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RE Growth Program Public Review Meeting

Rhode Island Distributed Generation Board

October 14, 2014



RE Growth Program Highlights

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- Promotes distributed generation across Rhode Island
- Will create local energy, economic and environmental benefits
- Quadruples capacity available compared with DG Standard Contract Program, to 160 MW over five years
- Simple, always-open enrollment for Residential customers
- Easier application process for non-residential customers and “stand-alone” systems
- Integrates net metering option for customers, and allows for locational and other incentives

RE Growth Program Process

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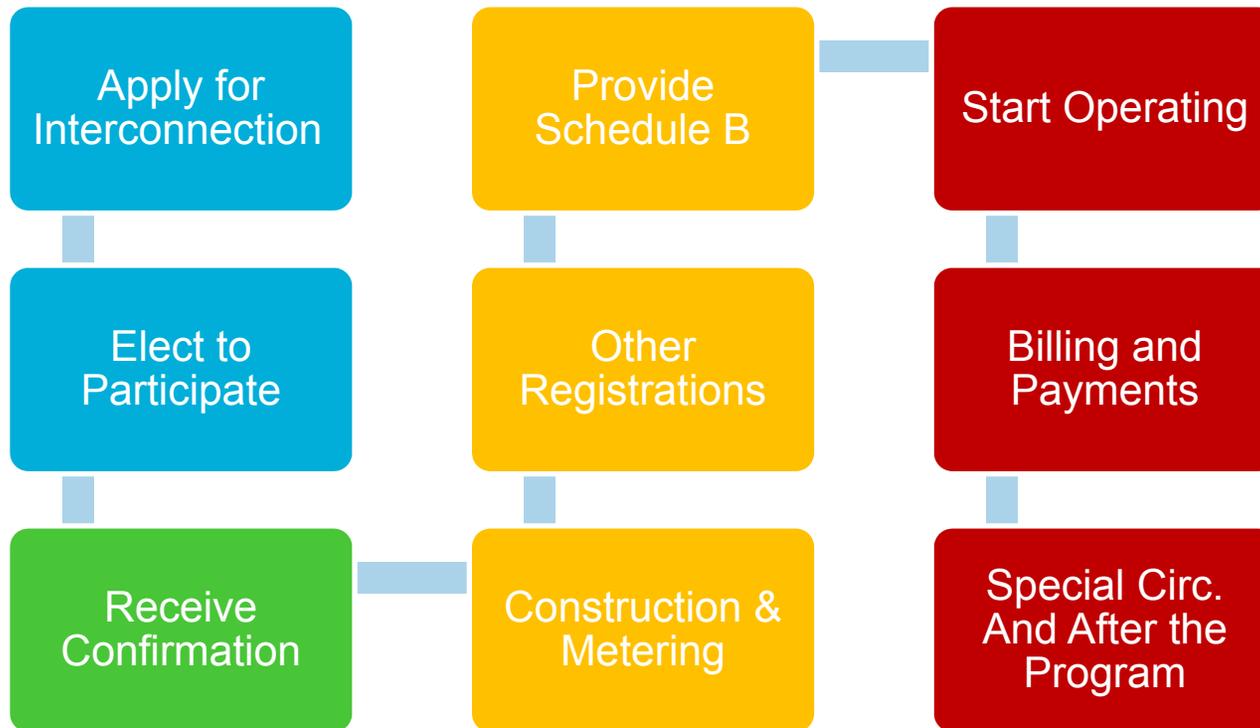
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Residential Program

