The Rhode Island Energy Efficiency and Resource Management Council

March 3, 2017

VIA HAND-DELIVERY AND ELECTRONIC MAIL

Luly E. Massaro
Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket #4684 – Proposed Energy Efficiency Targets 2018-2020 and Proposed Amendments to Least Cost Procurement Standards
Responses to PUC Data Requests Directed to EERMC

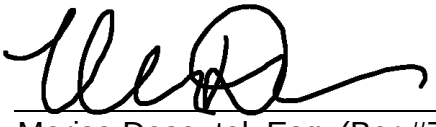
Dear Luly,

Enclosed please find an original and nine (9) copies of the Rhode Island Energy Efficiency and Resource Management Council's ("EERMC") responses to the Public Utility Commission's Data Requests Directed to EERMC, dated February 28, 2017.

This transmittal completes the EERMC's responses to the PUC's first set of data requests issued by the PUC in the above-referenced docket.

Thank you for your attention to this matter. Please do not hesitate to contact me if I can be of further assistance in this regard.

Respectfully submitted,
Rhode Island Energy Efficiency and
Resource Management Council
By its Attorney



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CERTIFICATION

I hereby certify that I filed an original and nine (9) copies of the within Responses and sent a true copy, via electronic mail, on this 3rd day of March, 2017, to the Service List for Docket #4684 as follows:

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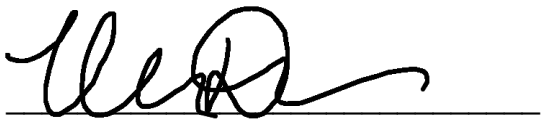

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: ENERGY EFFICIENCY RESOURCE MANAGEMENT	**:**	
COUNCIL PROPOSED ENERGY EFFICIENCY TARGETS	**:**	
2018-2020 AND PROPOSED AMENDMENTS TO LEAST	**:**	**DOCKET NO. 4684**
COST PROCUREMENT STANDARDS	**:**	

COMMISSION'S FIRST SET OF DATA REQUESTS
DIRECTED TO EERMC
(Issued February 28, 2017)
Please respond by End of Day March 2, 2017 if possible

1. Please provide a redlined copy of the proposed LCP Standards.

RESPONSE: The Rhode Island Energy Efficiency and Resource Management Council ("EERMC") Consultant Team did not maintain a "track changes" version of the Standards because significant rewrite of both the Energy Efficiency and System Reliability Standards had taken place. Instead, the Consultant Team drafted a "summary of changes" document for each. Those summaries are included in the Memorandum filed with the PUC on December 22, 20017.

In response to the PUC request, the Consultant Team performed a "Compare Documents" exercise, using a clean Word version of the 2014 Standards and compared it to the new draft of the Proposed Standards. It is attached hereto as APPENDIX A.

The EERMC Consultant Team believes it is a 'busy' and somewhat confusing document, but hope that some sections will provide more detail and clarity about the relationship between the 2014 Version and the new Proposed Version. We look forward to responding to any further questions the PUC has.

Response prepared by Scudder Parker, EERMC Consultant Team and Marisa Desautel, EERMC Legal Counsel.

ATTACHMENT A: Compared Document

~~2014 Least Cost Procurement Standards~~

CHAPTER 1 – Energy Efficiency Procurement

~~1.1.Section 1.1 Plan Filing Dates~~

1.1. ~~The Utility~~ Introduction

~~A.~~ Energy Efficiency Procurement ~~Plan ("The EE Procurement Plan") submitted on September 1, 2008 and triennially thereafter on September 1, shall propose overall budgets and efficiency targets for the three years of implementation beginning with January 1 of the following year.~~

~~B.~~ ~~The Utility shall prepare and file a supplemental filing containing details of implementation plans~~(EEP) as mandated by ~~program for the next program year ("The EE Program Plan"). Beginning in 2014, the EE Program Plan shall be filed on October 15 except in years in which an EE Procurement Plan~~§39-1-27.7, is ~~filed; in those years, the EE Program Plan filing shall be made on November 1. The EE Program Plan filings shall also provide for adjustment, as necessary, to the remaining years of the **EE Procurement Plan** based on experience, ramp-up, and increased assessment of the resource levels available.~~

~~1.2.Section 1.2 EE Procurement Plan Components~~

~~A. The EE Procurement Plan shall identify the strategies and an approach to planning and implementation of programs that will secure all cost-effective energy efficiency resources that are lower cost than supply and are prudent and reliable.~~

~~i. Strategies and approaches to planning.~~

~~a. The Utility shall use the Council's Opportunity Report as issued on July 15, 2008 (and as it may be subsequently supplemented or updated to identify the cost effective energy efficiency potential and opportunities) as one resource among others in developing its EE Procurement Plan. The Utility may include in its Plans an outline of proposed strategies to supplement and build upon the initial Opportunity Report~~

~~b. The EE Procurement Plan shall describe the recent energy efficiency programs offered by the Utility and highlight how the EE Procurement Plan supplements and expands upon these offerings, including but not~~

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~~limited to new measures, implementation strategies, measures specifically~~ intended ~~for demand management, new strategies to make capital available to effectively overcome market barriers, and new programs as appropriate.~~

~~c. The EE Procurement Plan shall include a section describing a proposal to investigate new strategies to make available the capital needed to implement projects in addition to the incentives~~ to complement system reliability and supply procurement as provided~~. Such proposed strategies shall move beyond traditional financing strategies and shall include new capital availability strategies that effectively overcome market barriers in each market segment in which it is feasible to do so.~~

~~d.~~A. ~~The EE Procurement Plan shall address how the utility plans to integrate~~ for in §39-1-27.8, with the common purpose of meeting electrical and natural gas ~~and electric energy efficiency programs to optimize customer energy efficiency.~~energy needs in Rhode Island, in a manner that is optimally cost-effective, reliable, prudent and environmentally responsible.

A. ~~The EE Procurement Plan~~In order to adhere to the principles set forth in §39-1-27.7 and to meet Rhode Island's energy system needs in a least cost manner, the EE Standards set forth guidelines for the development of least cost energy efficiency plans.

1.2. Definitions

A. Energy efficiency

Energy efficiency is defined as the reduction of energy consumption or strategic and beneficial management of the time of energy use within a defined system. A system may be a residence, a place of business, a public accommodation, or an energy production, delivery, and end-use consumption network.

