

February 17, 2015

BY HAND DELIVERY AND ELECTRONIC MAIL

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

RE: Docket 4536-A - Tariff Advice Filing for Renewable Energy Growth Program and Solicitation and Enrollment Process Rules
National Grid's Presentation at Technical Session on February 10, 2015

Dear Ms. Massaro:

I have enclosed the final version of the slide presentation National Grid used at the technical session on February 10, 2015 concerning the Renewable Energy Growth Program. This version of the slides, which the PUC can use to post on its website, reflects a few minor edits the Company made to the slides it used on February 10.

Thank you for your attention to this matter. If you have any questions concerning this filing, please contact me at 781-907-2121.

Very truly yours,



Raquel J. Webster


Enclosures

cc: Docket 4536-A Service List
Steve Scialabba, Division
Leo Wold, Esq., Division
Karen Lyons, Esq., Division

Service List

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

Copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.



Joanne M. Scanlon

February 17, 2015

Date

Docket No. 4536-A National Grid Tariff Advice Filing for Renewable Energy Growth Program (RE Growth Program) and Solicitation & Enrollment Process Rules for 2015

Docket No. 4536-B RI Distributed Generation Board (DG Board) Report and Recommendation Regarding 2015 Renewable Energy Growth Classes, Ceiling Prices and Targets

Service List updated 1/9/15

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Renewable Energy Growth Program

Docket No. 4536-A

Presentation at Rhode Island Public Utilities Commission Technical Session

February 10, 2015 (Revised version submitted February 13, 2015)

Renewable Energy (RE) Growth Program Highlights

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The RE Growth section of the Clean Energy Jobs Act of 2014 (RI General Law §39-26.6) was enacted to:

- Facilitate and promote installation of renewable distributed generation (DG)
- Reduce environmental impacts from electricity
- Stimulate economic development
- Integrate bill credit option for customers and allow for locational and other incentives
- Quadruple capacity available, compared with DG Standard Contract Program, to 160 MW over five years

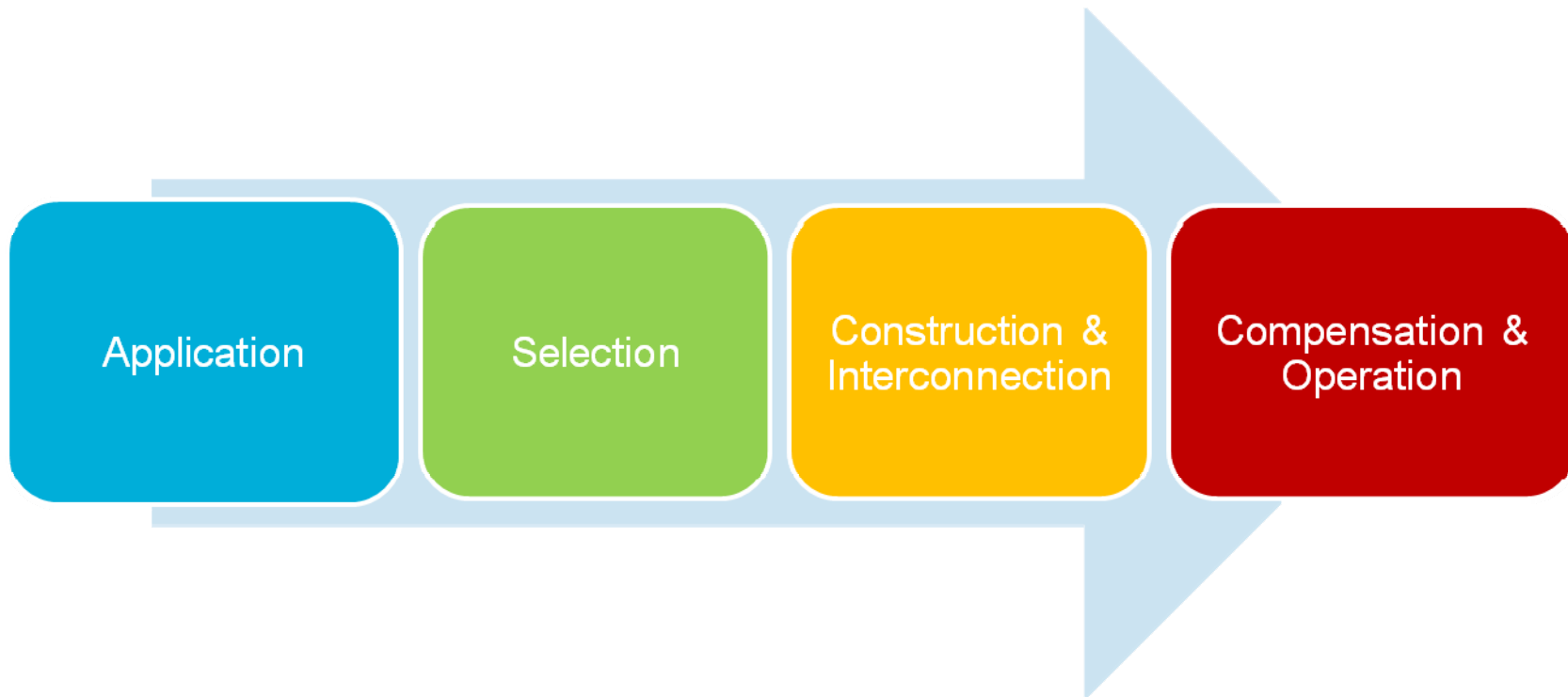
National Grid seeks to:

- Streamline open enrollment for Small-Scale Solar customers
- Simplify application process for non-residential customers and “stand-alone” systems

RE Growth Program Process

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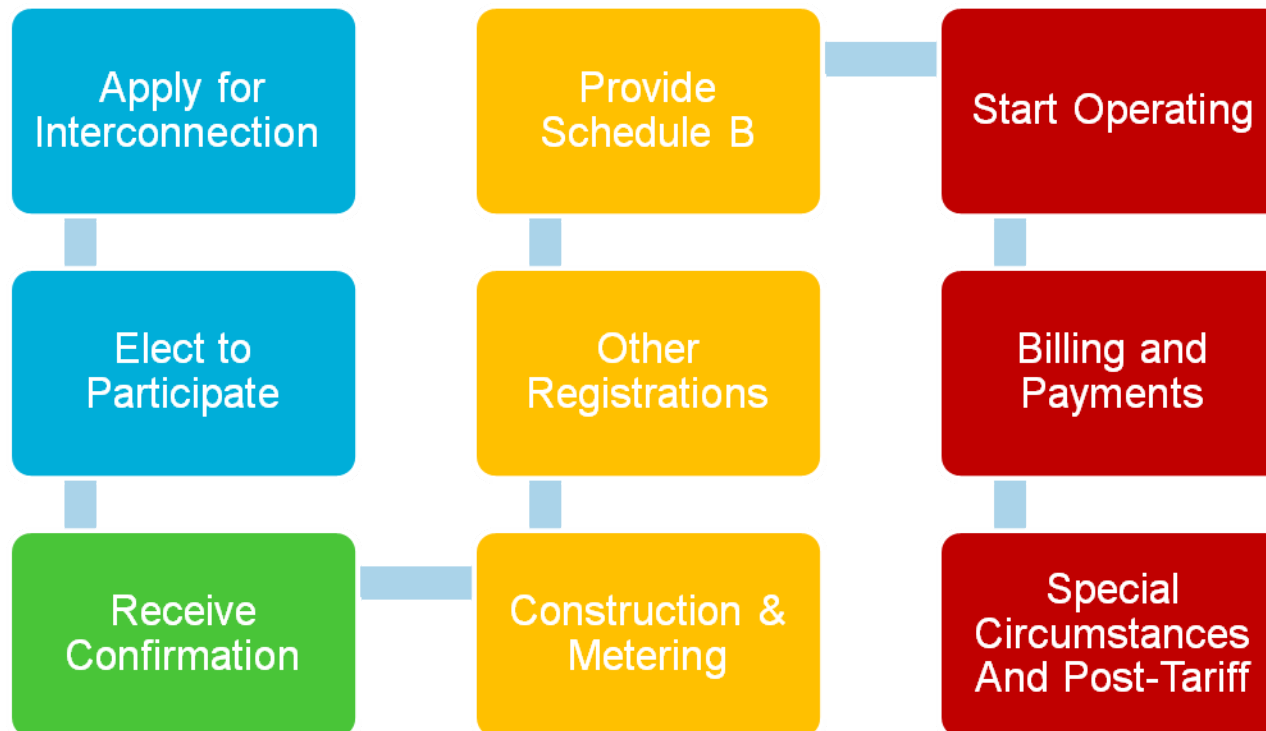