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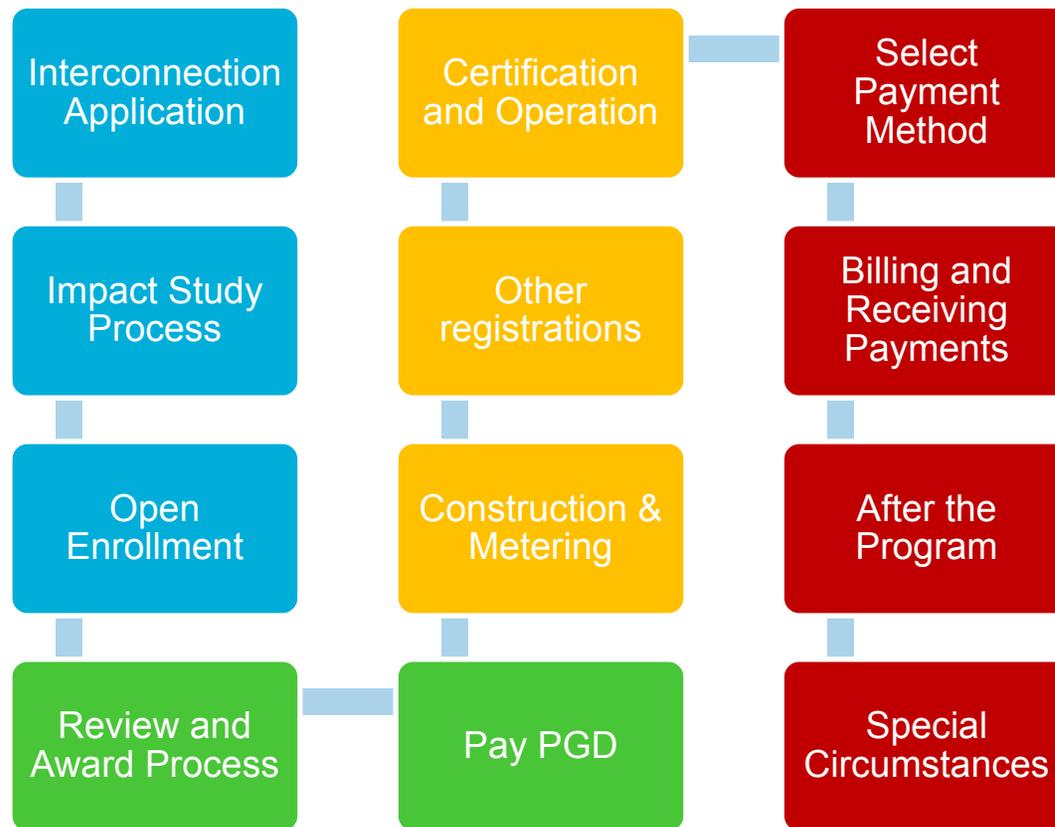
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Non-residential Program Flow

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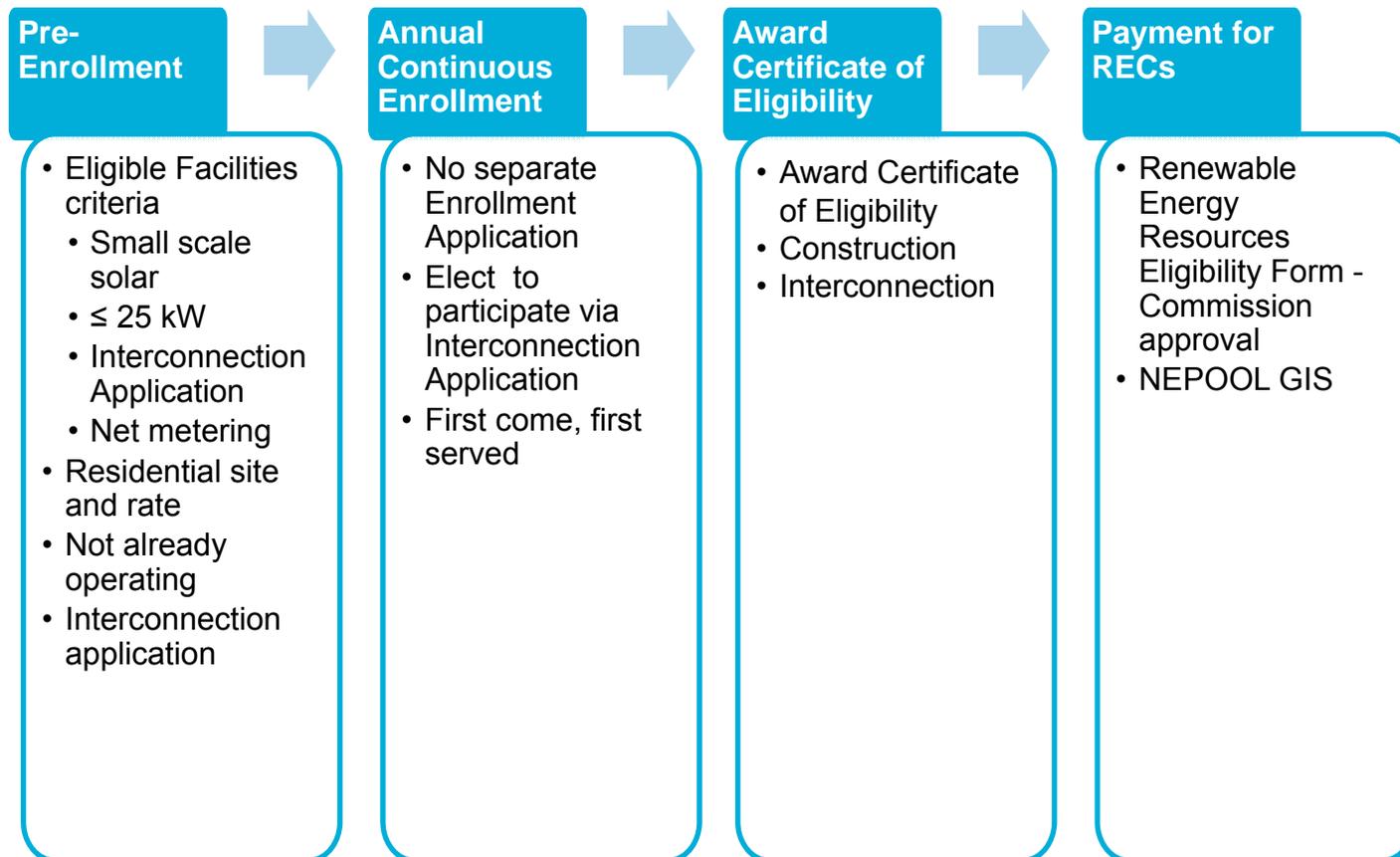