Energy Efficiency Plans[1] should be designed where possible to complement the objectives of Rhode Island's energy efficiency, renewable energy, and clean energy programs, and describe their interaction with them, including, but not limited to the System Reliability Procurement Plan; Renewable Energy Standard; the Renewable Energy Growth Program; the Net Metering Program; and the Long-Term Contracting for Renewable Energy Standard. Energy Efficiency Plans should also be coordinated where possible with other applicable energy procurement, planning, and investment programs, including, but not limited to, Standard Offer Supply Procurement.

Innovation. Energy Efficiency Plans should address new and emerging issues as they relate to least cost procurement (e.g., CHP, strategic electrification, integration of grid modernization, gas service expansion, distributed generation and storage technologies, and energy efficiency services for non-regulated fuels,

[1] Energy Efficiency Plans refers to both the EE Procurement Plan (or Three-Year Plan) and EE Program Plan (or Annual Plan), as applicable.

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etc.), as appropriate, including how they may meet State policy objectives and provide system, customer, environmental, and societal benefits.

Comprehensiveness. The Utility should consistently design programs and strategies to ensure that all customers have an opportunity to benefit comprehensively through types of measures or depth of services, realizing both near-term and long-lived savings opportunities where appropriate, from expanded investments in this low-cost resource. The programs should be designed and implemented in a coordinated fashion by the Utility, in active and ongoing consultation with the Council.

i. Equity. The portfolio of programs proposed by the Utility should be designed to ensure that different sectors and all customers receive opportunities to participate in and secure efficiency resources lower cost than the cost of supply.

B. Cost-effectiveness

~~c.~~

~~ii.~~A. ~~Cost-effectiveness~~

~~a.~~The Utility shall assess measure, program and portfolio cost-effectiveness according to a benefit-cost test that builds on the Total Resource Cost ~~test ("TRC")~~[2]Test approved by the Commission in Docket 4443, but that more fully reflects the policy objectives of the state with regard to energy, its costs, benefits, and environmental and societal impacts. The Utility shall, after consultation with the Council, propose the specific benefits and costs to be reported, and factors to be included ~~in the Rhode Island TRC test and include them~~, in the ~~EE Procurement Plan.~~Rhode Island Benefit Cost Test (RI Test) and include them in Energy Efficiency Plans. These benefits ~~may~~should include resource ~~impacts and non-energy~~ impacts~~.~~, non-energy impacts, distribution system impacts, economic development impacts, and the value of greenhouse gas reductions, as described below. The accrual of specific non-energy impacts to only ~~specific~~certain programs or technologies, such as income-eligible programs or combined heat and power, may be considered.

~~b. That test~~With respect to the value of greenhouse gas reductions, the RI Test shall include the costs of CO^2 mitigation as they are imposed and are projected to be imposed by the Regional Greenhouse Gas Initiative. The test shall also include any other utility system costs associated with reasonably anticipated future greenhouse gas reduction requirements at the state, regional, or federal level for both electric and gas programs. A comparable benefit for greenhouse gas reduction resulting from natural gas or delivered fuel energy efficiency or displacement may be considered. The test may include the value of greenhouse gas reduction not embedded in any of the above. The test may

~~[2] Since the focus of the Rhode Island legislation is on securing customer benefits, not just Utility benefits from energy efficiency procurement, the TRC test is recommended.~~

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also include the costs and benefits of other emissions and their generation or reduction through Least Cost Procurement.

~~c.~~Benefits and costs that are projected to occur over the term of ~~each EE Program Plan~~the Energy Efficiency Plans shall be stated in present value terms in the ~~TRC test~~RI Test calculation, using a discount rate that appropriately reflects the risks of the investment of customer funds in energy efficiency; in other words, a ~~low-risk~~ discount rate ~~which would indicate~~that indicates that energy efficiency is a low-risk resource in terms of cost of capital risk, project risk, and portfolio risk. The discount rate shall be reviewed and updated ~~for each EE Program Plan~~in the Energy Efficiency Plans, as appropriate, to ensure that the applied discount rate is based on the most recent information available.

~~d.~~The ~~utility~~Utility shall provide a discussion of the carbon impacts efficiency and reliability investment plans will create, whether captured as benefits or not.

~~i. Prudency and Reliability~~

~~. In the initial three-year EE Procurement Plan, a ramp-up to achieve all cost-effective efficiency lower cost than supply shall be proposed by the Utility that is both aggressive in securing energy, capacity, and system cost savings and is also designed to ensure the programs will be delivered successfully and cost-effectively over the long term[3]. The proposed ramp-up will appropriately balance the significant cost saving efficiency investment opportunity that is identified and the near-term capacity and staffing issues within the utility and vendor community with an emphasis on ensuring an aggressive and sustainable ramp-up of program investments over time.~~

C. ~~Subsequent~~ Reliable

Build on prior plans. Energy Efficiency Plans shall describe the recent energy efficiency programs offered by the Utility and highlight how the Energy Efficiency Plans supplement and expand upon these offerings at the appropriate level of detail, including but not limited to new measures, implementation strategies, measures specifically intended for demand or load management, and new programs as appropriate.

i. Build on prior programs. Utility program development shall proceed by building upon what has been learned to date in Utility program experience, systematically identifying new opportunities and pursuing comprehensiveness of measure implementation as appropriate and feasible.

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[3] ~~The Utility may propose a study or studies to investigate and document current energy efficiency program infrastructure in Rhode Island; to assess the ability of the infrastructure to meet increased demand for energy efficiency services; and to make recommendations for increasing capacity if needed. Any such report should address: staffing levels and ability to expand staffing; training and experience of staff; current workloads; interest in working with utility program sponsors; statewide coverage of services; and other relevant factors. Where appropriate, the Utility may partner with research efforts of this sort that are regional in nature or in other jurisdictions, so long as they provide pertinent information for building the Rhode Island infrastructure. The costs of these plans and the actions to implement them may be included as program costs.~~

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D. Prudent

Plan based on potential assessments. The Utility shall use the Council's Opportunity Report as issued on July 15, 2008, or other assessments of potential, as resources in developing its Three-Year Plan. The Utility shall include in its Three-Year Plan an outline of proposed strategies to supplement and build upon these assessments of potential.