The purpose of this slide presentation is to provide an overview of the Company's Renewable Energy Growth Program. These slides should not be relied upon for Program eligibility or other requirements. Please refer to the Program tariffs and solicitation and enrollment process rules for Program eligibility and other requirements.

Small Solar Program Flow

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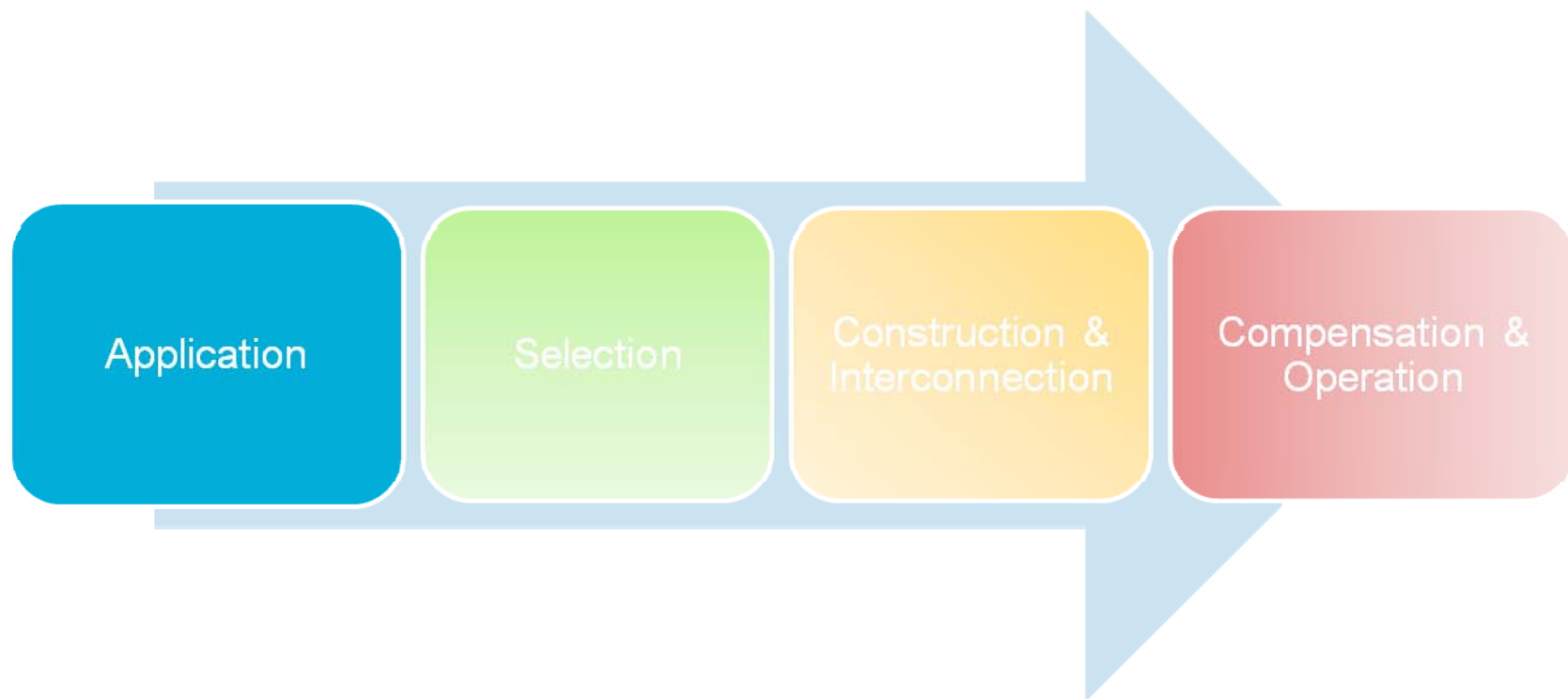
Larger Solar and Other Technologies Program Flow

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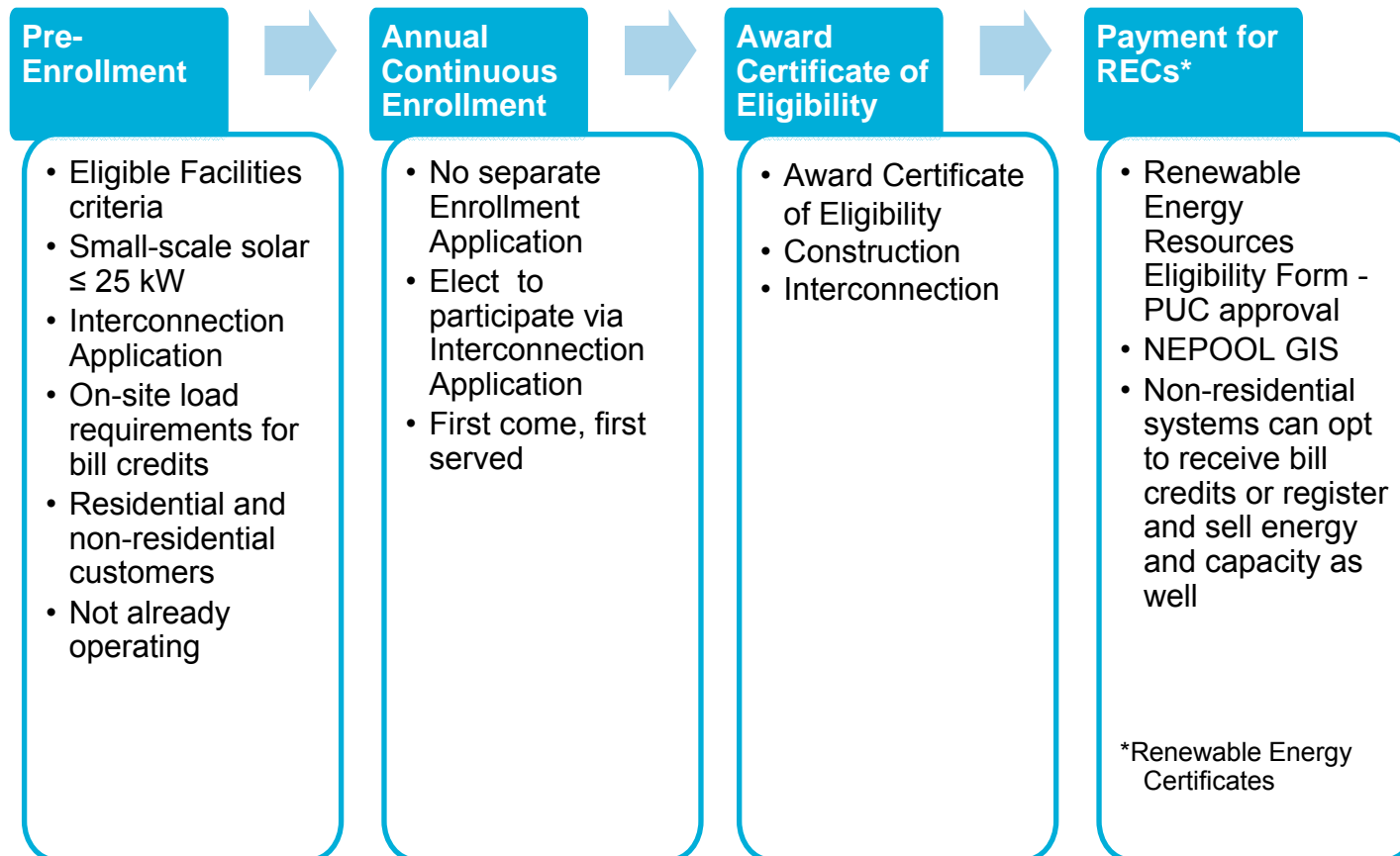
The purpose of this slide presentation is to provide an overview of the Company's Renewable Energy Growth Program. These slides should not be relied upon for Program eligibility or other requirements. Please refer to the Program tariffs and solicitation and enrollment process rules for Program eligibility and other requirements.