Residential Applicants: Process Overview

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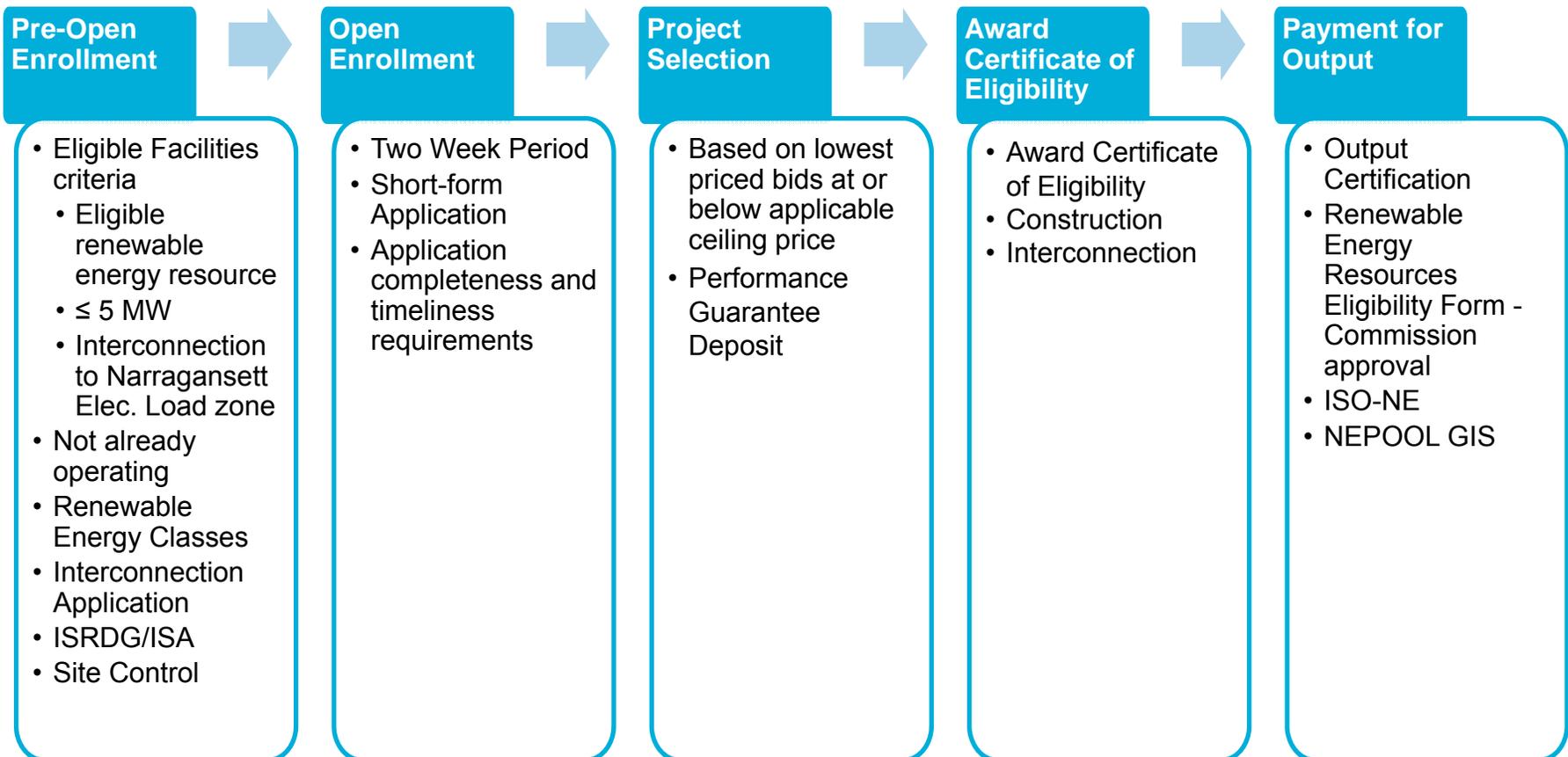
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Non-Residential Applicants: Process Overview