Unlocks capital and effectively uses funding sources. Energy Efficiency Plans shall include a section outlining and discussing new strategies to make available the capital needed to effectively overcome barriers to implement projects in addition to direct financial incentives provided in order to cost-effectively achieve the Least Cost Procurement mandate. Such proposed strategies shall move beyond traditional financing strategies and shall include new capital availability strategies and partnerships that effectively overcome market barriers in each market segment in which it is feasible to do so.

Integration. Energy Efficiency Plans shall address how the Utility plans to integrate gas and electric energy efficiency programs to optimize customer energy efficiency, and provide benefits from synergies between the two energy systems and their respective programs.

~~b.~~Three-Year Plans shall be developed to propose strategies to achieve the energy efficiency savings targets that shall be proposed by the EERMC and approved by the Commission for that three year period. Such strategies shall ~~continue to~~ secure energy, capacity, and system benefits and also be designed to ensure the programs will be delivered successfully ~~and~~, cost-effectively, and cost-efficiently over the long term. In addition to satisfying other provisions of these Standards, the ~~EE Procurement~~Three-Year Plan shall ~~continue to~~ contribute to a sustainable energy efficiency economy in Rhode Island, respond to and transform evolving market conditions, strive to increase participation, and provide widespread consumer benefits.

~~c.EE Procurement Plan efficiency~~Energy Efficiency investments shall be made on behalf of all customers. This will ensure consistency with existing program structure under which all customers pay for and benefit from ~~today's~~Rhode Island's efficiency programs.

i. Efficacy. All efforts to establish and maintain program capability shall be done in a manner that ensures quality delivery and is economical and efficient. The Utility shall include wherever possible and practical partnerships with existing educational and job training entities.

E. Environmentally Responsible.

Environmental responsibility is indicated by the procurement of energy savings, compliance with State environmental policies, and the proper valuation of greenhouse gas reduction benefits.

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1.3. EE Procurement Plan

A. The Utility Energy Efficiency and Conservation Procurement Plan (The EE Procurement Plan or Three-Year Plan) submitted on September 1, 2008 and triennially thereafter on September 1, shall propose overall budgets and efficiency targets for the three years of implementation beginning with January 1 of the following year. These budgets and targets shall be illustrative and provisional[4] and shall guide annual energy efficiency program plans over the three year period.

B. The Three-Year Plan shall identify the strategies and an approach to planning and implementation of programs that will secure all cost-effective energy efficiency resources that are lower cost than supply and are prudent and reliable, consistent with the definitions provided herein. The Three-Year Plan shall contain sections which describe

i. Strategies and approaches to planning,

ii. Cost-effectiveness

iii. Prudency and Reliability

~~. The EE Procurement Plan should describe how it interacts with the System Reliability Procurement Plan.~~

~~iii.~~iv. Funding Plan and Initial ~~Goals~~Targets

a. The Utility shall develop a funding plan using, as necessary, the following sources of funding to meet the budget requirement of the ~~EE Procurement~~Three-Year Plan and fulfill the statutory mandate of Least Cost Procurement. The Utility shall utilize as necessary and available, the following sources of funding for the efficiency program investments:

(1) the existing System Benefits Charge ~~("~~("SBC"~~);~~);

(2) revenues resulting from the participation of energy efficiency resources in ISO-New England's forward capacity market ~~("~~("FCM"~~).~~);

(3) proceeds from the auction of Regional Greenhouse Gas Initiative (RGGI) allowances pursuant to § 23-82-~~.~~6 of the General Laws;

(4) funds from any state, federal, or international climate or cap and trade legislation or regulation including but not limited to revenue or allowances allocated to expand energy efficiency programs;

(5) a fully reconciling funding mechanism, pursuant to R.I.G.L. § 39-1-27.7, which is a funding mechanism to be relied upon after the other sources as needed to fully fund cost-effective electric and gas energy efficiency programs to ensure the legislative mandate to procure all cost effective efficiency that is lower cost than supply is met~~.~~; and

[4] As the Three-Year Plan is illustrative and provisional, variances between Annual Plans and Three-Year Plans due to changes in factors such as, but not limited to, sales forecasts, funding sources, avoided costs, and evaluation results may be acceptable, subject to Commission review of Utility explanation for those variances.

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(6) other sources as may be identified by the EERMC, the OER, and the Utility.

b. The Utility shall include a preliminary budget for the ~~EE Procurement~~Three-Year Plan covering the three-year period that identifies the projected costs, benefits, and initial energy saving ~~goals~~targets of the portfolio for each year. The budget shall identify, at the portfolio level, the projected cost of efficiency resources in cents/ lifetime kWh~~.~~ or cents/lifetime MMBtu. The preliminary budget and initial energy saving ~~goals~~targets may be updated, as necessary, in the Utility's ~~EE Program~~Annual Energy Efficiency Plan.

~~B.Efficiency~~ Performance Incentive Plan Structure, pursuant to Section 1.5

~~. Pursuant to R.I.G.L. § 39-1-27.7(e) and § 39-1-27.7.1, the Utility shall have an opportunity to earn a shareholder incentive that is dependent on its performance~~**EE Program Plan** ~~in implementing the approved EE Procurement Plan~~

~~a.The Utility, in consultation with the Council, will propose in its EE Procurement Plan a Performance Incentive (PI) proposal that is designed to promote superior Utility performance in cost-effectively and efficiently securing for customers all efficiency resources lower cost than supply.~~

~~b.The Performance Incentive should be structured to reward program performance that makes significant progress in securing all cost-effective efficiency resources that are lower cost than supply while at the same time ensuring that those resources are secured as efficiently as possible.~~

~~c.The Utility PI model currently in place in RI should be reviewed by the Utility and the Council. The Utility and Council shall also review incentive programs and designs in other jurisdictions including those with penalties and increasing levels of incentives based on higher levels of performance.~~

~~. The PI may provide incentives for other objectives that are consistent with the goals including but not limited to comprehensiveness, customer equity, increased customer access to capital, and market transformation.~~

~~. The PI should be sufficient to provide a high level of motivation for excellent Utility performance annually and over the three year period of the EE Procurement Plan, but modest enough to ensure that customers receive most of the benefit from energy efficiency implementation.~~

1.4. ~~Section 1.3~~

A. The Utility shall prepare and file a supplemental filing containing details of implementation plans by program for the next program year (Energy Efficiency Annual Plan or Annual Plan). Beginning in 2014, the Annual Plan shall be filed on October 15 except in years in which a Three-Year Plan is filed; in those years, the Annual Plan filing shall be made on November 1. The Annual Plan filings shall also

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provide for adjustment, as necessary, to the remaining years of the Three-Year Plan based on experience, ramp-up, and assessment of the resources available.