Small Solar Application Overview

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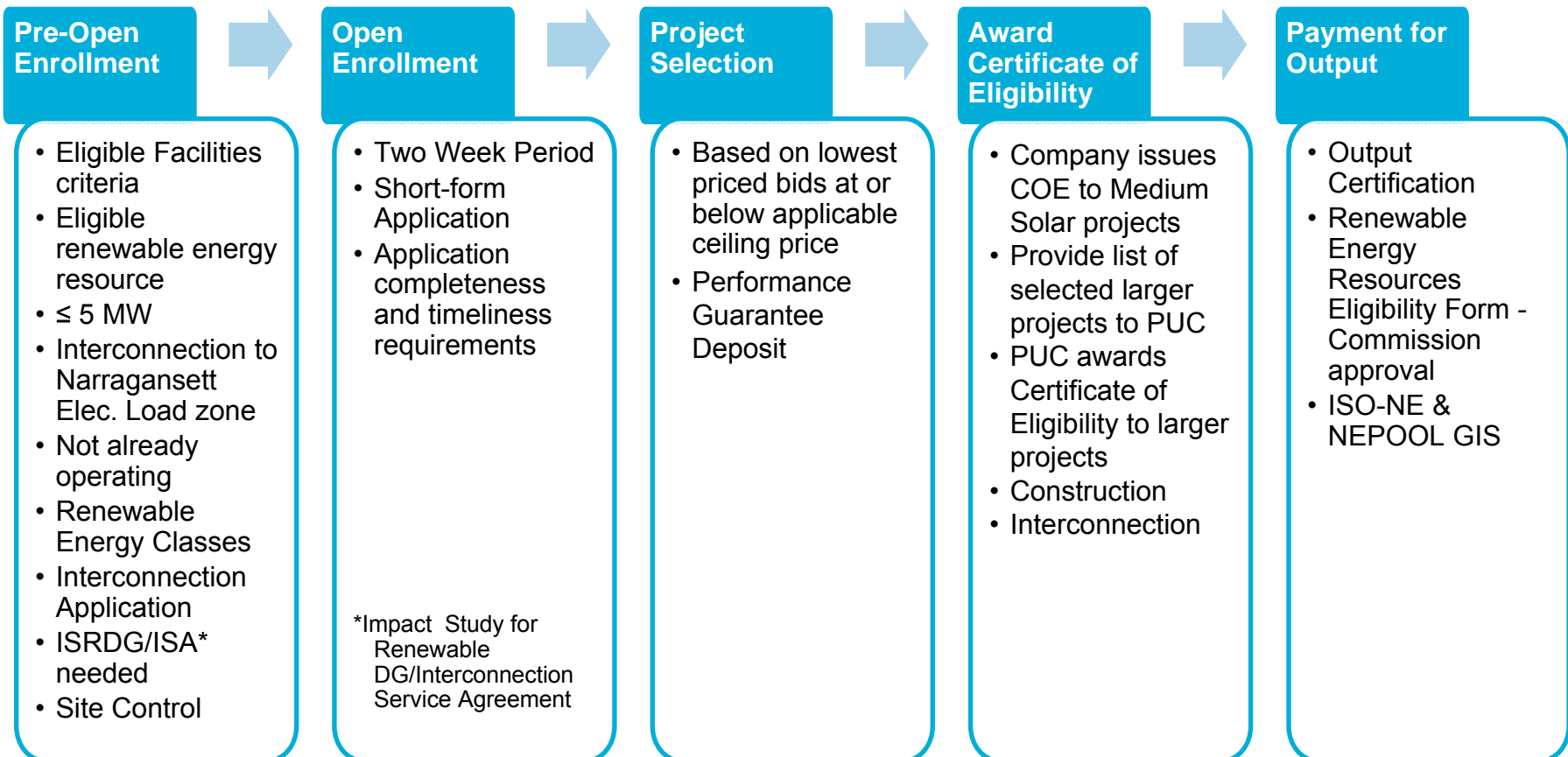


The purpose of this slide presentation is to provide an overview of the Company's Renewable Energy Growth Program. These slides should not be relied upon for Program eligibility or other requirements. Please refer to the Program tariffs and solicitation and enrollment process rules for Program eligibility and other requirements.

Larger Solar and Other Technology Application Overview

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General Eligibility Requirements

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- **Eligible Renewable Energy Classes as determined by the Board and approved by PUC**
- **Nameplate Capacity less than or equal to 5 MW**
- **Interconnect to Narragansett Electric Company distribution system and located in ISO-NE load zone**
- **Not Already Operating, excluding pre-existing hydro**
- **Not Under Construction, except for prep work <25% total project cost**
- **Not Fully Financed for construction, excluding small-scale solar projects**
- **Any associated accounts must be in good standing with the Company**
- **Prohibition on Project Segmentation**
- **Submitted Interconnection Application and have a completed Impact Study Renewable DG (ISR DG), if required, or Interconnection Service Agreement**
- **Site Control – Own, Lease, Ownership/Lease Options**

Renewable Energy Classes

- Small Distributed Generation Projects**

Small Wind	Small Scale Solar	Medium Scale Solar	Other Technology
50 kW - 1,500 kW	Up to and including 25 kW	Greater than 25 kW, up to and including 250 kW	TBD by the DG Board, up to 1 MW.

