization solution(s) to other distributed resources*<br>• Performance monitoring/reporting*<br>• Individual length of authorization customization (SCE & SDG&E only)*<br>• Inclusion of the Customer Class Indicator in the Expanded Data Set (PG&E & SDG&E only)*<br>• Alternative Authentication (SCE only)*<br>• Shorter Data Set Synchronously (SDG&E only)*<br><u>All Three Utilities, Application for:</u><br>• Additional improvements as determined through the Customer Data Access Committee that cannot be achieved within the Advice Letter Funding Cap*<br>• API Solution 1* | | |

## 18 Forum for Ongoing Feedback and Dispute Resolution

Throughout the working group process, stakeholders have expressed the need for their feedback to be considered as the click-through solution is being designed and built. Stakeholders also requested that Utilities include in the Advice Letters, a proposal for a mechanism for stakeholder feedback to be incorporated on an ongoing basis.[240] Further, stakeholders have occasionally come to the Energy Division requesting informal assistance in resolving minor disputes like problems with the quality of data delivered to demand response providers including gaps or missing data, as well as concerns with the way third-parties are accessing data.

### 18.1 PG&E's Proposal for Ongoing Feedback

PG&E was the only Utility to include a proposal for stakeholder feedback. PG&E proposes hosting focus groups where stakeholder feedback can be solicited and incorporated. PG&E's proposal came as a response to stakeholder's protests which requested that the Utilities' file additional Advice Letters to clarify details of the development of solutions.[241] PG&E believes that imposing additional regulatory requirements could result in the delay of the implementation of the solution due to waiting time for decisions on Advice Letters. A stakeholder focus group would allow for more flexibility.

### 18.2 Customer Data Access Committee

The Commission must balance the need for the Utilities to incorporate ongoing stakeholder feedback with the need to quickly make changes to the click-through authorization solution(s). At the same time, the Commission must ensure that the click-through solution evolves and improves as time goes on. The click-through working group's purview was limited to the development of the consensus proposal and the January 3, 2017 Advice Letters,[242] so no forum

[240] Informal Status Report at 11.

[241] PG&E Reply at 5-6, citing OhmConnect Protest to PG&E and SCE at 3-4, and Joint Protesting Parties Protest at 10-11.

[242] D.16-06-008 ordered parties and interested stakeholders to develop a consensus proposal, but no process for ongoing implementation issues was established. *See* D.16-06-008 at 10-14, 19-23, and Ordering Paragraph 10.

currently exists to address implementation issues beyond the Advice Letter filings. Parties and stakeholders need a forum to discuss ongoing click-through issues and resolve disputes informally. Therefore, we direct the Utilities to form a Customer Data Access Committee as specified below, for the purpose of receiving stakeholder feedback and resolving on-going issues.

The Energy Data Access Committee (EDAC) provides a good model for the Customer Data Access Committee (CDAC). The EDAC was established under the Smart Grid Proceeding[243] as a technical committee. Its goal "is to serve as a forum for evaluating progress, informally resolving disputes, considering next steps, introducing new ideas, and identifying problems with the utilities implementation of the orders in this decision."[244] Further, the EDAC, "unlike a regular mediator, may issue a recommendation or diverging recommendations concerning whether to provide access to data."[245] The EDAC provides research institutions and governmental entities a forum to informally resolve disputes regarding access to aggregated customer data.[246] While EDAC is led by Energy Division, Energy Division does not determine the outcome; instead, parties and stakeholders raise issues and make agreements on their own. Further, EDAC can at its option provide an informal recommendation. Because the Committee is informal, parties retain their right to file formal complaints, expedited complaints, seek Alternative Dispute Resolution, participate in proceedings, file comments, and petition the Commission to clarify any policy matters.[247]

Unlike EDAC which addresses issues of access to aggregated customer data, the goal of the CDAC will be to address data access issues associated with customer authorizations to third-party providers, i.e. customer consent for the Utility to

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[243] Rulemaking 08-12-009. The EDAC was established in D.14-05-016.

[244] D.14-05-016 at Ordering Paragraph 11.

[245] *Id.* at 97-98.

[246] *See Id.* at 99, explaining that the goal of the EDAC is to identify "problems with the implementation of the orders in this decision," which include the methods for parties to request aggregated data. The decision did not address the process for gaining access to non-anonymized, customer specific data.

[247] *Id.* at 99.

release non-anonymized data to third-party providers, including, but not limited to the click-through authorization process(es) for demand response direct participation. While both Committees address similar issues, the issue of customer-specific authorization is different enough that the CDAC will not duplicate efforts of the EDAC. We find it efficient for the two committees to coordinate closely, especially if issues arise that relate to the work of both groups. The goal of the CDAC shall be to address implementation issues arising in the development of the click-through solution(s), considering next steps, informally resolving disputes, introducing new ideas, and other customer data access issues.

The implementation issues the CDAC should address include, but are not limited to:

- providing timely input into design of OAuth Solution 3 including – the overall design, the connectivity to mobile devices, the links to terms and conditions, the user experience and other technical features;
- developing proposals for Advice Letter filings requesting funding within the caps including performance metrics for the Utility websites, and additional improvements;
- developing proposals for the application filing including forming the business requirements for API Solution 1, expanding the click-through solution(s) to other distributed energy resource and energy management providers, and additional improvements beyond what can be accomplished in the funding caps; and
- informally resolving dispute that may arise among stakeholders.

The CDAC shall be comprised of representatives from each Utility, Energy Division staff, and any interested stakeholders or parties regardless of their status as providers of demand response. Energy Division staff will have oversight responsibility of the Committee, but it shall be managed by the Utilities and interested stakeholders on an interim basis. The Energy Division may at its discretion assume direct management of the Committee or appoint a working group manager. To facilitate public participation and transparency, meeting notes prepared by stakeholders shall be posted on the Energy Division's website or other website as determined appropriate.

The Committee shall be non-adjudicatory, and is not a formal advisory committee. Therefore, any party or stakeholder with an interest in non-anonymized customer data access is eligible to serve on the committee, but shall do so without compensation. Any recommendations made by CDAC shall be non-binding because stakeholders and parties retain formal dispute resolution options at the Commission.[248]

In comments on the Draft Resolution, the Joint Commenting Parties suggested the use of an enforcement mechanism to address issues that may arise regarding data delivery.[249] We find that additional enforcement mechanisms are not needed at this time because the Customer Data Access Committee ordered here could address issues of data delivery. By discussing any problems that arise in a group setting, parties will be able to discuss and propose solutions for any issues that arise. The Commission's Energy Division will oversee the Committee.

PG&E, SCE, SDG&E, with Energy Division guidance, shall host the first Customer Data Access Committee meeting no later than 45 days after this Resolution is issued, and will, at a minimum, meet quarterly for the first two years and as needed thereafter. We expect the Committee will need to meet more often during the first year to address the additional improvements ordered and the implementation issues arising in this Resolution. However, the Committee may also address related issues not directly raised in this Resolution.

19 Cost Recovery for Additional Improvements

Decision 17-06-005 increased the flexibility in the funding mechanisms for the implementation of direct participation demand response including streamlining the process for authorization of customer data (the click-through) to facilitate

[248] *See* D.13-12-029 discussing expedited dispute resolution in the direct participation context and the Rules of Practice and Procedure, California Code of Regulations, Title 20, Division 1, Chapter 1, Article 4 describing formal complaint options. *See also* Resolution ALJ-185, approving the Alternative Dispute Resolution program administered by the Administrative Law Judge division of the Commission. More information available at: http://www.cpuc.ca.gov/alternative_dispute_resolution/

[249] Joint Commenting Parties Comments on the Draft Resolution at 9.

enrollment in third-party Demand Response Provider programs, and increasing the registrations in the CAISO wholesale market. In accordance with that Decision, here we order PG&E, SCE, and SDG&E to file Advice Letters to implement additional improvements as discussed in this Section and throughout this Resolution. Further, we order the Utilities to file an application seeking cost recovery for additional improvements to the click-through authorization process, including API Solution 1, and any additional improvements.