1.8. **EE Program Plan Components**

A. Principles of Program Design

iii. . The EE ProgramAnnual Plan shall identify the specific energy efficiencyand contain programs proposed for implementation by the Utility, pursuant to the EE Procurement Plan.

ii.B. The Utility should consistentlyThree-Year Plan, and which demonstrate consistency with the principles of program design programs and strategies to ensure that all customers have an opportunity to benefit comprehensively, where appropriate, from expanded investments in this low-cost resource and the programs should be designed and implemented in a coordinated fashion by the utility, in active and ongoing consultation with the Councildescribed above in Section 1.2.

iii.C. Cost-effectiveness. The Utility shall propose a portfolio of programs in the EE ProgramAnnual Plan that is cost-effective. Any program with a benefit cost ratio greater than 1.0 (i.e., where benefits are greater than costs), should be considered cost-effective. The portfolio must be cost-effective and programs should be cost-effective, except as noted below.

a.The Utility shall be allowed to direct a portion of proposed funding to conduct research and development and pilot program initiatives. These efforts will not be subject to cost-effectiveness considerations. However, the costs of these initiatives shall be included in the assessment of portfolio level cost-effectiveness.

b.The Utility shall allocate funds to the Energy Efficiency and Resource Management Council and Office of Energy Resources as specified in R.I.G.L. § 39-2-1.2. These allocations will not be subject to cost-effectiveness considerations. However, these costs shall be included in the assessment of portfolio level cost-effectiveness.

vi. All efforts to establish and maintain program capability as identified in Section 1.2 A iii shall be done in a manner that ensures quality delivery and is economical and efficient. The utility shall include wherever possible and practical partnerships with existing educational and job training entities.

vii. The portfolio of programs proposed by the Utility should be designed to ensure that different sectors and all customers receive opportunities to secure efficiency resources lower cost than the cost of supply

vi.D. Parity. While it is anticipated that rough parity among sectors can be maintained, as the limits of what is cost-effective are identified, there may be more efficiency opportunities identified in one sector than another. The Utility should design programs to capture all resources that are cost-effective and lower cost than supply. The Utility should consult with the Council to address ongoing issues of Parityparity

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~~ix. The Utility shall explore as part of its plan, new strategies to make available the capital needed to effectively overcome market barriers and implement projects that moves beyond traditional financing strategies.~~

~~B.~~E. Final Funding Plan and Budget Amounts, Cost-Effectiveness and Goals

i. The Utility shall include a detailed budget for the ~~EE Program~~Annual Plan covering the annual period beginning the following January 1, that identifies the projected costs, benefits, and energy saving goals of the portfolio and of each program. The budget shall identify at the portfolio level the projected total resource cost of efficiency resources in cents/~~-~~lifetime kWh or cents/lifetime MMBtu.

ii. The ~~EE Program plans~~Annual Plans filed October 15 or November 1 will reflect program implementation experience and anticipated changes, shifts in customer demand, changing market costs, and other factors, including a discussion of market transformation impacts as noted in Section 1 above. The annual detailed budget update shall include the projected costs, benefits, and energy saving goals of each program as well as the total resource cost of efficiency resources in cents/~~-~~lifetime kWh or cents/lifetime MMBtu.

iii. The EE Program Plan shall identify the energy cost savings and ~~typical~~ bill impacts that RI ratepayers will realize through its implementation.

~~iv. In order to assess the potential effect of greenhouse gas reduction costs, the Utility, upon consultation with the Council, may conduct and report in the EE Program Plan filing a sensitivity analysis of the cost-effectiveness of the proposed portfolio of programs that includes a "potential" avoided cost for CO2 mitigation that is agreed upon among the parties.~~

~~C.~~F. Program Descriptions

~~i. Utility program development shall proceed by building upon what has been learned to date in utility program experience, systematically identifying new opportunities and pursuing comprehensiveness of measure implementation as appropriate and feasible.~~

~~ii.~~ The Utility shall, as part of its ~~EE Program~~Annual Plan, describe each program, how it will reach its target market, and how it will be implemented~~, and~~. In these descriptions, the ~~total costs and benefits associated~~Utility shall demonstrate, as appropriate, how the Program is consistent with the ~~efficiency investments~~

~~iii.~~i. ~~The Utility plan shall describe in each appropriate program section a plan to devise new strategies to make available the capital needed in addition to the incentives provided to implement measures~~principles of program design described above.

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~~iv.~~ii. In addition to these basic requirements, the plan shall address, where appropriate, the following elements:

a. Comprehensiveness of opportunities addressed at customer facilities;

b. Integration of electric and natural gas energy efficiency implementation and delivery (while still tracking the cost-effectiveness of programs by fuel); energy efficiency opportunities for delivered fuels customers should be addressed to the extent possible;

c. Integration of energy efficiency programs with renewables ~~-~~and other system reliability procurement plan elements;

d. Promotion of the effectiveness and efficiency levels of ~~Codes~~codes and standards and other market transforming strategies. If the ~~utility~~Utility takes a proactive role in researching, developing and implementing such strategies, it may, after consultation with the Council, propose a mechanism to claim credit for a portion of the resulting savings~~.~~;

e. Implementation, where cost-effective, of demand response and load management measures or other programs that are integrated into the electric and natural gas efficiency program offerings. Such measures/programs will be designed to supplement cost-effective procurement of long-term energy and capacity savings from efficiency measures~~.~~; and

f. Integration with non-wires alternatives.

~~D.~~G. Monitoring & Evaluation (M&E) Plan

i. The Utility shall~~, after consultation with the Council,~~ include a Monitoring and Evaluation ("M & E") component in its ~~EE Program~~Annual Plan.

ii. This M & E component shall address at least the following:

a. ~~a component that addresses~~ savings verification including, where appropriate, analysis of customer usage; such savings verification should also facilitate participation in ISO-NE's forward capacity market;

b. ~~a component that will address~~ issues of ongoing program design and effectiveness;

c. any other issues, for example, efforts related to market assessment and methodologies to claim savings from market effects, among others;

d. a discussion of ~~Regional~~regional and other cooperative M & E efforts the Utility is participating in or plans to participate in; and

e. longer~~-~~-term studies as appropriate, to assess programs over time.

iii. The Utility shall include in its M & E component any changes it proposes to the frequency and level of detail of ~~utility~~Utility program plan filing and subsequent reporting of results.