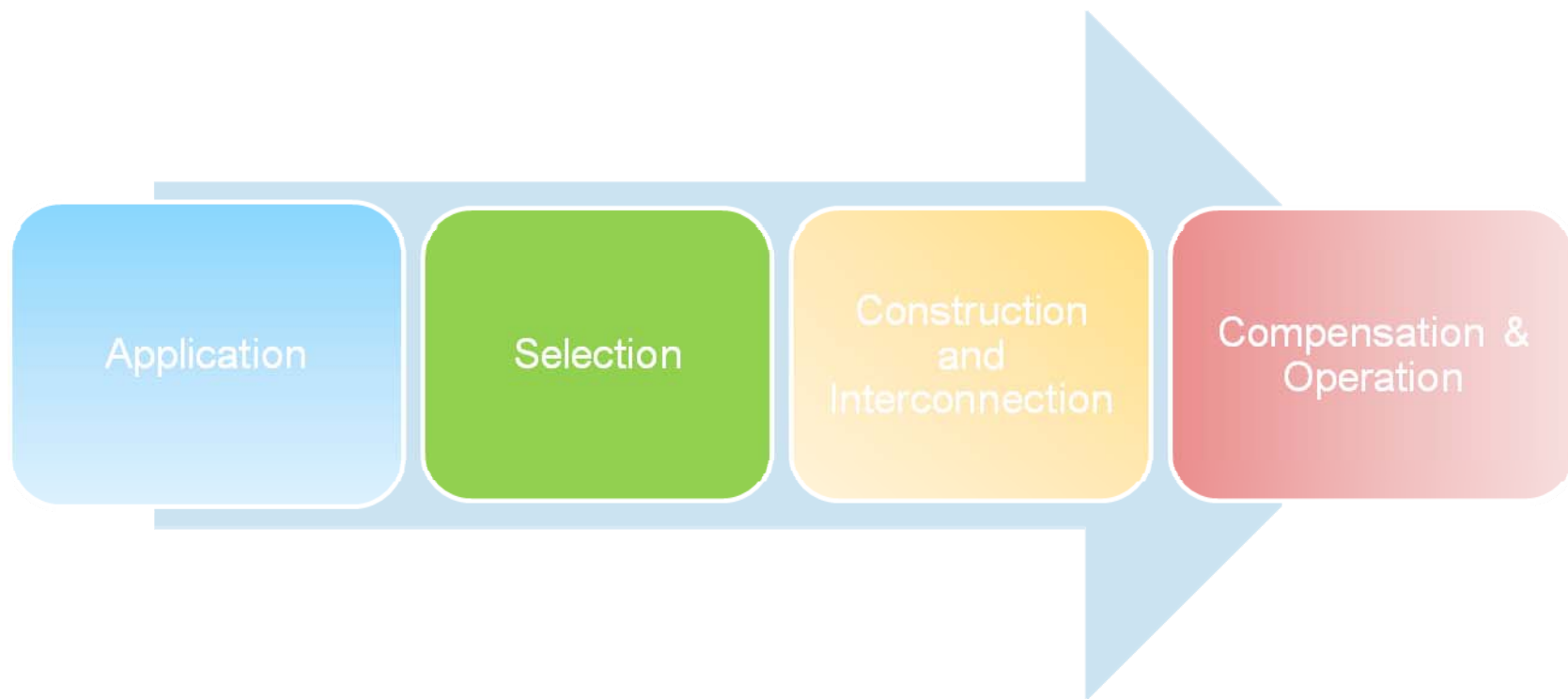
- Large Distributed Generation Projects**

Commercial Scale Solar	Large Scale Solar	Large Scale Wind	Other Technology
Greater than 250 kW, but less than 1 MW	1 MW, up to and including 5 MW	Greater than 1.5 MW, up to and including 5 MW	Greater than small DG, up to and including 5 MW

- Each year, the DG Board will recommend the eligible renewable energy classes for PUC approval.**

Distributed Generation Board Proposed 2015 Program Targets

Renewable Energy Class (Nameplate kW)	Enrollment Target (Nameplate kW)
Small-Scale Solar (up to 25 kW DC)	3,000
Medium-Scale Solar (26-250 kW DC)	4,000
Commercial-Scale Solar (251-999 kW DC)	5,500
Large-Scale Solar (1,000-5,000 kW DC)	6,000
Wind (1,500-5,000 kW AC)	5,000
Anaerobic Digestion (150-1,000 kW AC)	1,500
Small-Scale Hydropower (10-1,000 kW AC)	



RE Growth Enrollment Process: Larger Solar and Other Technologies

- **Typically conduct 3 enrollments each year for all but Small Solar**
 - 2 open enrollments planned in 2015
- **Send Applicants e-mail communication one month prior to each enrollment**
- **Must complete and submit a short-form application during two week period**
- **Application will request information on:**
 - Project ownership/site control
 - Project Technical detail;
 - Bid pricing
 - Interconnection documentation
 - Financing and development costs
- **Award Certificate of Eligibility to selected Applicants approximately 6 weeks after each enrollment ends**

Application Evaluation & Selection Process

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- **Large Scale Solar, Commercial Scale Solar and DG projects for Other Eligible Technologies** required to **submit competitive priced bid** (\$/kWh) for output of facility
- **Selection of projects based on ranking of pricing bids** at or below applicable ceiling price for given technology class.
 - Projects awarded a Certificate of Eligibility (COE) will be paid Performance-Based Incentive (PBI) equal to their respective bid price
- **Small-Scale and Medium-Scale Solar projects** will not be required to submit competitive priced bids – open enrollment on “**first come, first served**” basis and paid applicable Standard PBI

Award Certificate of Eligibility

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■ Certificate of Eligibility and Performance Guarantee Deposit:

- Projects >250 kW in nameplate capacity are required to wire a Performance Guarantee Deposit within 5 business days of being selected and offered a COE
 - If payment is not received by date required, the Company will withdraw the offer and proceed with the next competitive bid in that enrollment
- After confirmation of receipt of Performance Guarantee Deposit
 - Company awards COE to small- and medium-scale solar projects
 - Company files with the PUC list of all other selected projects and PUC shall issue an order awarding COEs
- COE contains information about DG Facility such as – renewable technology and class, facility size, and energy output, term length and price (PBI)

Small Solar Applicants: Open Enrollment Process

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- **Eligible Facilities and Criteria:**

- Small-scale solar with a nameplate capacity up to and including 25 kW
- All residential and any non-residential customers wishing to receive bill credits must meet sizing requirements of net metering tariff – i.e., sized to annually produce electricity no greater than the customer's 3-year average annual usage

- **Enrollment continuously open** until the annual targets for Small-Scale solar class has been met

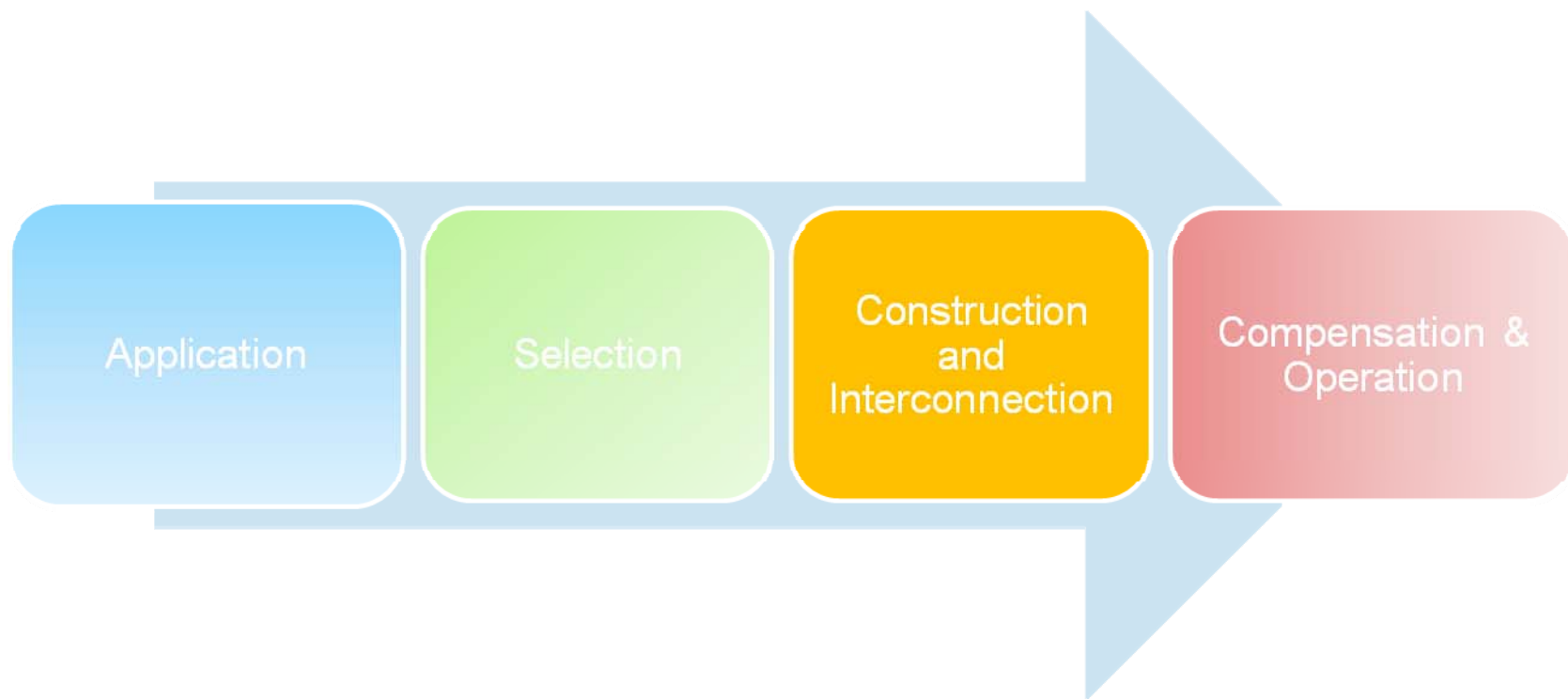
- Additional capacity may become available under the annual MW target