Originally, D.16-06-008 ordered the Utilities to file a consensus proposal to improve the click-through authorization process,[250] but the Decision left ambiguous how the Utilities could recover costs. The Decision allowed the Utilities to request funding through a Tier 3 Advice Letter process for "increasing customer participation registrations," and set a cap for each utility.[251] The decision required that any funding for "advancements" of direct participation demand response that were needed beyond these caps should be requested in the 2018-22 portfolio applications, the mid-cycle review, or subsequent program year applications.[252]

D.17-06-005 clarified the purposes for which Utilities could request funding through and removed the limitation that required requests for funding be included in the demand response portfolio applications. D.17-06-005 PG&E, SCE, and SDG&E may file Tier 3 Advice Letters to recover costs related to the click-through authorization process. The cap for this purpose is $5.6 million for PG&E, $1.5 million for SCE, and $4.9 million for SDG&E.[253] These caps represent costs included in the Advice Letters, and the caps have already been reached through the approvals in this Resolution.

In addition, D.17-06-005 specified other purposes for which Utilities may request Tier 3 Advice Letter cost recovery are:

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[250] D.16-06-008 at Ordering Paragraph 10.

[251] *Id.* at Ordering Paragraph 13.

[252] *Id.* at Ordering Paragraph 12.

[253] D.17-06-005 at Ordering Paragraph 2, modifying Ordering Paragraph 12 of D.16-06-008.

> "funding for additional improvements in Rule 24/32 implementation beyond the improvements requested in the Advice letter ordered in Ordering Paragraph 10, including but not limited to enrollment process improvements and increasing customer participation registrations in the California Independent System Operators [CAISO] market."[254]

Therefore, given the increased flexibility of the funding cap, we order PG&E, SCE and SDG&E to file one or more Advice Letter(s) as described in Table 3 below, to implement the modifications to OAuth Solution 3, the performance metrics, and other minor improvements that were not scoped in the extant Advice Letters and are ordered in this Resolution. The Utilities shall work with the parties and any other interested stakeholders in the Customer Data Access Committee to scope out requirements, and develop a consensus proposal(s).

Finally, D.17-06-005 removed limitations in D.16-06-008 that would have required all activities related to third-party demand response and Rule 24/32 direct participation to be requested in the demand response portfolio program cycle, and removed the requirement that the Utilities wait for Commission directive before filing mass market applications to increase customer participation registrations in the CAISO wholesale market.[255] These flexibilities will allow the Utilities to make improvements to the click-through authorization process, increasing Rule 24/32 registrations, and implement other changes to support a robust third-party market.

Table 2 below provides additional clarity.[256]

[254] *Id.* at Ordering Paragraph 13, modifying Ordering Paragraph 13 of D.16-06-008.
[255] *Id.* at Ordering Paragraph 3, modifying Ordering Paragraph 12 of D.16-06-008.
[256] Figure 1, "Explanation of Funding Sources," D.17-06-005 at 16.

**TABLE 2**
*Funding Mechanisms and Budgets Remaining*

| Purpose for Funding D.16-06-008 as Modified by D.17-06-005 | Funding Mechanism | Funding Caps (in Millions) | Remaining Budgets[257] |
|---|---|---|---|
| *Ordering Paragraph 10*: To implement the click-through authorization process, as approved in this Resolution. | Tier 3 Advice Letters:<br>PG&E 4992-E<br>SCE 3541-E<br>SDG&E 3030-E | PG&E: $ 5.6<br>SCE: $ 1.5<br>SDG&E: $ 4.9 | None |
| *Ordering Paragraph 13*: Improvements for direct participation beyond those requested in the Advice Letters.[258] | Additional Tier 3 Advice Letters[259] | PG&E: $ 10.39<br>SCE: $ 3.2<br>SDG&E: $ 4.9 | PG&E: $ 8.476<br>SCE: $ 3.2<br>SDG&E: $ 1.847 |
| *Ordering Paragraph 12*: Increasing enrollments with click-through improvements not possible within Advice Letter caps and mass market requirements. | New Application (No need to wait for Commission directive) | None | Subject to Commission approval through an application proceeding. |

As discussed throughout this Resolution, we find it necessary to improve the click-through authorization process beyond what was proposed in the Advice

[257] Without prejudging the outcome, budgets remaining described here assume pending CAISO registration Advice Letters are approved as proposed. PG&E AL 5014-E requested $1.914 million; SDG&E AL 3041-E requested $3.053 million; and SCE AL 3553-E requested no additional funds.

[258] These purposes include but are not limited to (1) improvements to the click through authorization process, (2) activities to increase enrollments in third-party programs, and (3) increases in customer registrations in the CAISO wholesale market.

[259] The CAISO registration Advice Letters (PG&E AL 5014-E, SCE AL 3553-E, and SDG&E AL 3041-E) are examples of those filed for additional improvements.

Letters. Table 3 below describes the timing for the meetings and Advice Letter filings ordered in this Resolution. Advice Letter filings requesting cost recovery shall be Tier 3. All others shall be Tier 2.

**TABLE 3** [260]

*Schedule of Advice Letter Filings and Meetings*

| | 45 Days | 60 Days | 90 Days | 120 Days |
|---|---|---|---|---|
| **Filings** | | • Expansion of the Data Set (SDG&E)<br>• Short Synchronous Data Set (SDG&E)<br>• Email Notification (if needed, SDG&E, SCE) | • Proposal for Performance Metrics Website | • CISR-DRP and Rule 24/32 Updates<br>• Revocation in My Account or Green Button platform (if needed, SCE)<br>• Revocation in click-through within cap<br>• Other technical features or improvements within cap |
| **Meetings** | First meeting Customer Data Access Committee | | Meeting with Distributed Energy Resource providers to "future-proof" solution(s) | |

[260] These activities are in addition to the phasing described in Section 17 - Phase 1 in six months, Phase 2 in nine months, and Phase 3 in fifteen months. Activities refer to all three Utilities unless otherwise noted. Some filings are optional as indicated, depending upon if the Utility needs additional funding.

The Utilities shall also include additional improvements in the Advice Letter filings within the budget caps. All other improvements as determined by the Customer Data Access Committee shall be included in an application filed no later than fifteen months from the approval of this Resolution.

The applications shall contain:

- a proposal to expand the click-through solution(s) to other distributed energy resource and energy management providers;
- a cost estimate and proposal for API Solution 1;
- a cost estimate and proposal for Synchronous data of the complete and expanded data set within ninety seconds;
- improvements to the authorization process that may have the effect of increasing customer enrollment in third-party demand response programs;
- improvements in data delivery processes;
- upgrades to the information technology infrastructure needed for click-through authorization processes;
- additional functionalities for click-through authorization processes proposed in the Customer Data Access Committee;
- resolution of implementation issues related to OAuth Solution 3 or API Solution 1 raised by stakeholders in the Customer Data Access Committee;
- costs for integrating the CISR-DRP Request Form terms and conditions into the Utility Green Button platforms – ShareMyData, Green Button Connect, or Customer Energy Network;[261] and

[261] Currently, all three Utilities provide customers the option to authorize through their Green Button platform, but the CISR-DRP terms and conditions are not included. Including the CISR-DRP Request Form terms and conditions would limit customer confusion in cases where a customer seeks to authorize multiple Distributed Energy Resource providers, and advance the D.16-09-056 principle of promoting customer choice.