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~~E.~~H. Reporting Requirements

i. The Utility, in consultation with the Council, will propose the content to be reported and a reporting format that is designed to communicate clearly and effectively the benefits of the efforts planned and implemented, with particular focus on energy cost savings and program participation levels across all sectors, to secure all EE resources that are lower cost than supply.

I. Performance Incentive Plan, pursuant to Section 1.5

1.5. Efficiency Performance Incentive Plan

A. Pursuant to R.I.G.L. § 39-1-27.7(e) and § 39-1-27.7.1, the Utility shall have an opportunity to earn a shareholder incentive that is dependent on its performance in implementing the approved Annual Plan.

The Utility, in consultation with the Council, will propose in its Three-Year Plan and subsequent Annual Plans, a Performance Incentive (PI) proposal that is designed to promote superior Utility performance in cost-effectively and efficiently securing for customers all efficiency resources lower cost than supply.

The Performance Incentive should be structured to reward program performance that makes significant progress in securing all cost-effective efficiency resources that are lower cost than supply while at the same time ensuring that those resources are secured as efficiently as possible.

The Utility PI model currently in place in RI should be reviewed by the Utility and the Council. The Utility and Council shall also review incentive programs and designs in other jurisdictions including those with penalties and increasing levels of incentives based on higher levels of performance.

~~4~~ The PI may provide incentives for other objectives that are consistent with the goals including, but not limited to, comprehensiveness, customer equity, lifetime net benefits, increased customer access to capital, and market transformation.

B. The PI should be sufficient to provide a high level of motivation for excellent Utility performance annually and over the three year period of the Three-Year Plan, but structured so that customers receive most of the benefit from energy efficiency implementation.

~~4.~~1.6. Role of the Council in Plan Development and Approval

A. The Council shall take a leadership role in ensuring that Rhode Island ratepayers receive excellent value from the ~~EE Procurement~~Three-Year Plan being implemented on their behalf. The Council shall do this by collaborating closely with the Utility on design and implementation of the Monitoring and Evaluation efforts presented by the Utility under the terms of Section 1.~~3~~4 D, and if necessary, provide recommendations for modification that will strengthen the assessment of ~~utility~~Utility programs.

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~~B. As part of the Council's April 15 annual report required by R.I.G.L. §42-140.1-5 the Council shall report on program performance and whether program costs are justified, given the intent of the enabling legislation. The Council shall also report on the effectiveness of any performance incentive approved by the PUC in achieving the objectives of efficient and cost-effective procurement of all efficiency resources lower cost than supply and the level of its success in mitigating the cost and variability of electric service by reducing customer usage.~~

~~C.~~B. In addition to the other roles for the Council indicated in this filing, the Utility shall seek ongoing input from, and collaboration with the Council on development of the ~~EE Procurement~~Three-Year Plan and Program Plans, and on development of annual updates, if any, to the ~~EE Procurement Plan~~Three-Year Plan. The Utility shall seek to receive the endorsement of the Plan by the Council prior to submission to the Commission.

~~D.~~C. The Utility and the Council shall report to the PUC a process for Council input and review of its 2008 EE Procurement Plan and EE Program Plan by July 15, 2008 and triennially thereafter.

~~E.~~D. The Council shall vote whether to endorse the ~~EE Procurement~~Three-Year Plan by August 15, 2008 and triennially thereafter. If the Council does not endorse the Plan then the Council shall document the reasons and submit comments on the Plan to the PUC for their consideration in final review of the Plan.

~~F.~~E. The Utility shall, in consultation with the Council, propose a process for Council input and review of its ~~EE Procurement~~Three-Year Plan and ~~EE Program~~Annual Plan. This process is intended to build on the mutual expertise and interests of the Council and the Utility, as well as meet the oversight responsibilities of the Council.

~~G.~~F. The Utility shall submit a draft ~~annual EE Program~~Annual Plan to the Council and the Division of Public Utilities and Carriers for their review and comment annually at least one week before the Council's scheduled meeting prior to the filing date that year.

~~H.~~G. The Council shall vote whether to endorse the ~~annual EE Program~~Annual Plan prior to the prescribed filing date, annually. If the Council does not endorse the ~~annual EE Program~~Annual Plan, the Council shall document its reasons and submit comments on the Plan to the PUC for its consideration in final review of the Plan.

~~I.~~H. The Council shall prepare memos on its assessment of the cost effectiveness of the ~~Least Cost Procurement Plan and annual EE Program~~Three-Year Plans and Annual Plans, pursuant to R.I.G.L. §39-1-27.7(c)(5), and submit them to the PUC no later than two weeks following the filing of the respective Plans with the Commission

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CHAPTER 2 - System Reliability Procurement

~~**Section 2.1 Distributed/Targeted Resources in Relation to T &D Investments**~~

~~The Utility~~

2.1. Introduction

A. System Reliability Procurement ~~Plan ("The SRP Plan")~~(SRP) as mandated by §39-1-27.7, is intended to complement energy efficiency and conservation procurement, and supply procurement as provided for in §39-1-27.8, with the common purpose of meeting electrical and natural gas energy needs in Rhode Island, in a manner that is optimally cost-effective, reliable, prudent and environmentally responsible.[5]

B. In order to ~~be submitted for the Commission's review and approval on September 1, 2011 and triennially thereafter on September 1, shall propose general planning~~ adhere to the principles ~~and potential areas of focus that incorporate non-wires alternatives (NWA) into National Grid's ("the Company")~~set forth in §39-1-27.7 and to meet Rhode Island's energy system needs in a least cost manner, the SRP Standards set forth guidelines for the incorporation of energy efficiency, distributed generation, demand response, and other energy technologies (collectively referred to as "non-wires alternatives") into Utility distribution planning. These guidelines seek to enable the deployment of cost-effective non-wires alternatives to achieve state policy goals, optimize grid performance, enhance reliability and resiliency, and encourage optimal investment by the Utility.

C. SRP should be integrated with the Company's distribution planning process ~~for the three years of implementation beginning January 1 of the following year. The~~ and be designed where possible to complement the objectives of Rhode Island's energy efficiency, renewable energy, and clean energy programs, and describe its interaction with them, including, but not limited to the programs described in in Section 1.2.ii. SRP should also be coordinated where possible with other applicable energy procurement, planning, and investment programs, including, but not limited to Standard Offer Supply Procurement and the Infrastructure, Safety and Reliability Plan.