- **Customers or their Project Developer can simply submit an interconnection application and elect to participate in Program**

Small Solar Applicants: Award of Certificate of Eligibility



- **Certificate of Eligibility and Project Schedule:**
 - National Grid selects projects and awards Certificates of Eligibility on a “first come, first served basis” until annual MW target is met
 - Small-Scale Solar Certificates will be issued as applications approved
 - Company will send a list of all recipients to PUC with other results
 - Certificate of Eligibility voided if project does not complete construction and become operational per the tariff requirements within 24 months



Residential and Small C&I Interconnection

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- Small Residential and Small C&I (Most Small Scale Solar and those on Residential Tariff)
 - Under 10 kW (single phase) or under 25 kW (three-phase inverter-based PV)
 - Eligible for Simplified process (review and approval in as little as 15 to 20 business days)
 - Enrollment Application will start the interconnection process for these smaller systems

Medium Size Interconnection

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- Larger Residential and Small C&I (Some Small Scale Solar, Medium Scale Solar, Small DG, larger than 10 kW single phase on the Residential Tariff)
 - Larger than 10 kW single phase or larger than 25 kW three-phase inverter-based PV up to 250 kW
 - Will follow Expedited process (up to 40 business days for application review and study process)
 - Larger projects could require ISRDG under Standard process
 - Once study process is complete, an Interconnection Service Agreement (ISA) with any upgrade requirements and construction schedule milestones will be provided
 - Enrollment Application requires executed ISA or completed ISRDG

Larger Size Interconnection

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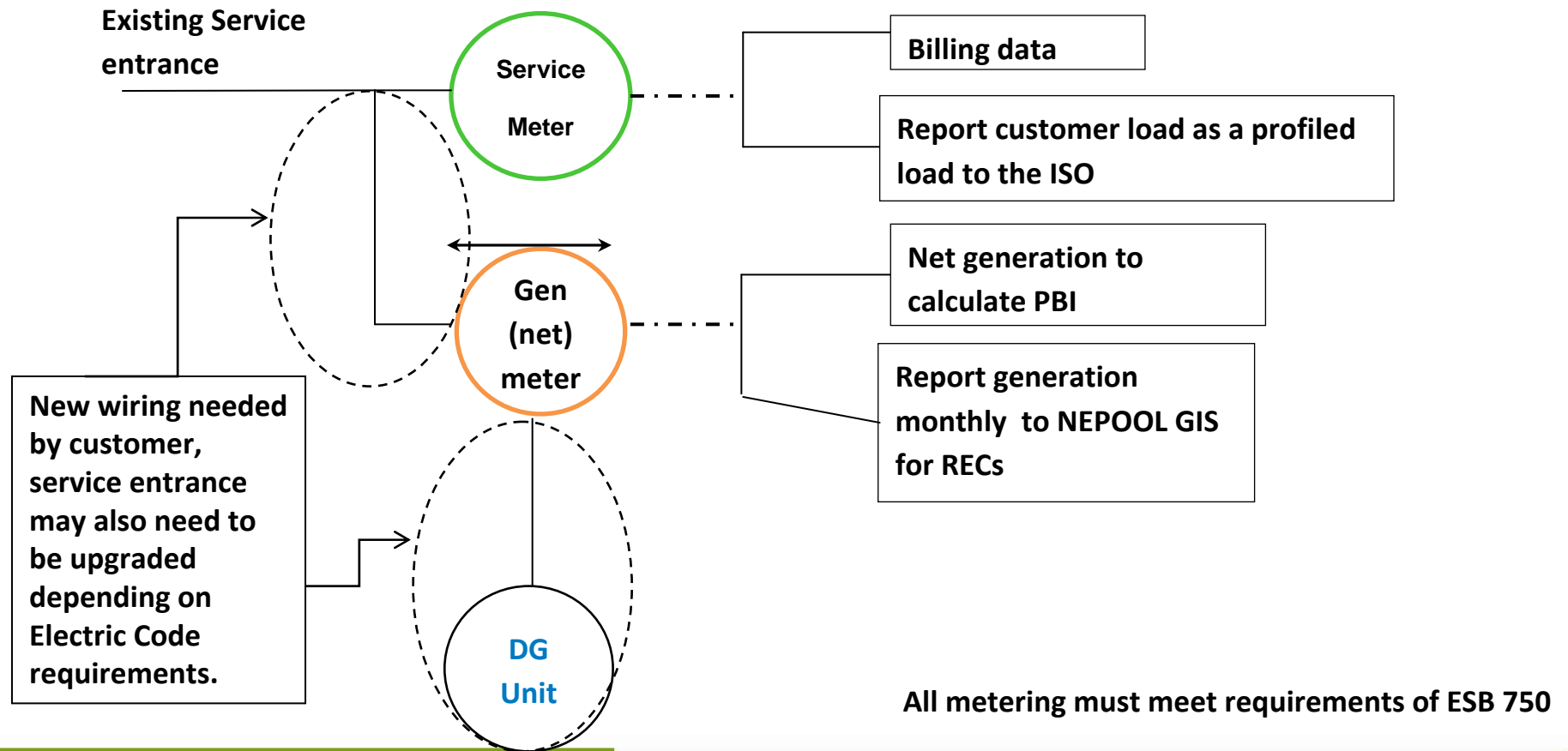
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- Projects larger than 250 kW (Commercial Solar, Large Scale Solar and other Large DG)
 - May be eligible for Expedited process (up to 40 business days for application review and study process)
 - If not eligible for Expedited, Standard process followed
 - ISRDG (study only) can take up to 90 calendar days, whole process of application review and doing all necessary studies can take up to 120 business days
 - Once study process is complete, an Interconnection Service Agreement (ISA) with any upgrade requirements and construction schedule milestones will be provided
 - Following study process, an ISA is offered with any upgrade requirements specified
 - Interconnection application and study process must take place prior to applying to the Program
 - Enrollment Application requires executed ISA or completed ISRDG