- publication of customer friendly information on the Utility website including, information about Rule 24/32, and instructions on how to authorize data access or revoke authorization.

## COMMENTS

Public Utilities Code section 311(g)(1) provides that this Resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this Resolution was neither waived nor reduced. Accordingly, this draft Resolution was mailed to parties for comments on July 11, 2017.

The Draft Comment Resolution E-4868 was published on July 11, 2017. The Joint Commenting Parties,[262] OhmConnect, Inc. ("OhmConnect"), and all three Utilities timely submitted comments on the Draft Resolution on July 31, 2017. Comments are addressed here and throughout the resolution as indicated.
*Alternative Authentication Credentials*: The Joint Commenting Parties urge the Commission to make a decision on the precise credentials that should be used, with a preference for the customer name, account number and zip code.[263] SDG&E and PG&E urge the Commission to reconsider the prohibition on the use of the Social Security or Federal Tax Identification numbers.[264] Further, SDG&E suggests that the issue be considered in a stakeholder working group.[265]
We decline to determine the specific credentials. We reaffirm that the Social

[262] The Joint Commenting Parties include the Joint Demand Response Parties (CPower, EnerNOC, and EnergyHub), as well as the California Efficiency + Demand Management Council, Mission:Data Coalition, and Olivine, Inc..

[263] Joint Commenting Parties Comment on Draft Resolution at 4-5.

[264] SDG&E Comment on the Draft Resolution at 1-3; and PG&E Comments on Draft Resolution E at 3-4.

[265] SDG&E Comments on Draft Resolution at 3.

Security Number and Tax Identification Number are numbers, which generally, should only be used for purposes of employment, not for enrollment in a demand response program.

*Cost of Data*: The Joint Commenting Parties request again that the Commission declare that the Utilities provide at no charge to third-party Demand Response Providers, all "usage and related information necessary for increasing customer participation in EE or DR."[266] We decline to make a determination on this issue because insufficient information was provided regarding the current charges and costs that third-party Demand Response Providers must pay now. It is not possible to assess the reasonableness of a cost without more information.
*Reporting Performance Metrics*: PG&E and SCE prefer monthly reporting. PG&E explains that it has sought to resolve issues quickly and therefore does not need to report the performance of the click-through solution(s) on a daily basis.[267] SCE objects to the requirement that data delivery performance be reported daily, and believes that the costs of implementation are too high.[268] We find that the frequency of performance reporting on data delivery can be determined by stakeholders in the Customer Data Access Committee, and then filed in a consensus report as directed in Section 19. However, we affirm that reporting of performance metrics is necessary to protect the ratepayer investment in the click-through solution(s). We therefore only adjust the timing and allow PG&E and SCE to implement their websites by Phase 3 as described in Section 17.

*API Solution 1 and "Decoupling" the Solutions*: The Joint Commenting Parties request a faster timeline for filing the Application with a cost estimate on API Solution 1.[269] Both PG&E and SCE expressed concerns about staff resources and working on OAuth Solution 3 and API Solution 1 concurrently.[270] PG&E is

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[266] Joint Commenting Parties Comment on the Draft Resolution at 9-10.

[267] PG&E Comments on the Draft Resolution at 3.

[268] SCE Comments on the Draft Resolution at 5-6.

[269] Joint Commenting Parties Comment on the Draft Resolution at 10-11.

[270] PG&E Comments on the Draft Resolution at 8; and SCE Comments on the Draft Resolution at 2-3.

concerned about timing and requests that the Application for API Solution 1 be "decoupled" from the Application for improvements to OAuth Solution 3.[271] Additionally, SCE requests indemnification from liability because of security concerns.[272] We decline to indemnify the Utilities because the Customer Data Access Committee may be able to find technical solutions to address any security concerns as described in Section 14. Further, API Solution 1 will not be implemented until the Commission makes a determination in the Application ordered by this Resolution as described in Section 19. Therefore, SCE may raise the issue of indemnification there. We decline to decouple the Application for API Solution 1 from the improvements to OAuth Solution 3 and expanding the solution to other distributed energy resource providers. We also decline to move up the required filing date for the Application on API Solution 1. It will be more efficient to file one Application given that the solutions are so related.

*Customer Friendly Information on Rule 24/32 Websites:* PG&E requests the removal of a requirement for the Applications ordered in Section 19 regarding customer friendly information about Rule 24/32. PG&E states that the requirement is very similar to the OhmConnect Marketplace proposed in the 2018-22 Application 17-01-012 et. al.[273] We decline to remove the section entirely, but revise the requirement because we find that more customer friendly Rule 24/32 websites will help inform customers about Rule 24/32, and about how to revoke authorization. Therefore, we change the requirement from:

> "publication of customer friendly information prominently on the Utility website including, a list of Commission-registered third-party demand response providers with contact information, and instructions on how to authorize data access or revoke authorization."

to:

[271] PG&E Comments on the Draft Resolution at 2.

[272] SCE Comments on the Draft Resolution at 2.

[273] PG&E Comments on the Draft Resolution at 11.

"publication of customer friendly information on the Utility website including, information about Rule 24/32 and instructions on how to authorize data access or revoke authorization."

*Other Granted Requests for Modifications:* There were several other minor requests for modifications in the Comments on the Draft Resolution that were granted, but not discussed throughout the Resolution including:

- "Enrollment": PG&E and SCE requested the removal of language that imposes a responsibility on the Utility to increase enrollments in third-party programs[274] in Section 19, "improvements to increase customer enrollment in third-party demand response programs." The Resolution therefore clarifies that these improvements would better the click-through authorization process, which could have the effect of increasing enrollment.
- Customer Data Access Committee Feedback "in time": PG&E is supportive of the ongoing feedback mechanism through the Customer Data Access Committee described in Section 18, but is concerned about receiving feedback after it has already developed the requirements of a particular technical feature, because this could lead to delay and going outside of the budget.[275] Therefore, we added "timely" throughout the Resolution wherever the issue of stakeholder input was discussed in order to clarify that input must be timely in order to be properly incorporated by the Utility.

## FINDINGS

1. PG&E AL 4992-E, SCE AL 3541-E and SDG&E AL 3030-E require improvements beyond the proposals in the filings as described herein.

[274] PG&E Comments on the Draft Resolution at 10; and SCE Comments on the Draft Resolution at 6.

[275] PG&E Comments on the Draft Resolution at 11.

2. The general principle that alternative authentication credentials shall be limited to information that is easily available to the customer and the specific credentials should be no more onerous than those required for a similar online utility transaction is reasonable.
3. Providing any part of a social security number or a federal tax identification number is overly burdensome and would create additional barriers for joining third-party demand response programs.
4. All customer classes must have the ability to use the alternative authentication credentials function of the click-through authorization process.
5. The customer should be able to authorize ongoing data transfers to the Demand Response Provider of their choice regardless of whether the customer identity is verified using the utility login and password or alternative authentication credentials.
6. Dual authorization of two third-party demand response providers is reasonable and consistent with both D.16-06-008 and D.16-09-056.
7. SCE's request to roll out dual authorization on the CISR and the online process at the same time is reasonable.
8. There has not been sufficient information provided to support a requirement for more than two authorized parties within a single authorization transaction.
9. PG&E, SCE, and SDG&E proposals to minimize clicks and screens in the OAuth Solution 3 click-through authorization process, as modified in the reply comments are reasonable.
10. Minimizing clicks and screens in the click-through authorization process creates a streamlined process as ordered by D.16-06-008.
11. The user experience requirements in Appendix E of the Informal Status Report are reasonable.
12. Pre-populating the click-through authorization process will reduce customer fatigue and drop off in compliance with D.16-06-008.
13. Displaying the terms and conditions with a scroll bar or requiring customers to click on a link with pop-out terms and conditions will likely lead to increased customer abandonment.