~~A.~~2.2. System Reliability Procurement ~~Plan should be integrated with the Energy Efficiency Procurement Plan and designed to manage demand and optimize grid performance, using customer side resources.~~ Definitions

A. In order to fulfill the intent of the statute, System Reliability Procurement (SRP) is interpreted to mean an ongoing Company practice to maximize the prudent, reliable and environmentally responsible use of non-wires alternatives (NWA) to meet electric distribution system needs and optimize grid performance, subject to a system

[5] R.I.G.L §39-1-27.7 specifies that standards and guidelines for system reliability procurement may include, but not be limited to: (i) Procurement of energy supply from diverse sources, including, but not limited to, renewable energy resources as defined in chapter 26 of this title; (ii) Distributed generation, including, but not limited to, renewable energy resources and thermally leading combined heat and power systems, which is reliable and is cost-effective, with measurable, net system benefits; (iii) Demand response, including, but not limited to, distributed generation, back-up generation and on-demand usage reduction, which shall be designed to facilitate electric customer participation in regional demand response programs, including those administered by the independent service operator of New England ("ISO-NE") and/or are designed to provide local system reliability benefits through load control or using on-site generating capability.

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whereby wires solutions and NWA solutions can be properly compared for both benefits and costs.

B. Non-~~Wires Alternatives~~wires alternatives (NWA) may be utilized through various approaches to advance the goals of SRP and optimize grid performance as described in 2.1.B. These approaches may include but are not limited to:

i. Strategic promotion of customer-side NWA through investment or outreach by the Company or a third party

a. Customer-Side NWA may include but are not limited to:

~~a.~~(1) Least Cost Procurement energy efficiency baseline services~~.~~

~~b.~~(1) Peak demand and geographically-focused supplemental energy efficiency strategies

~~c.~~(1) Distributed generation[6] generally, including combined heat and power and renewable energy resources ~~(predominately wind and solar, but not constrained)~~7

~~d.~~(1) Demand response

~~e.~~(1) Direct load control

(1) Energy storage~~, including~~

(2) Electric vehicles

~~f.~~(3) Controllable or dispatchable electric ~~vehicles~~heat or cooling

~~g.~~(1) Alternative metering and tariff options, including time-varying rates

i. ~~Investments~~Utility investment in grid-~~facing~~ side tools and technologies ~~that further optimize~~

a. Grid-Side NWA may include but are not limited to:

(1) Energy storage

(2) Voltage management

(3) Communications systems

(4) Grid-optimization technologies[8]

(5) Generation to provide or in support of any or all of B(ii)(1)-(4), consistent with Rhode Island General Law.

ii. Combinations of NWA (both customer-side and grid-side) and combinations

[6] In order to meet the statute's environmental goals, generation technologies must comply with all applicable general permitting regulations for smaller-scale electric generation facilities.

[7] ~~In order to meet the statute's environmental goals, generation technologies must comply with all applicable general permitting regulations for smaller-scale electric generation facilities.~~ As defined in the Renewable Energy Standard http://webserver.rilin.state.ri.us/Statutes/TITLE39/39-26/39-26-5.HTM

[8] "Grid-facing" investments may include technologies that automate grid operations and allow the distribution utility to monitor and control grid conditions in near real time. (Source: MA DPU Docket 12-76-A, pg. 2)

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of NWAs with traditional infrastructure investments

C. Electric distribution system needs

i. Electric distribution system needs shall include, but are not limited to: system capacity (normal and emergency), voltage performance ~~may~~, reliability performance, protection coordination, fault current management, reactive power compensation, asset condition assessment, distributed generation constraints, and operational considerations. Note that not all system needs can be addressed by NWAs.

D. Optimization of grid performance

i. Optimizing grid performance refers to activities undertaken to improve the performance and efficiency of the electric distribution system by the Company. Performance improvements can include enhanced reliability, peak load reduction, and increased capacity utilization for more efficient use of assets. More efficient delivery of electricity can include optimization of operations and reduced system losses. Costs and data requirements associated with these optimization activities should be considered ~~and coordinated with the System~~.

ii. In the longer term, optimizing grid performance can include a response to anticipated changes to the distribution system and the associated planning process.

E. Prudency

i. Prudent planning under SRP will be assessed by:

a. Risks associated with each alternative (ability to obtain licensing and permitting, significant risks of stranded investment, the potential risk reduction of a more incremental approach, sensitivity of alternatives to differences in load forecasts, emergence of new technologies);

b. Potential for synergy savings based on alternatives that address multiple needs;

c. Implementation issues; and

d. Customer responsiveness and ability to potentially modify usage at certain times and seasons.

~~C.~~F. Reliability ~~Procurement Plan.~~[9]

i. Reliability will be assessed by the solutions':

a. Ability to meet the identified system needs;

b. Review of anticipated reliability as compared to alternatives;

c. Operational complexity and flexibility; and

d. Resiliency of the system.

[9] ~~"Grid-facing" investments may include technologies that automate grid operations and allow the distribution utility to monitor and control grid conditions in near real time. (Source: MA DPU Docket 12-76-A, pg. 2)~~

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G. Environmental responsibility:

i. Environmental responsibility will be assessed by the manner in which the solution advances the goals and objectives of the state energy plan and other environmental policies. Considerations of environmental responsibility may include impacts on greenhouse gas emissions, criteria air pollution, land use, water, and other resources.

H. Cost-effectiveness

i. Cost-effectiveness will be assessed by a comparison of costs and benefits as described in 2.3.F.

2.3. Assessment of Applicability of Non-Wires Alternatives (SRP Planning)

~~D.~~A. Identified ~~transmission or~~electric distribution ~~(T &D) projects with a proposed solution~~system needs that meet the following criteria will be evaluated for potential NWAs that could reduce, avoid or defer ~~the~~a T&D wires solution over an identified time period.

~~a.~~i. The need is not based on asset condition~~.~~;

~~b.~~ii. The wires solution, based on engineering judgment, will likely cost more than approximately $1 million; the cost floors may vary across different project types and time frames;

~~c.~~iii. If load reductions are necessary, then they are expected to be less than ~~20percent~~20 percent of the relevant peak load in the area, or sub area in the event of a partial solution, of the defined need;

~~d.~~iv. Start of wires alternative construction is at least ~~36~~30 months in the future;

~~e.~~v. At its discretion, the ~~utility~~Utility may consider and, if appropriate, propose a project that does not pass one or more of these criteria if it has reason to believe that a viable NWA solution exists, assuming the benefits of doing so justify the costs.