Metering for DG < 25 KW for Residential and Small C&I

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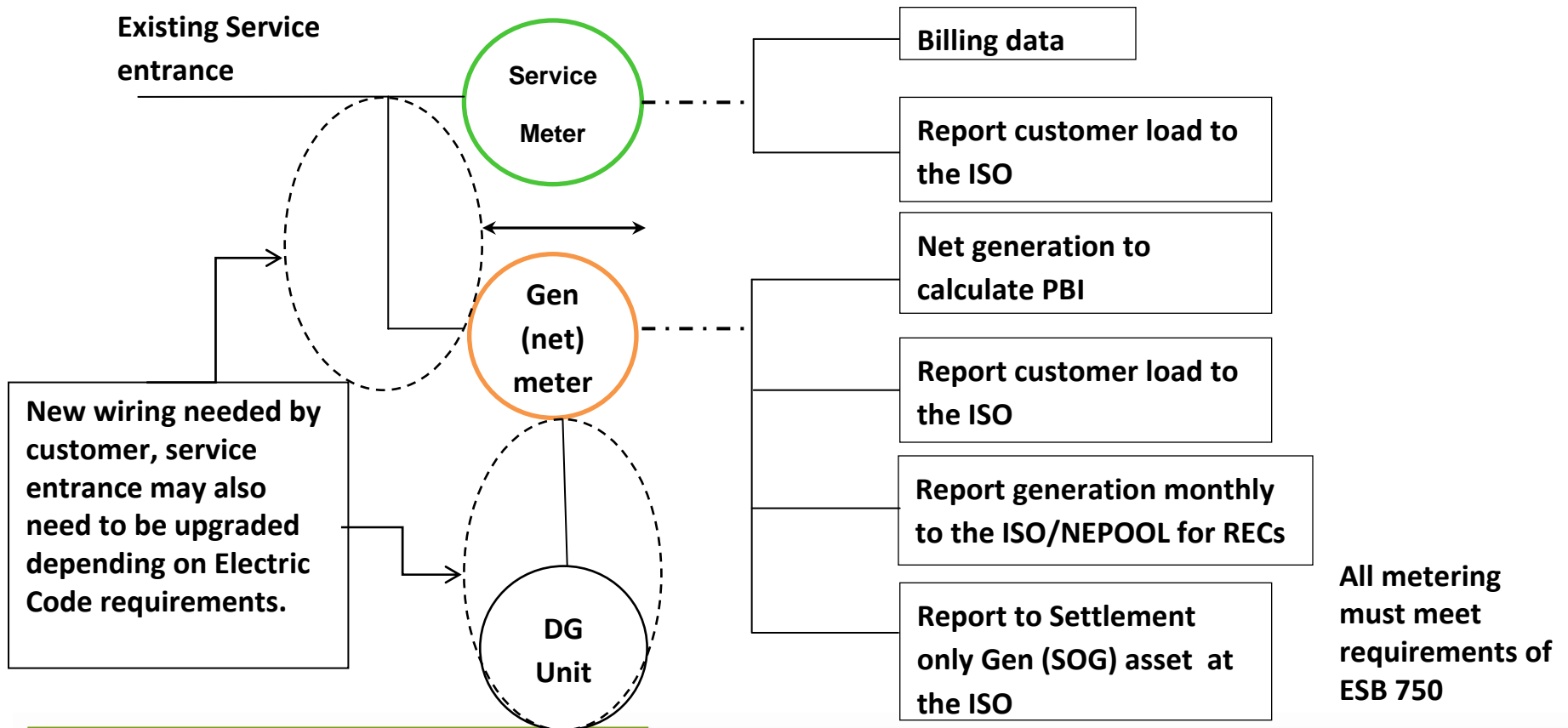
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Metering for All DG > 25 kW, and All Interval Metered Customers

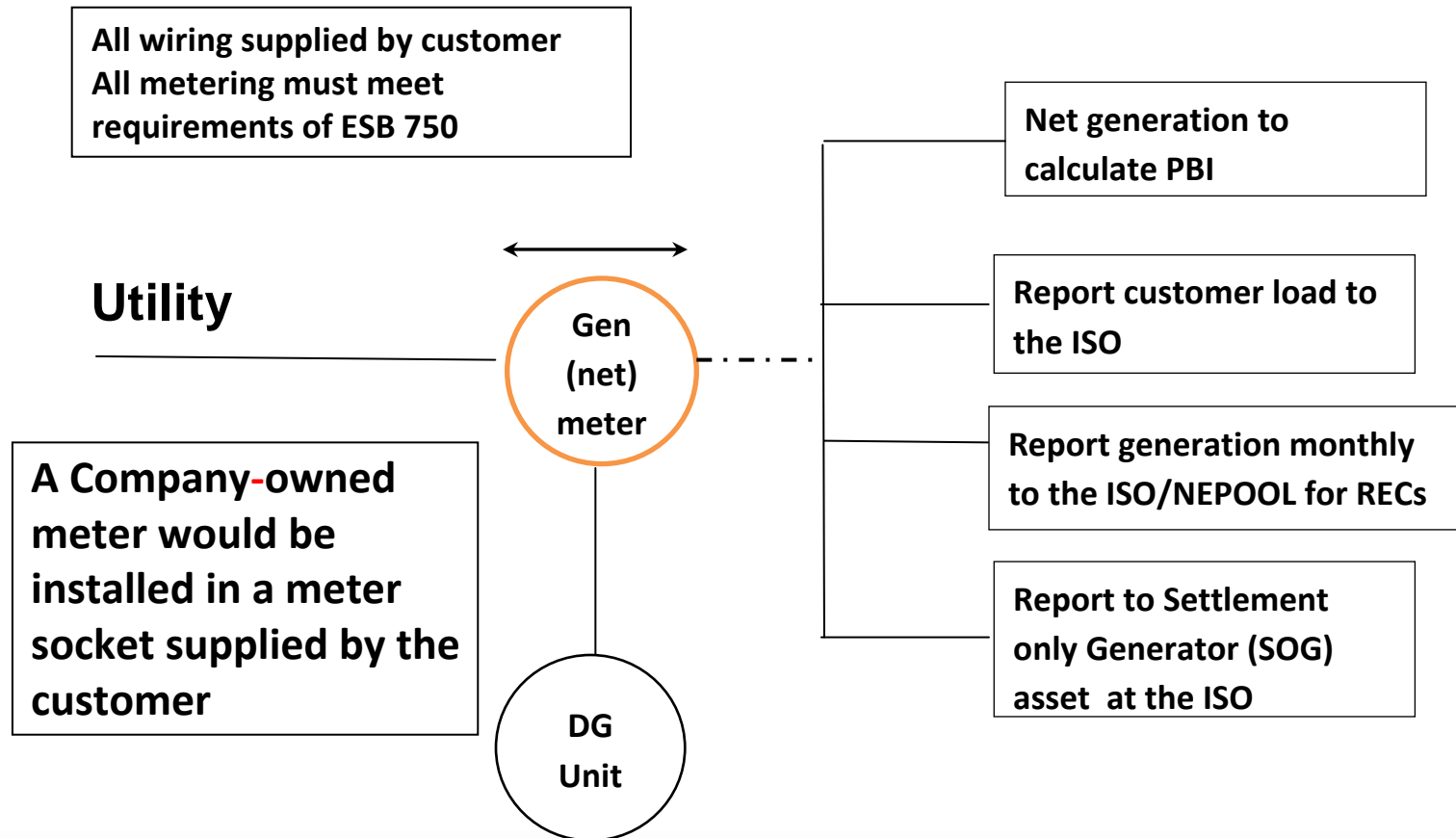
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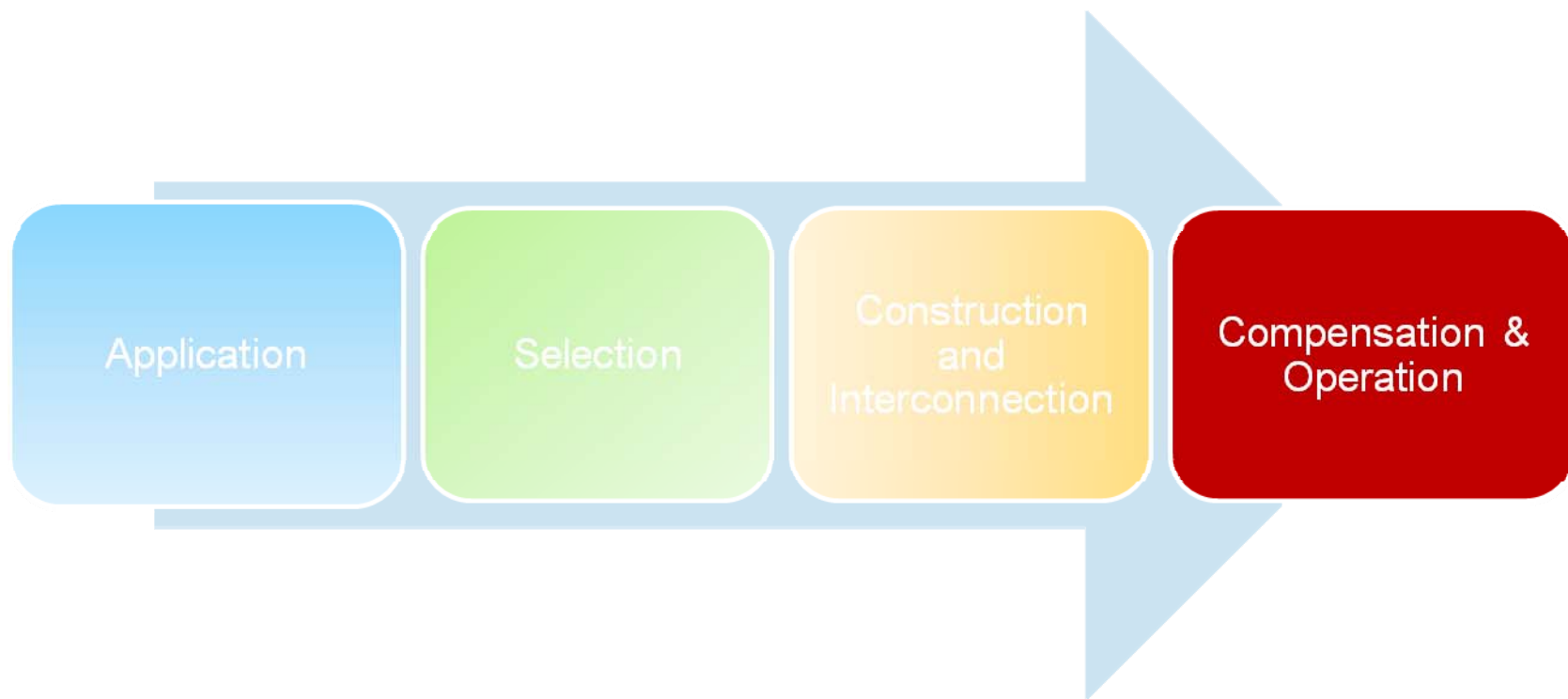
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Stand-alone DG Project Metering