14. Customer fatigue is reduced if the click-through authorization screens are written in clear and concise language, with less formal legal language.
15. Existing ShareMyData, Customer Energy Network, and Green Button Connect authorization platforms do not provide a seamless user experience and cause customer fatigue.
16. The parties concern about the mobile user experience is reasonable.
17. Third-party providers and other interested parties should be able to provide meaningful and timely input on the mobile application for the click-through solution. Focus groups and content sharing will not provide sufficient opportunities for ongoing feedback.
18. There is a difference between websites that are "mobile device capable" and websites that are "optimized for mobile devices."
19. The customer, not the Utility is in the best position to determine whether the length of authorization offered by the Demand Response Provider suits their needs.
20. SDG&E's technical specifications for the length of authorization described in Section 6 herein most coincide with the options discussed in the working group.
21. Allowing customers to choose between either a specific end date or an indefinite timeframe for authorization increases customer choice, removes barriers to customer data access, and demonstrates a preference for third-party demand response providers.
22. SDG&E's proposal for notifying all parties of the successful completion of the authorization with a system generated email, including up to two demand response providers and the customer, is reasonable.
23. Accepting three different forms of notification of successful authorization could be confusing, burdensome, and inefficient for third-party demand response providers.
24. It is reasonable to allow both customers and demand response providers to revoke authorization and stop the flow of data from the Utility to the third-party.

25. Creating a variety of methods for customers and third-party demand response providers to revoke authorization promotes customer choice by allowing a customer to easily un-enroll from one demand response provider.
26. A customer should be able to revoke authorization using their Utility MyAccount, the Utility Green Button platform, the click-through authorization process, on the third-party demand response providers' website, using the paper Customer Information Service Request Demand Response Provider form, or by contacting the Utility.
27. Online solutions including the click-through authorization process are dynamic and therefore may need future updates and improvements. The Customer Data Access Committee established herein, is an appropriate place to address technical improvements.
28. The OAuth 2.0 standard or subsequent standard agreed upon by the Customer Data Access Committee will provide all parties with a uniform approach which will allow third-party Demand Response Providers to more efficiently utilize the click-through authorization process.
29. Customizing the timeframe of any particular customer is a useful feature.
30. The approaches taken by SCE and PG&E to expand the Rule 24/32 data set are reasonable.
31. It is reasonable to exclude PDF copies of customers' bills, payment information, data that is not typically stored, and gas service data.
32. It is reasonable to require all three Utilities to include the Customer Class Indicator in order to comply with D.16-09-056, Resolution E-4838, and Demand Response Auction Mechanism requirements.
33. The comment SDG&E made at the January 9, 2017 workshop describing data beyond "customer usage data" as proprietary ignores the customer's own interest in their energy related data.
34. The customer's interest in accessing and determining to whom their energy-related data should be disclosed could be limited if the Utility only releases "usage data."
35. The grammatical placement of "a customer's" in Public Utilities Code § 8380 implies that the customer has an interest in their energy related data.

36. Expanding the data set helps achieve the goal and principles identified in D.16-09-056 of increasing customer choice, eliminating barriers to customer data access, developing a competitive market with a preference for third-party demand response providers, and supporting renewable integration and emission reductions.

37. Rule 24/32 already requires the Utilities to release data beyond "customer usage data."

38. Limiting the definition of data that Utilities must release to data used for "direct participation" imposes barriers to data access.

39. D.16-06-008 found that direct participation is evolving and should be improved. Expanding the data set will improve direct participation.

40. D.16-06-008 directed Utilities to streamline and simplify the direct participation enrollment process, including adding more automation, mitigating enrollment fatigue, and resolving any remaining electronic signature issues. Expanding the data set adds more "automation" and is within the scope of the Rule 24/32 Application 14-06-001 et. al. proceeding and the Advice Letter implementation ordered in D.16-06-008, and the Customer Data Access Committee established in this Resolution.

41. Progress must be made for demand response use cases before the click-through authorization process(es) can be expanded to other distributed energy resource and energy management providers.

42. Limiting data set to data only for "direct participation" is contrary to the D.16-09-056 principle of eliminating barriers to data access. The adopted principle of eliminating barriers to data access necessitates expanding the Rule 24/32 data set.

43. The expanded data set provides data to third-party demand response providers that is needed for (1) direct participation integration into the CAISO wholesale market, (2) essential Demand Response Provider business practices, and (3) providing a successful customer experience.

44. Requiring third-party demand response providers to obtain data from other sources including directly from the customer is extremely unreasonable and burdensome. Requesting data from the customer does not "streamline and

simplify the direct participation enrollment process," nor does it add more automation, or mitigate enrollment fatigue as directed by D.16-06-008.

45. Ratepayers paid for the cost of Advance Metering Infrastructure, as well as collecting, storing, and managing customer data. An expanded data set will allow customers to benefit from these existing investments and provide them with more choices for demand response.

46. PG&E, SCE, and SDG&E propose reasonable budgets for expanding the data set.

47. Timely data delivery is necessary for providing a positive customer experience, integrating with the CAISO wholesale market and determining eligibility for third-party demand response programs.

48. The cost of providing ninety second expanded data delivery is unknown.

49. PG&E and SCE's proposals for providing a shorter data set within an average of ninety seconds from when the Demand Response Provider requests the data are reasonable.

50. Two days is a reasonable timeframe for delivering the complete expanded data set in the vast majority of cases.

51. The Commission has approved various fees that PG&E, SCE, and SDG&E may recover from third-party demand response providers as described herein.

52. This Resolution does not approve any additional fees that the PG&E, SCE, or SDG&E can recover from third-party demand response providers.

53. Insufficient information was provided regarding the charges that third-party Demand Response Providers pay now in order for the Commission to assess the reasonableness of those charges.

54. Fees by PG&E, SCE, or SDG&E to third-party demand response providers that are not already formally approved require Commission review through an Advice Letter or some other Commission process.

55. SDG&E's proposal for reporting performance metrics of OAuth Solution 3 is reasonable.

56. A webpage would act as a self-enforcement mechanism because Utilities will be motivated to resolve any reported problems quickly. A webpage is

reasonable because it would provide performance metrics on a real-time or near real-time but no less frequently than daily basis.

57. Monthly or quarterly reporting would not meet the objective of flagging any performance issues and quickly resolving these problems.

58. Utility webpages meet the objectives of D.16-06-008 by ensuring the performance of the solution is effective which adds to a streamlined customer experience, and a more automated solution.

59. The reporting metrics listed in the Informal Status Report and in Section 13 are reasonable.

60. It is efficient to report monthly aggregated performance data as part of the Quarterly Report Regarding the Status of Third-Party Demand Response Direct Participation in order to capture performance data over time, and it is reasonable to continue to file the report through 2020.

61. It is reasonable to monitor other aspects of Rule 24/32 operations such as data delivery time, the frequency of ongoing data delivery, and delivery time for missing or gaps in data or other metrics as determined by the Customer Data Access Committee.