B. If the Company determines that an NWA cannot defer the entire T&D project, the Company is encouraged to examine the application of NWAs to avoid or defer part of the overall scope of the project. This shall be referred to as 'partial' or 'hybrid' NWA. The Utility will review reduction of the discrete portions of the entire T&D plan. Examples include: 1) reducing two new feeders to one new feeder; 2) reducing a new proposed fully build station (2 power transformers, 8 feeders) to a partial station (1 power transformer, 4 new feeders).[10]

C. To further incorporate NWAs into the Company's distribution planning process, the Company may investigate the application of NWAs to reduce or manage load in areas including, but not limited to, highly utilized distribution systems, where construction is physically constrained, and where demand growth is anticipated, to prolong the useful lifetime of existing systems. It is understood that an economic analysis framework for this type of NWA would need to be developed. With wider penetration, load reduction NWAs are expected to generally defer or reduce infrastructure investment in a similar manner to Energy Efficiency efforts.

D. A more detailed version of these criteria may be developed by the distribution utility

[10] It is understood that reduction in the size of equipment (wire, transformers, etc.) offers little to no cost reduction to enable an economic NWA due to the discrete sizing of these components, and the Utility is not expected to pursue such analysis.

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and shared with ~~input from~~ the Council and other stakeholders.

~~E.~~A. Feasible NWAs will be compared to traditional solutions based on ~~the following:~~reliability, prudency, environmental responsibility, and the comparison of costs and benefits as defined below[11].

~~a. Ability to meet the identified system needs;~~

B. Comparison of benefits and costs

i. The analysis of costs and benefits for each solution shall include a full assessment of costs and benefits of the various technologies, measures, and/or strategies included in the NWA as guided, where applicable, by the cost-effectiveness test outlined in Section 1 of these Standards. The following financial analysis should be conducted for each solution where an NWA is a viable option:

a. A calculation of the net present value benefit of deferring the traditional alternative over a set time period or eliminating the traditional alternative entirely as applicable.

b. A calculation of the net present value cost of the NWA over the same time period as the net present value calculation in (a).

c. A cost benefit analysis, which shall consist of a comparison of (a.) and (b.) plus any other estimated benefits

(1) Other estimated benefits[12] shall include but are not limited to: avoided capacity costs; avoided energy costs; avoided transmission costs; avoided ancillary service costs; market price suppression effect; improved reliability; revenues from grid resources; avoided greenhouse gas emissions; other environmental externalities; avoided environmental compliance costs; economic development benefits, and any site-specific, or option-specific benefits or costs directly attributable to the location of the project or the proposed alternatives, provided however that these benefits have not already been counted in the justification of any other underlying program (e.g. the Energy Efficiency Procurement Plan, the Renewable Energy Growth Program, the Net Metering Program, the Long-Term Contracting for Renewable Energy Standard, etc.) to avoid double-counting of benefits.

(2) Recognizing that quantification methods for some benefits are not yet defined, and may need further research, where benefits cannot be reasonably quantified, a qualitative impact analysis or description of potential benefits should be included.

ii. Where there is no wires solution yet identified consistent with Section 2.3.C, a traditional benefit/cost analysis (consistent with this section) for the NWA

[11] It is recognized that individual attributes can be compared to each other, but the ability to compare all the attributes together may not be able to be done at this time and may be the subject of other proceedings.

[12] It is expected that site-specific avoided distribution costs and reduced operations and maintenance costs would be captured in the calculation of the net present value benefit of deferring or avoiding the traditional alternative.

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should be done, and if it is greater than 1 the NWA can be recommended for approval.

2.4. Three Year System Reliability Procurement Plan

A. The Utility System Reliability Procurement Plan ("The SRP Plan") submitted on September 1, 2017 and triennially thereafter on September 1, shall describe general planning principles and potential areas of focus for System Reliability Procurement for the three years of implementation beginning with January 1 of the following year. Such Plans shall include but are not limited to:

i. Proposed evolutions to definitions, identification, and assessment of non-wires alternatives which may include but are not limited to:
   a. Observations and lessons learned from the most recent three year period.
   b. Trends in distributed energy resource technology and analytics, either grid-side or customer-side, that may influence NWA planning over the three year period.

ii. Anticipated scope of NWA deployment in coming three year period.
   a. In-progress NWA projects projected to continue, and a high-level timeline.
   b. Projected areas of focus[13] for distribution planning review that may result in the identification of new NWA projects.

iii. Description of how the SRP Plan complements the objectives of Rhode Island's energy efficiency, renewable energy, and clean energy programs listed in 2.1.C.

iv. Proposed shareholder incentive framework.

2.5. Annual System Reliability Procurement Report

A. The Utility shall prepare and file a supplemental filing on November 1, 2017 and annually thereafter on November 1, containing details of implementation of the SRP Plan for the next program year ("The SRP Report"). Such reports will include but are not limited to:

~~a. Anticipated reliability of the alternatives;~~
~~a. Risks associated with each alternative (licensing and permitting, significant risks of stranded investment, sensitivity of alternatives to differences in load forecasts, emergence of new technologies)~~
~~a. Potential for synergy savings based on alternatives that address multiple needs~~
~~a. Operational complexity and flexibility~~
~~a. Implementation issues~~
~~a. Customer impacts to potentially modify usage at certain times and seasons~~
~~a. Other relevant factors~~

~~A. Financial analyses of the preferred solution(s) and alternatives will be conducted to the extent feasible. The selection of analytical model(s) will be subject to Public Utilities Commission review and approval. Alternatives may include the determination of deferred investment savings from NWA. The selection of an NWA shall be informed by the considerations approved by the Public Utilities Commission which may include, but not~~

[13] It is not anticipated that this will include project specifics, which are dependent on needs and screening; those are expected in Annual SRP Reports. In the absence of project specifics or budgets, this section is intended to give a picture of the expected size and scope of NWA efforts during the three year period and a sense of whether it is expected to grow relative to current activities.