RE Growth Tariffs

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- Tariffs provide guarantee of PBI payments for the term specified in the applicable tariff supplement
- Applicant/customer must abide by the terms of the tariff
- Once awarded a Certificate of Eligibility, applicant may not terminate without Company's consent
- Supplements will be filed following each round of enrollments and will include PBI, term, list of bid projects awarded COE, and other project details
- For non-residential customers, Company will own all output
- Residential customers retain all energy and capacity for self-supply per the statute

Initiating Payment for Output

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Threshold Requirements to initiate PBI payments for output:

- Output Certification by Licensed Professional Engineer (except small and medium solar)
- Registration of Asset in ISO-NE (except residential systems)
- NEPOOL GIS registration
- Qualification as “Renewable Energy Resource” under Renewable Energy Standard with PUC required
- Non-residential customers may need to register as Renewable Portfolio Standard eligible in other states at their cost, if the Company directs them to

Certificate of Eligibility

- Once DG Facility meets all conditions for payment under the Tariff, the COE becomes effective and payments begin

Larger Solar and Other DG Technology Projects: Output Certification



- **Output Certification by Licensed Professional Engineer for Solar >250 kW and all systems of other technologies:**
 - DG Facility has completed construction, interconnection, meter installation & testing
 - DG Facility capable of producing at least 90% of energy output stated on Certificate of Eligibility
 - Actual nameplate capacity and maximum hourly output as stated on Certificate of Eligibility
- **Certificate of Eligibility voided and performance guarantee deposit is forfeited if output certification not provided within 24 months, except:**
 - 36 months for Anaerobic Digestion
 - 48 months for small-scale Hydropower
 - Timeline for completion begins when COE is approved by the PUC

Net-Metering Provision vs. RE Growth Program

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- RE Growth customers who opt to receive RE Growth bill credits must meet the sizing criteria in the RE Growth tariffs, which are the same as specified in the Net Metering Provision
- Customers can receive RE Growth bill credits OR choose to receive compensation for eligible generation under the Net Metering Provision, as they are different tariffs
 - If compensated in NM Provision, they will not be eligible for participation in RE Growth Program for that system
- At the conclusion of the term specified in the applicable tariff supplement, RE Growth program Customers that are eligible for net metering can receive compensation under the Net Metering Provision

Billing of Performance-Based Incentive Payments

- Prior to receiving PBI Payments:
 - The Applicant must select payment method before the system is operational (Non-Residential only)
 - If a Customer account is to receive bill credits, that Customer must file a Schedule B (from Net Metering Provision) to indicate account
 - Customer/Applicant must ensure that retail delivery service account receiving credits and the generation account are in good standing prior to receiving bill credits
 - Customer/Applicant must pay all outstanding charges, including interconnection fees and costs

Residential Projects: Billing of PBI Payments

- Applicants will receive the Standard PBI for the term specified in the tariff supplement applicable to each enrollment
- PBI will be paid through a combination of bill credit on customer's electric service account and cash payment to designated recipient
- Customer's monthly bill will reflect:
 - Billing of on-site use at applicable retail delivery service and commodity charges
 - Bill credit based upon the lesser of the customer's on-site use or the resource generation
 - Calculation of cash payment to recipient which will be the full PBI payment less the bill credit

Illustrative Electric Bill – Residential Full Requirements Customer

Calculations below are simplified examples and do not include all applicable charges, such as taxes and fixed charges.

■ Delivery Service

- Customer Charge \$ 5.00
- Delivery Service Chgs \$0.07131 x 700 kWh \$ 49.92

■ Supply Service (National Grid)

- Energy Charges \$0.08359 x 700 kWh \$ 58.51

➤ Total Electric Service Charges \$113.43

Illustrative (1) Electric Bill – Residential RE Growth Program

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Calculations below are simplified examples and do not include all applicable charges, such as taxes and fixed charges.