62. It is more prudent to begin evaluating API Solution 1 now, instead of waiting until an evaluation on OAuth Solution 3 is complete.

63. In order to determine whether API Solution 1 comports with Commission Privacy Rules, the details and technical specifications of the solution must be developed.

64. It is reasonable for the non-Utility participants of the Customer Data Access Committee to develop detailed business requirements for API Solution 1. The Utilities need not begin work on the business requirements until non-Utility stakeholders have developed a detailed list.

65. Once cost estimates for API Solution 1 are filed in an application, the Commission can properly evaluate whether API Solution 1 would be an efficient use of ratepayer resources.

66. It is more efficient to file only one application for API Solution 1, additional improvements to OAuth Solution 3, and expanding the solutions to other distributed energy resources.

67. The issue of indemnification need not be determined now and would be more appropriately addressed in the Application proceeding ordered in this Resolution.
68. SDG&E's approach of incorporating flexibility into the architecture and design of the click-through solution(s) for application to distributed energy resource and other third-party providers in the future is reasonable.
69. Supporting one third-party that provides multiple services is consistent with Commission policy around integration including D.07-10-032 and D.08-09-040, as well as research studies such as the Demand Response Potential Study.
70. Taking steps now to plan for the potential future expansion of the click-through solution(s) to other distributed energy resources will protect the ratepayer investment and "future-proof" the solution(s).
71. Incorporating flexibilities into the architecture of the click-through solution(s) are likely easy to plan for since Utility Green Button platforms already allow customers to share data with third-party distributed energy resource providers.
72. Holding a meeting to ensure that the data sets needed by distributed energy resource and energy management providers are incorporated into the click-through authorization solution(s) is reasonable.
73. Clarifying a pathway for expanding the solution to other distributed energy resource and energy management providers will alleviate procedural uncertainty and allow issues of customer data access to be discussed in a broader forum.
74. Remaining on schedule for the initial roll-out of the click-through authorization solution for Demand Response Providers will allow progress to be made on demand response and positively impact enrollment in third-party demand response provider programs for the 2018 demand response auction mechanism.
75. It is reasonable to use the click-through authorization process for Community Choice Aggregation and Direct Access customers when the Utility is the Meter Data Management Agent.

76. It is reasonable to allow the Utilities to provide the expanded data set to Demand Response Providers for Community Choice Aggregation and Direct Access customers.

77. The Utilities proposals to phase their click-through solutions are reasonable, but a more aggressive timeline and certain modifications are needed to ensure sufficient progress is made.

78. The use of Generally Applicable Accounting Procedures, and the categorization of a portion of the costs as capital expense for software is reasonable.

79. It is reasonable for Phase 1 to be completed within six months of the approval of this Resolution; Phase 2 within ten months; and Phase 3 within fifteen months.

80. SCE's proposal of one-time data transfer functionality is not needed at this time.

81. The complete implementation of Alternative Authentication for ongoing data is reasonable by Phase 3.

82. The parties and stakeholders need a forum to discuss concerns with the implementation of the click-through authorization solution(s), incorporate ongoing and timely feedback into the design and development of the solution(s), and resolve disputes informally.

83. The Energy Data Access Committee addresses technical issues related to access to aggregated customer data, especially the processes for requesting data outlined in D.14-05-016.

84. D.16-06-008 ordered PG&E, SCE and SDG&E to form the click-through working group and develop consensus proposals in order to file the January 3, 2017 Advice Letters, but no forum or process for ongoing implementation was established in that Decision.

85. The Energy Data Access Committee provides a good model for the Customer Data Access Committee.

86. Because the Energy Data Access Committee only deals with issues of requests for aggregated customer data, and the Customer Data Access Committee will deal with issues of customer specific data, the Committee will not duplicate

efforts. Close coordination on issues that relate to the work of both groups will ensure efficiency.

87. It is reasonable for the Utilities to manage the Customer Data Access Committee, with oversight by the Commission's Energy Division.

88. Publishing meeting notes will facilitate public participation.

89. The Customer Data Access Committee shall be neither adjudicatory, nor advisory, so participation will not be compensated.

90. No additional enforcement mechanism is needed to address issues of data delivery because the Customer Data Access Committee, overseen by the Commission's Energy Division, may help parties address any issues that arise and come to agreements regarding potential solutions.

91. Parties retain formal dispute or policy resolution options at the Commission and recommendations made by the Customer Data Access Committee are non-binding and informal.

92. The Customer Data Access Committee will likely need to meet more than once a quarter during the first year because of the additional improvements addressed in this Resolution, but need not be limited by issues herein.

93. Prior to modification, D.16-06-008 left ambiguous how PG&E, SCE and SDG&E could recover costs for the click-through authorization process, and the Utilities were limited to request additional funding for advancements in direct participation to the 2018-22 portfolio application or mid-cycle review.

94. D.17-06-005 clarified that PG&E, SCE, and SDG&E may file Tier 3 Advice Letters to recover costs related to the click-through authorization consensus proposals at a cap of $5.6 million for PG&E, $1.5 million for SCE, and $4.9 million for SDG&E. The caps for the click-through authorization consensus proposals have been reached.

95. D.17-06-005 clarified that PG&E, SCE, and SDG&E may file Tier 3 Advice Letters up to a cap to recover costs related to "additional improvements" in direct participation demand response implementation including the click-through authorization process, activities to help increase enrollments in third-party demand response programs, and costs for increasing customer registrations in the CAISO wholesale market. From the caps for additional improvements, assuming Tier 3 Advice Letters for PG&E 5014-E requesting

$1.914 million and SDG&E 3041-E requesting $3.053 million are approved, PG&E has $8.476 million remaining; SCE has $3.2 million remaining; and SDG&E has $1.847 million remaining.

96. D.17-06-005 increased the flexibility of future funding requests by removing the requirement that PG&E, SCE, and SDG&E wait for Commission directive before filing an application to support CAISO registrations for the mass market, or wait until the 2018-22 mid-cycle review before filing an application for funding requests for additional improvements.

97. It is necessary to improve the click-through authorization process beyond the proposals in Advice Letters PG&E AL 4992-E, SCE AL 3541-E and SDG&E AL 3030-E.

## THEREFORE IT IS ORDERED THAT:

1. PG&E AL 4992-E, SCE AL 3541-E and SDG&E AL 3030-E and included budgets are approved as modified herein. The Utilities shall use Generally Accepted Accounting Principles. The Utilities may categorize a portion of costs as capital expenditures where applicable under Commission rules.
2. In addition to an authentication process that utilizes the Utility login and password, PG&E, SCE and SDG&E shall incorporate alternative authentication credentials into the click-through authorization process. Alternative authentication shall be available to all customer classes, and customers must be able to authorize ongoing data for purposes of direct participation demand response. The alternative authentication credentials shall be limited to information that is easily available to the customer, and the specific credentials shall be no more onerous than those required for a similar online utility transaction. Authentication credentials shall not include any part of the social security or federal tax identification numbers.
3. PG&E, SCE, and SDG&E shall incorporate dual authorization for their online click-through authorization process(s) whether the customer uses a Utility login and password, or alternative authentication credentials. PG&E and SDG&E shall continue to make available dual authorization on the paper CISR-DRP Request Form. SCE may wait to implement dual authorization on the CISR-DRP Request Form until Phase 1 of the click-through has been implemented.