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~~be limited to, those issues enumerated in(D), the deferred revenue requirement savings and an evaluation of costs and benefits according to the Total Resource Cost test (TRC)[14].Consideration of the net present value of resulting revenue requirements may be used to inform the structure of utility cost recovery of NWA investments and to assess anticipated ratepayer rate and bill impacts.~~

~~A. For each need where a NW A is the preferred solution, the distribution utility will develop an Implementation plan that includes the following:~~

i. Identification and NWA viability determination of needs which passed the initial screening in Section 2.3;

ii. Identification of needs where an NWA project was selected as a solution including:

a. A summary of the comparative analysis following the criteria outlined in Section 2.3 above;

~~a.~~b. Characterization of the transmission or distribution need including:

~~i.~~(1) ~~Identification of the load-based need, including the~~ The magnitude ~~of the need, the~~ (daily and annual load shape ~~of the load curve~~curves, voltage improvement, etc.) if applicable, the projected year and season by which a solution is needed, and other relevant timing issues~~.~~;

~~ii.~~(2) ~~Identification and description~~Description of the ~~T&D investment~~traditional wires solution and how it ~~would change as a result of~~is impacted by the NWA~~.~~[15];

~~iii. Identification of the level and duration of peak demand savings and/or other operational functionality required to avoid the need for the upgrade.~~

~~iv.~~(3) Description of the sensitivity of the need and T&D investment to load forecast assumptions.

~~x. Ability of affected customers to participate in the proposed project~~

iii. Description of how the NWA projects complement the ~~business as usual upgrade in terms of technology, net present value, costs (capital~~objectives of Rhode Island's energy efficiency, renewable energy, and ~~O&M), revenue requirements, and schedule~~clean energy programs listed in 2.1.C;

~~b.~~iv. Implementation plans for the ~~upgrade~~newly selected NWA projects and any previously approved projects being proposed for continuation, which should include:

~~c.~~a. ~~Description~~A description of the ~~NW A~~NWA solution, including ~~description of the NW A solution(s) in terms of~~ technology, ~~reliability~~customer engagement, cost (capital and O&M), net present value, and timing~~.~~;

b. ~~Development of~~The ability of affected customers to participate in the

~~[14]The TRC test may be appropriately modified to account for the value of reliability and other site-specific and NWA-appropriate costs, benefits, and risks.~~

[15] Description should include technology proposed, net present value, costs (capital and O&M), revenue requirements, and timeline for the upgrade

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proposed project;

c. A description and results of any competitive bid (Request for Proposals) processes that were conducted to inform the description in 2.5.A.iv.a;

d. The proposed NWA investment scenario(s~~)~~);

~~i. Specific NWA characteristics~~

~~ii.~~e. ~~Development of an implementation plan, including~~The proposed technology ownership and contracting considerations or options;

~~x. Development of a detailed cost estimate (capital and O&M) and implementation schedule.~~

~~A. Funding Plan~~

f. ~~The Utility shall develop a funding plan based on the following sources to meet the budget requirement of the system reliability procurement plan.~~The proposed evaluation plans.

v. Funding plans for the selected NWA projects and any previously approved projects being proposed for continuation. The Utility may propose to utilize funding from the following sources for system reliability investments:

~~iii.~~a. Capital funds that would otherwise be applied towards traditional wires based alternatives, where the costs for the ~~NW A~~NWA are properly capitalized under generally accepted accounting principles and can be properly placed in rate base for recovery in rates along with other ordinary infrastructure investments;

~~iv.~~b. Existing Utility EE investments as required in Section I of these Standards and the resulting Annual Plans~~.~~;

~~v.~~c. Additional energy efficiency funds to the extent that the energy efficiency-related NWA can be shown to pass the ~~TRC test with a~~ cost benefit ~~to cost ratio~~test as outlined in Section 1 of ~~greater than 1.0~~these Standards and such additional funding is approved;

~~vi.~~d. Utility operating expenses to the extent that recovery of such funding is explicitly allowed;

~~vii.~~e. Identification of ~~significant~~ customer contribution or third party investment that may be part of a NWA based on benefits that are expected to accrue to the specific customers or third parties~~.~~;

~~viii.~~f. Any other funding sources that might be required and available to complete the NWA.

~~E.~~A. ~~Annual SRP Plan reports should be submitted on November 1. Such reports will include but are not limited to:~~

~~f. Identification of projects which passed the initial screening in section (C);~~

~~g. Identification of projects where NWA were selected as a preferred solution; and a summary of the comparative analysis following the criteria outlined in sections (D) and (E) above;~~

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~~h. Implementation plan for the selected NW A projects;~~
~~i. Funding plan for the selected NW A projects;~~
~~j. Recommendations on pilot distribution and transmission project alternatives for which it will utilize selected NWA reliability and capacity strategies. These proposed pilot projects will be used to inform or revise the system reliability procurement process in subsequent plans;~~
~~k.~~vi. Status of any previously selected and approved projects and pilots;
~~l.~~vii. Identification of any methodological or analytical tools to be developed in the year;
~~m.~~viii. Total SRP Plan budget, including administrative and evaluation costs~~.~~;

~~A. The Annual SRP Plan will be reviewed and funding approved by the Commission prior to implementation.~~

ix. Proposed shareholder incentive;

~~F.~~B. To the extent the implementation of a ~~NW A~~NWA may contribute to an outage event that is beyond the control of the Company, the Company may apply to the Commission for an exclusion of such event in the determination of Service Quality performance.

2.6. ~~Chapter 3: Aligning~~ SRP Performance Incentive Plan

Utility ~~Incentives & Reforming Rates~~

A. ~~The Energy Efficiency and Resource Management Council and the Company~~ shall ~~review existing rates and~~ have an opportunity to earn a shareholder incentive ~~structures and, as needed, propose adjustments to align utility and consumer incentives with the objectives of Least Cost Procurement and System Reliability Procurement~~that is dependent on its performance in implementing the approved SRP Plan.
B. The Utility, in consultation with the Council, will propose in its SRP Plan a Performance Incentive (PI) proposal that is designed to promote superior Utility performance in cost-effectively and efficiently delivering least cost and reliable non-wires alternatives projects.
C. The Performance Incentive should be structured to reward program performance that makes significant progress in securing least cost and reliable non-wires alternatives projects while at the same time ensuring that those resources are secured as efficiently as possible.
D. The PI may provide incentives for other objectives that are consistent with the goals including but not limited to resiliency, connectivity, and operability.
E. The PI should be sufficient to provide a high level of motivation for excellent Utility performance annually and over the three year period of the SRP Plan, but structured so that customers receive most of the benefit from SRP implementation.

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