<p>■ <u>Electric Service Bill</u></p>		
<p>■ <u>Delivery Service</u></p>		
Customer Charge		\$ 5.00
Delivery Service Charges	\$0.07131 x 700 kWh	\$ 49.92
<p>■ <u>Supply Service (National Grid)</u></p>		
Energy Charges	\$0.08359 x 700 kWh	<u>\$ 58.51</u>
		<i>Current Charges</i>
		<i>\$113.43</i>
<p>■ <u>Performance-Based Incentive Payment</u></p>		
<p>■ PBI Payment \$0.2500 x 1000 kWh \$250.00</p>		
<p>■ <u>Bill Credit</u></p>		
Delivery Service Charges	\$0.07131 x 700 kWh	\$ 49.92
Energy Charges	\$0.08359 x 700 kWh	<u>\$ 58.51</u>
		<u>Total Bill Credit</u>
		\$108.43

➤ Electric Service	\$113.43
➤ Bill Credit	(\$108.43)
<i>Total due National Grid</i>	
<i>\$5.00</i>	

➤ PBI Payment	\$250.00
➤ Bill Credit	(\$108.43)
<i>Recipient Cash Payment</i>	
<i>\$141.57</i>	

Illustrative (2) Electric Bill – Residential RE Growth Program

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Calculations below are simplified examples and do not include all applicable charges, such as taxes and fixed charges.

<p>■ <u>Electric Service Bill</u></p>		
<p>■ <u>Delivery Service</u></p>		
Customer Charge		\$ 5.00
Delivery Service Charges	\$0.07131 x 700 kWh	\$ 49.92
<p>■ <u>Supply Service (National Grid)</u></p>		
Energy Charges	\$0.18000 x 700 kWh	<u>\$126.00</u>
	Current Charges	\$180.92
<p>■ <u>Performance-Based Incentive Payment</u></p>		
<p>■ PBI Payment \$0.2500 x 700 kWh \$175.00</p>		
<p>■ <u>Bill Credit</u></p>		
Delivery Service Charges	\$0.07131 x 700 kWh	\$ 49.92
Energy Charges	\$0.18000 x 700 kWh	<u>\$126.00</u>
	<u>Total Bill Credit</u>	\$175.92

- Electric Service \$180.92
- Bill Credit (\$175.92)

Total due National Grid
\$5.00

- PBI Payment \$175.00
- Bill Credit (\$175.92)

Recipient Cash Payment
\$0

Non-Residential Projects: PBI Payments



- Option 1
 - PBI may be paid in the form of a check or in some other form agreeable to the Company and the Applicant
 - If generation unit is “stand-alone” the Company will establish billing account and PBI payment will be based upon the net output
 - If on-site load is present, Customer will receive electric bill based upon on-site use, PBI payment Recipient will receive PBI payment based upon net output of generation
- Option 2
 - Where on-site load is present, PBI payment may be a combination of bill Credit to customer and check to PBI payment Recipient
- Applicant may change billing option once during term of tariff supplement

Illustrative Electric Bill – Non-Residential: Option 1



Calculations below are simplified examples and do not include all applicable charges, such as taxes and fixed charges.

■ Electric Service Bill

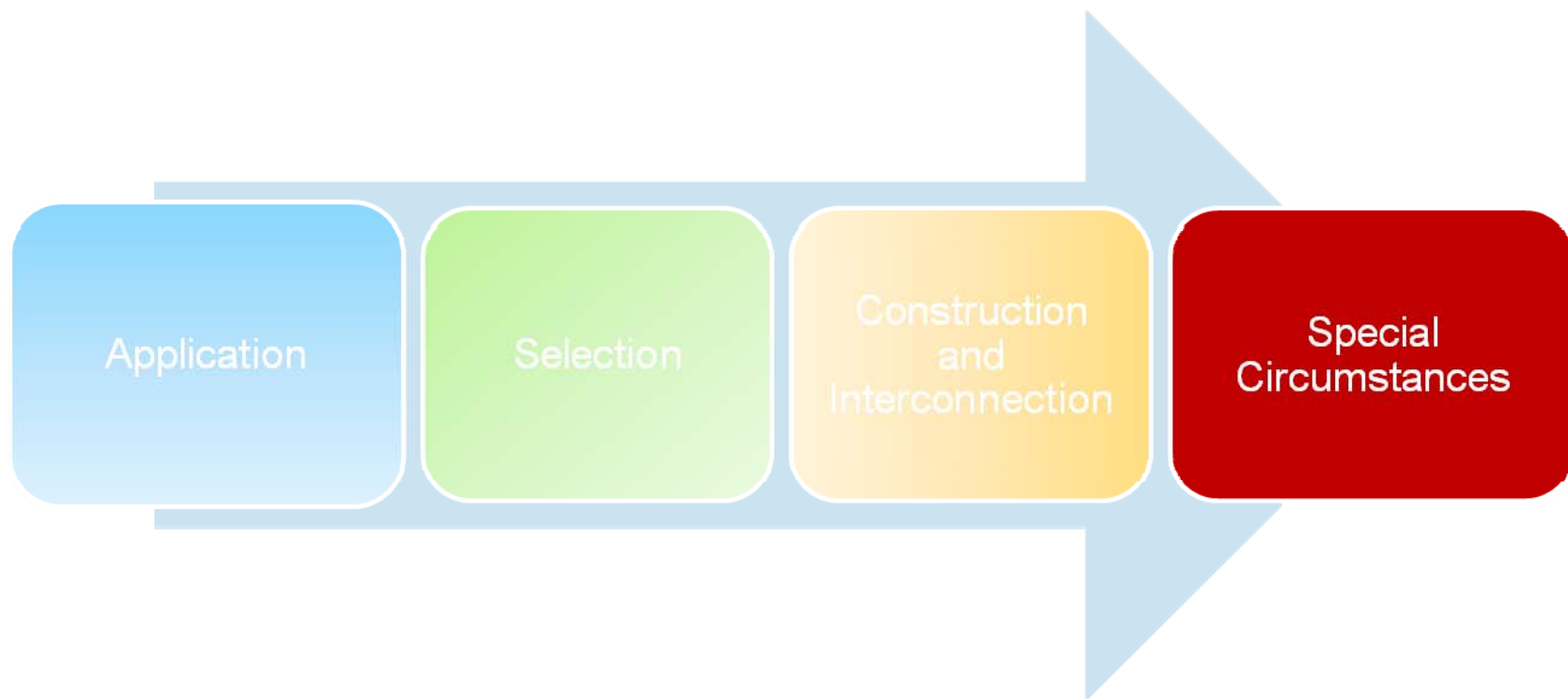
Delivery Service

Customer Charge (Small C&I)	\$ 10.00
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■ Performance-Based Incentive Payment

PBI Payment	$\$0.2500 \times 1000$	\$250.00
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➤ Total Due Customer/Recipient	\$240.00
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Updates and Transfers

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- Applicants to the program are responsible to update National Grid on any changes in their contact details
- Applicants are responsible for completing the projects, and completing all of the steps, not the Customer receiving bill credits (unless the same person)
- Transfers of ownership of a Certificate of Eligibility are anticipated, e.g. with sales of the systems themselves
- Such transfers must be made in writing, signed by the current Applicant, and provided to National Grid

Segmentation and Expansion

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- To protect against abuses of the class and ceiling price definitions, the Program provides certain limitations
- Anti-segmentation Rules on same or contiguous parcels by same applicant apply, except for:
 - Different technology allowed (e.g., wind and solar on same site)
 - New system construction commences after 24 months allowed
 - Net metered only allowed, if electrically segregated
 - Contiguous parcels with different customers and distinct systems
- Expansion of existing systems is not allowed: Generation consistently greater than certified maximum may result in loss of Certificate of Eligibility and tariff eligibility

Rollout and Communication

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- Once PUC issues order and program details are finalized, National Grid will provide communication to customers via web, email and other means to educate them about the Program
- To further help customers participate in the Program, web page guides and FAQs will be developed about Application & Enrollment Processes
- RE Growth specific information will be included in Company's Interconnection Trainings for installers/engineers
- Notification of competitive solicitations will occur approximately four weeks ahead of enrollment period opening via email and other channels