4. PG&E, SCE, and SDG&E shall design and implement the OAuth Solution 3 click-through authorization process to have a maximum of two screens and four clicks for the "quick path" authorization flow. The "quick path" shall be defined as a user flow in which the customer:

   1) was not already logged into the utility account;
   2) Does not click the "forgot your password" link;
   3) Does not initiate a new online Utility account registration;
   4) Has a single service account, or intends to authorize all service accounts;
   5) Accepts the default timeframe for authorization;
   6) Does not click to read the detailed terms and conditions; and
   7) Uses either utility login credentials or alternative authentication.

   Further, in all cases except for when the customer clicks the "forgot your password" link or initiates a new online Utility account registration, the click-through authorization process shall be completed in two screens. The Utilities shall ensure that there is a clear path back to the authorization flow wherever possible, in cases where a customer somehow gets out of the flow. The Utilities shall adhere to the OAuth 2.0 standard or subsequent standard agreed upon by the Customer Data Access Committee in the implementation of OAuth Solution 3.

5. PG&E, SCE, and SDG&E shall ensure that the authorization screens and the terms and conditions are written in clear and concise language. The terms and conditions shall be summarized, preferably, with a link to the full terms and conditions, and shall not make use of a scroll bar, or pop-out that a customer is required to view before approving the authorization. The Utilities shall incorporate timely feedback about the display of terms and conditions from the parties and any other interested stakeholders in the Customer Data Access Committee. The Utilities and stakeholders shall work together to reduce the potential for customer abandonment resulting from user experience problems. There shall be a clear path back to the authorization screen after the customer has completed reading the terms and conditions.

6. The click-through authorization solution(s) shall perform seamlessly on mobile devices and be optimized for mobile applications. The Utilities shall incorporate timely feedback from participants in the Customer Data Access Committee established herein, when assessing the final design and determining whether the authorization process(s) are sufficiently optimized for mobile devices.
7. PG&E, SCE and SDG&E shall allow customers to choose an indefinite timeframe for authorization on both the paper CISR-DRP Request Form and the click-through authorization solution(s).
8. Demand response providers shall be given the option of pre-registering or pre-selecting their preferred timeframe to present to their customers. This may include a minimum end date, a preferred end date, or indefinite. Either end date can include a specification of an indefinite timeframe. PG&E shall provide the options described herein by Phase 3. Like PG&E, SCE and SDG&E shall develop a feature that allows the Demand Response Provider to customize the length of authorization of any individual customer. If additional funding is needed, Utilities may file a Tier 3 Advice Letter as described in Ordering Paragraph 28 or 29.
9. PG&E, SCE, and SDG&E shall send an automatically generated electronic notification such as email, upon successful completion of a customer authorization or upon modification of an existing authorization to the third-party demand response provider(s) and to the customer. The customer shall not be required to respond to the email as part of the authentication process unless required to do the same for a similar utility as described in Section 1 and Ordering Paragraph 1.
10. PG&E, SCE, and SDG&E shall build into existing infrastructure, the MyAccount and/or the Green Button platform, the ability for customers to revoke authorization for sharing data with third-party demand response providers. If additional funding is required, the Utilities may request funding for improvements as described in Table 3 herein and Ordering Paragraph 28.
11. Third-party demand response providers that utilize the click-through authorization solution(s), shall provide their customers with information about how to revoke authorization, which could include a link and instructions on how to revoke online with the Utility. The instructions shall

be subject to Energy Division review in order to ensure customer protection, as is within the authority and jurisdiction of the Commission.

12. PG&E, SCE, and SDG&E shall permit third-party demand response providers to revoke authorization if they no longer wish to receive customer data, both online and on the paper CISR-DRP Request Form. The Utilities shall file a Tier 2 Advice letter as described in Ordering Paragraph 28 to adopt any changes in Rule 24/32 or the CISR-DRP Request Form that are needed to facilitate Demand Response Provider revocation.

13. PG&E and SCE shall provide an expanded data set to third-party demand response providers after receipt of a valid customer authorization as described in Attachment 1 to this Resolution and in Advice Letters PG&E 4992-E and SCE 3541-E, and Replies to Protests. PDF copies of customer bills, payment information, data that is not typically stored, and data relating to gas service shall be exempt from inclusion in the expanded data set. However, all three Utilities shall include the Customer Class Indicator in order to ensure third-party compliance with Commission rules on prohibited resources, as well as Demand Response Auction Mechanism requirements. If additional funding is required, the Utilities may file Tier 3 Advice Letters in accordance with Ordering Paragraph 28.

14. PG&E, SCE and SDG&E shall expand the data set so that customer's may exercise their interest in accessing and determining to whom their own energy-related data should be disclosed. The expanded data set allows the customer to exercise their right to disclose their data to third-party Demand Response Providers. Customer energy-related data is needed for:

    1) direct participation integration into the wholesale market;
    2) essential Demand Response Provider business practices; and
    3) a successful customer experience.[276]

15. SDG&E's expanded data set shall include the data points described Attachment 1 to this resolution, except those related to PDF copies of customer bills, payment information, data that is not typically stored, and

[276] OhmConnect Protest to SDG&E at 6 and Appendix A of the Protest.

data relating to gas service. However, SDG&E shall include the Customer Class Indicator in order to ensure third-party compliance with Commission rules on prohibited resources, as well as Demand Response Auction Mechanism requirements. If SDG&E needs to deviate from the list in Attachment 1, it may file a Tier 2 Advice Letter. If additional funding is required, SDG&E may file a Tier 3 Advice Letter in accordance with Ordering Paragraph 28.

16. PG&E shall provide the current Rule 24/32 data set synchronously, within ninety seconds on average, after completion of the click-through authorization process.

17. SCE shall provide a summarized data set as described in its Advice Letter synchronously, within ninety seconds on average, in order to determine a customer's eligibility. SCE is encouraged to provide additional data points within ninety seconds as is feasible. SCE may request additional funding as described in Ordering Paragraph 28 if needed.

18. SDG&E shall file an Advice Letter as described in Table 3 and Ordering Paragraph 28, with a proposal for the delivery of a smaller data set synchronously, within ninety seconds on average. SDG&E should use PG&E and SCE's approaches as a model and provide data that is available on systems integrated with the Customer Energy Network platform.

19. PG&E, SCE, and SDG&E shall deliver a complete expanded data set within two business days after a customer completes the click-through authorization. In each case, the Utility will provide the Demand Response Provider an explanation and an estimated time of resolution for data that cannot be delivered within two business days. The Commission expects that in the overwhelming majority of cases, data will be delivered within two business days. If parties experience persistent problems, the issue should be raised in the Customer Data Access Committee described in Ordering Paragraph 27.

20. PG&E, SCE, and SDG&E shall develop a cost estimate of delivering the entire and expanded data set within ninety seconds. These estimates shall be included in an application for improvements in accordance with this Resolution and Ordering Paragraph 29.

21. PG&E, SCE and SDG&E (the Utilities) shall develop websites for reporting performance metrics. The Utilities shall use the performance metrics listed

herein and in the Informal Status Report. The Utilities shall work with stakeholders in the Customer Data Access Committee to determine additional metrics to monitor Rule 24/32 operations, such as data delivery times. The data shall be reported in real-time or near real-time basis, but no less frequently than daily, with a day's delay. In order to capture performance data on an ongoing basis, the Utilities shall file compliance reports, in a format approved by the Energy Division as part of the Quarterly Report Regarding the Status of Third-Party Demand Response Direct Participation. We order the Utilities to continue filing this report through 2020. The report shall be filed in the most current demand response proceedings and service lists. The Utilities shall use remaining funding under the cap if necessary, and the Tier 3 Advice Letter process described in Table 3 and Ordering Paragraph 28.

22. Non-Utility participants of the Customer Data Access Committee shall begin developing the business requirements and specific technical features of API Solution 1. PG&E, SCE, and SDG&E shall begin work on the business requirements only after a detailed list is presented by non-Utility stakeholders. After the Customer Data Access Committee reaches a consensus, the Utilities shall file application for Commission approval of the proposal to develop API Solution , other improvements to OAuth Solution 3, and expanding the solutions to other distributed energy resources as described in Ordering Paragraph 29.

23. PG&E, SCE, and SDG&E shall take steps to plan for future expansion of the solution(s) to other distributed energy resource and energy management providers now, in order to "future-proof" the click-through authorization solution(s). The Utilities shall incorporate flexibility into the architecture and design of the solution(s) including ensuring that the different data sets available to each different distributed energy resource can be included as an option in the pre-registration process. Utilities shall hold a meeting within ninety days from the approval of this Resolution, that is open to all distributed energy resource, energy management and other third-party providers. The goal will be to ensure that the data sets that these resources need are thought through and built into the architecture of the click-through authorization solution(s).

24. PG&E, SCE, and SDG&E shall include a proposal for expanding the solution(s) to other distributed energy resource and energy management providers in the application for future improvements described herein and in Ordering Paragraph 29. The Utilities shall stick to the phasing schedule described in Ordering Paragraph 26 in order to ensure that progress is first made on demand response.
25. PG&E, SCE, and SDG&E shall allow Community Choice Aggregation and Direct Access customers to use the click-through authorization process including the expanded data sets.
26. PG&E, SCE and SDG&E shall complete OAuth Solution 3 and related data delivery improvements to the click-through authorization process within fifteen months of the approval of this Resolution. Following the adoption of this Resolution, Phase 1 shall be completed within six months; Phase 2 shall be completed within ten months; and Phase 3 shall be completed within fifteen months. The activities that shall be completed by the end of each phase vary by Utility and are given in Table 1 herein.
27. PG&E, SCE, SDG&E, shall host the first Customer Data Access Committee (CDAC) meeting within ninety days from the approval of this Resolution, inclusive of any interested stakeholders regardless of status as providers of demand response. Energy Division staff will have oversight responsibility of the Committee, but it shall be managed by the Utilities and interested stakeholders. The Energy Division may at its discretion assume direct management of the Committee or appoint a working group manager at any time. The objectives of the CDAC will be to address data access issues associated with customer authorizations to third-party providers, including, but not limited to:
    - providing timely input into design of OAuth Solution 3 including – the overall design, the connectivity to mobile devices, the links to terms and conditions, the user experience and other technical features;
    - developing proposals for Advice Letter filings requesting funding within the caps including performance metrics for the Utility websites, and additional improvements;
    - developing proposals for the application filing including forming the business requirements for API Solution 1, expanding the click-

through solution(s) to other distributed energy resource and energy management providers, and additional improvements beyond what can be accomplished in the funding caps; and

- informally resolving dispute that may arise among stakeholders.

The CDAC will be separate from the Energy Data Access Committee, but shall coordinate closely on related matters. The CDAC shall meet no later than forty-five days after this Resolution is issued, and will meet, at a minimum, quarterly for the first two years and as needed thereafter. Meeting notes shall be prepared by Utilities and stakeholders and published on a website. The Committee shall meet more often during the first year in order to address the additional improvements ordered and the implementation issues arising in this Resolution.

28. PG&E, SCE and SDG&E shall file Tier 3 Advice Letter(s) within sixty, ninety and one-hundred and twenty days as described in Table 3 herein to request funding for enhancements to OAuth Solution 3 and other improvements that were not scoped in the extant Advice Letters. If funding is not needed, a Tier 2 Advice Letter may be filed. The Utilities shall work with the parties and any other interested stakeholders in the Customer Data Access Committee to scope out requirements and develop consensus proposals.
29. PG&E, SCE, and SDG&E shall file an application no later than fifteen months from the approval of this Resolution seeking cost recovery for the following improvements to the click-through authorization process unless cost recovery was already sought via the Tier 3 Advice Letters in Ordering Paragraph 28:
    - a proposal to expand the click-through solution(s) to other distributed energy resource and energy management providers;
    - a cost estimate and proposal for API Solution 1;
    - a cost estimate and proposal for Synchronous data of the complete and expanded data set within ninety seconds;
    - improvements to the authorization process that may have the effect of increasing customer enrollment in third-party demand response programs;
    - improvements in data delivery processes;

- upgrades to the information technology infrastructure needed for click-through authorization processes;
- additional functionalities for click-through authorization processes proposed in the Customer Data Access Committee;
- resolution of implementation issues related to OAuth Solution 3 or API Solution 1 raised by stakeholders in the Customer Data Access Committee;
- costs for integrating the CISR-DRP Request Form terms and conditions into the Utility Green Button platforms – ShareMyData, Green Button Connect, or Customer Energy Network; and
- publication of customer friendly information on the Utility website including, information about Rule 24/32, and instructions on how to authorize data access or revoke authorization.

This Resolution is effective today.

I certify that the foregoing Resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on August 24, 2017; the following Commissioners voting favorably thereon:

/s/*TIMOTHY J. SULLIVAN*
TIMOTHY J. SULLIVAN
Executive Director

MICHAEL PICKER
President
CARLA J. PETERMAN
LIANE M. RANDOLPH
MARTHA GUZMAN ACEVES
CLIFFORD RECHTSCHAFFEN
Commissioners

**ATTACHMENT 1**

*Comparison of Current and Expanded Data Set*
*Southern California Edison (SCE)*

| SCE CURRENT RULE 24 DATA ELEMENTS | SCE EXPANDED (FUTURE) RULE 24 DATA ELEMENTS |
|---|---|
| **Account Elements** | **Account Elements** |
| Account name (ACME INC. or JOE SMITH) | Account address (123 OFFICE ST...) |
| | Account ID (2-xxx...) |
| **Service Elements** | **Outage block (A000)** |
| SCE Unique Identifier | **Service Elements** |
| Service ID (3-xxx...) | Known future changes to Status of Service |
| Service address (123 MAIN ST #100...) | Service tariff options (CARE, FERA, etc.) |
| | Known future changes to Sublap |
| Service tariff (D-TOU) | Known future changes to Pricing Node |
| Service voltage (if relevant) | Local Capacity Area |
| Service meter number (if any) | Known future changes Local Capacity Area |
| Meter Read Cycle | Customer Class Indicator |
| Sublap | **Bill tier breakdown (if any)** |
| Pricing Node | Name (Over Baseline 1%-30%) |
| **Billing Elements** | Volume (1234.2) |
| Bill start date | Cost ($100.23) |
| Bill end date | **Bill TOU kwh breakdown (if any)** |
| Bill total charges ($) | Cost ($100.23) |
| Bill total kWh | **Bill demand breakdown (if any)** |
| **Bill TOU kwh breakdown (if any)** | Cost ($100.23) |
| Name (Summer Off Peak) | **Bill line items (sum should equal bill total charges above)** |
| Volume (1234.2) | |
| **Bill demand breakdown (if any)** | Charge name (DWR Bond Charge) |
| Name (Summer Max Demand) | Volume (1234.2) |
| Volume (1234.2) | Unit (kWh) |
| | Rate ($0.032/kWh) |
| | Cost ($100.23) |

**ATTACHMENT 1**

*Comparison of Current and Expanded Data Set*
*Southern California Edison (SCE) (CONTINUED)*

| **SCE CURRENT RULE 24 DATA ELEMENTS (CONTINUED)** | **SCE EXPANDED (FUTURE) RULE 24 DATA ELEMENTS (CONTINUED)** |
|---|---|
| **Historical Intervals** | **Tracked line items** |
| Start | Charge name (e.g. Net In/Net Out) |
| Duration | Volume (1234.2 in kWh) |
| Volume (1234.2) | Unit (kWh) |
| Unit (kWh) | Rate ($0.032/kWh, if any) |
| **Utility Demand Response Programs** | Cost ($100.23) |
| Program Name | **Utility Demand Response Programs** |
| Earliest End Date w/o penalty | Capacity Reservation Level (CRL) for CPP/PDP customers |
| Earliest End Date regardless of penalty | |
| **Service Providers** | DR Program Nomination if fixed |
| LSE | **Service Providers** |
| MDMA | Known future changes to LSE |
| MSP | |
| Contact Information for LSE, MDMA, MSP | |
| | |
| ***DATA ELEMENTS NOT ADDING IN THE FUTURE (SCE)*** | ***Service Elements*** |
| | *# of Service Meters* |
| | *Standby Rate Option if On-Site Generation (but "S" indicated in rate schedule)* |
| | ***Historical Bills (PDF)*** |
| | ***Payment Information*** |

**ATTACHMENT 1**

*Comparison of Current and Expanded Data Set*
*Pacific Gas & Electric (PG&E)*

| PG&E CURRENT RULE 24 DATA ELEMENTS | PG&E EXPANDED (FUTURE) RULE 24 DATA ELEMENTS |
|---|---|
| **Account Elements** | **Account Elements** |
| Account name (ACME INC. or JOE SMITH) | Account address (123 OFFICE ST...) |
| **Outage block (A000)** | Account ID (2-xxx...) |
| **Service Elements** | **Service Elements** |
| PG&E Unique Identifier | Known future changes to Status of Service |
| Service ID (3-xxx...) | Service tariff options (CARE, FERA, etc.) |
| Service address (123 MAIN ST #100...) | Known future changes to Sublap |
| Service tariff (D-TOU) | Known future changes to Pricing Node |
| Service voltage (if relevant) | Local Capacity Area |
| Service meter number (if any) | Known future changes Local Capacity Area |
| # of Service meters | Standby Rate Option if On-Site Generation |
| Meter Read Cycle | Customer Class Indicator |
| Sublap | **Bill tier breakdown (if any)** |
| Pricing Node | Name (Over Baseline 1%-30%) |
| **Billing Elements** | Volume (1234.2) |
| Bill start date | Cost ($100.23) |
| Bill end date | **Bill TOU kwh breakdown (if any)** |
| Bill total charges ($) | Cost ($100.23) |
| Bill total kWh | **Bill demand breakdown (if any)** |
| **Bill TOU kwh breakdown (if any)** | Cost ($100.23) |
| Name (Summer Off Peak) | **Bill line items (sum should equal bill total charges above)** |
| Volume (1234.2) | |
| **Bill demand breakdown (if any)** | Charge name (DWR Bond Charge) |
| Name (Summer Max Demand) | Volume (1234.2) |
| Volume (1234.2) | Unit (kWh) |
| **Historical Intervals** | Rate ($0.032/kWh) |
| Start | Cost ($100.23) |
| Duration | |
| Volume (1234.2) | |
| Unit (kWh) | |

**ATTACHMENT 1**

*Comparison of Current and Expanded Data Set*
*Pacific Gas & Electric (PG&E) (CONTINUED)*

| **PG&E CURRENT RULE 24 DATA ELEMENTS (CONTINUED)** | **PG&E EXPANDED (FUTURE) RULE 24 DATA ELEMENTS (CONTINUED)** |
|---|---|
| **Utility Demand Response Programs** | **Utility Demand Response Programs** |
| Program Name | Capacity Reservation Level (CRL) for CPP/PDP customers |
| Earliest End Date w/o penalty | |
| Earliest End Date w/o penalty | DR Program Nomination if fixed |
| **Service Providers** | **Service Providers** |
| LSE | MSP |
| MDMA | Known future changes to LSE |
| | Contact Information for LSE, MDMA, MSP |
| | **Tracked line items** |
| | Charge name (e.g. Net In/Net Out) |
| | Volume (1234.2 in kWh) |
| | Unit (kWh) |
| | Rate ($0.032/kWh, if any) |
| | |
| ***DATA ELEMENTS NOT ADDING IN THE FUTURE (PG&E)*** | ***Historical Bills (PDF)*** |
| | ***Payment Information*** |

**ATTACHMENT 1**

*Ordered Current and Expanded Data Set*
*San Diego Gas & Electric (SDG&E)*

| ADOPTED SDG&E CURRENT AND EXPANDED RULE 32 DATA ELEMENTS | |
|---|---|
| **Account Elements** | **Bill tier breakdown (if any)** |
| Account name (ACME INC. or JOE SMITH) | Name (Over Baseline 1%-30%) |
| Account address (123 OFFICE ST...) | Volume (1234.2) |
| Account ID (2-xxx...) | Cost ($100.23) |
| **Outage block (A000)** | **Bill TOU kwh breakdown (if any)** |
| **Service Elements** | Name (Summer Off Peak) |
| SDG&E Unique Identifier | Volume (1234.2) |
| Service ID (3-xxx...) | Cost ($100.23) |
| Service address (123 MAIN ST #100...) | **Bill demand breakdown (if any)** |
| Service tariff (D-TOU) | Name (Summer Max Demand) |
| Service voltage (if relevant) | Volume (1234.2) |
| Service meter number (if any) | Cost ($100.23) |
| # of Service meters | **Bill line items (sum should equal bill total charges above)** |
| Meter Read Cycle | |
| Sublap | Charge name (DWR Bond Charge) |
| Pricing Node | Volume (1234.2) |
| Known future changes Status of Service | Unit (kWh) |
| Service tariff options (CARE, FERA, etc.) | Rate ($0.032/kWh) |
| Known future changes to Sublap | Cost ($100.23) |
| Known future changes to Pricing Node | **Tracked line items** |
| Local Capacity Area | Charge name (e.g. Net In/Net Out) |
| Known future changes Local Capacity Area | Volume (1234.2 in kWh) |
| Standby Rate Option if On-Site Generation | Unit (kWh) |
| Customer Class Indicator | Rate ($0.032/kWh, if any) |
| **Billing Elements** | Cost ($100.23, if any) |
| Bill start date | **Historical Intervals** |
| Bill end date | Start |
| Bill total charges ($) | Duration |
| Bill total kWh | Volume (1234.2) |
| | Unit (kWh) |

**ATTACHMENT 1**

*Ordered Current and Expanded Data Set*
*San Diego Gas & Electric (SDG&E)*

| **ADOPTED SDG&E CURRENT AND EXPANDED RULE 32 DATA ELEMENTS (CONTINUED)** | |
|---|---|
| **Utility Demand Response Programs** | **Service Providers** |
| Program Name | LSE |
| Earliest End Date w/o penalty | MDMA |
| Earliest End Date regardless penalty | MSP |
| Capacity Reservation Level (CRL) for CPP/PDP customers | Known future changes to LSE |
| | Contact Information for LSE, MDMA, MSP |
| DR Program Nomination if fixed | |
| | |
| ***DATA ELEMENTS NOT REQUIRED TO ADD IN THE FUTURE (SDG&E)*** | ***Historical Bills (PDF)*** |
| | ***Payment Information*** |