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Program Eligibility Requirements

- Eligible Renewable Energy Class 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
- Prohibit Project Segmentation
- Submitted Interconnection Application and have a completed Impact Study for 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 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 Board will recommend the eligible renewable energy classes for RI Commission approval.**



Residential Program: Open Enrollment Process



■ Eligible Facilities and Criteria:

- Small scale solar with a nameplate capacity up to 25 kW that is served by Basic Residential Rate A-16 or Low Income Rate A-60
- Must be sized to annually produce electricity equal to or less than customer usage, per Net Metering Provisions

■ Enrollment continuously open until the annual targets for Residential small scale solar class has been met

- “First come, first served”
- Additional capacity may become available under the annual MW target

■ Submit interconnection application and elect to participate in Program

- Applicant responsible for all interconnection costs

Non-Residential Program: Open Enrollment Process

- **Typically conduct 3 tariff enrollments each year**
 - 2 open enrollments planned in 2015
- **Provide Applicants email 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 details;
 - Bid pricing;
 - Interconnection documentation;
 - Financing and development costs
- **Recommend Certificate of Eligibility for selected Applicants approximately 6 weeks after each enrollment ends to PUC, followed by PUC approval and Certificate issuance within 60 days**



Residential Applicants: Award 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 met.
 - Residential Certificates will be awarded as applications are approved
 - A list of all recipients to be sent 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.

Non-Residential Program: Evaluation & Selection Process



- **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.
- **Non-residential Small Scale and Medium Scale Solar projects** will not be required to submit competitive priced bids - selected on **“first come, first served” basis** and paid applicable PBI
- Small and medium solar projects will be selected and awarded Certificates directly by National Grid without Commission review

Non-Residential Program: Performance Guarantee Deposit



- **Certificate of Eligibility and Performance Guarantee Deposit:**
 - All projects, except Small & Medium Scale Solar, 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 required date, the Company will withdraw the offer and proceed with the next competitive bid in that enrollment
 - After confirmation of receipt of Performance Guarantee Deposit the Company will file with the Commission a list of all selected projects and Commission shall issue an order awarding COEs within 60 days

Non-Residential Program: Certificates of Eligibility

- Certificate contains the following information:
 - Renewable Technology and Renewable Class
 - Facility Size
 - Energy output (annual and max hourly)
 - Term Length
 - Price (PBI)
- Quarterly Reports required on project status



Initiating Payment for Output

Threshold Requirements to initiate performance based incentive 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 designation form**
- **Qualification as “Renewable Energy Resource” with PUC**

Certificate of Eligibility

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

Non-Residential Program: Output Certification

- **Output Certification by Licensed Professional Engineer:**
 - 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 max 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

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 as little as 15 to 20 business days)
 - Enrollment Application will start the interconnection process for these smaller systems



Medium Size Interconnection

- Larger Residential and Small C/I (Some Small Scale, 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 30 business days for application review and approval). Larger projects could require ISRDG under Standard process
 - Enrollment Application requires executed interconnection service agreement (ISA) or completed ISRDG



Larger Size Interconnection

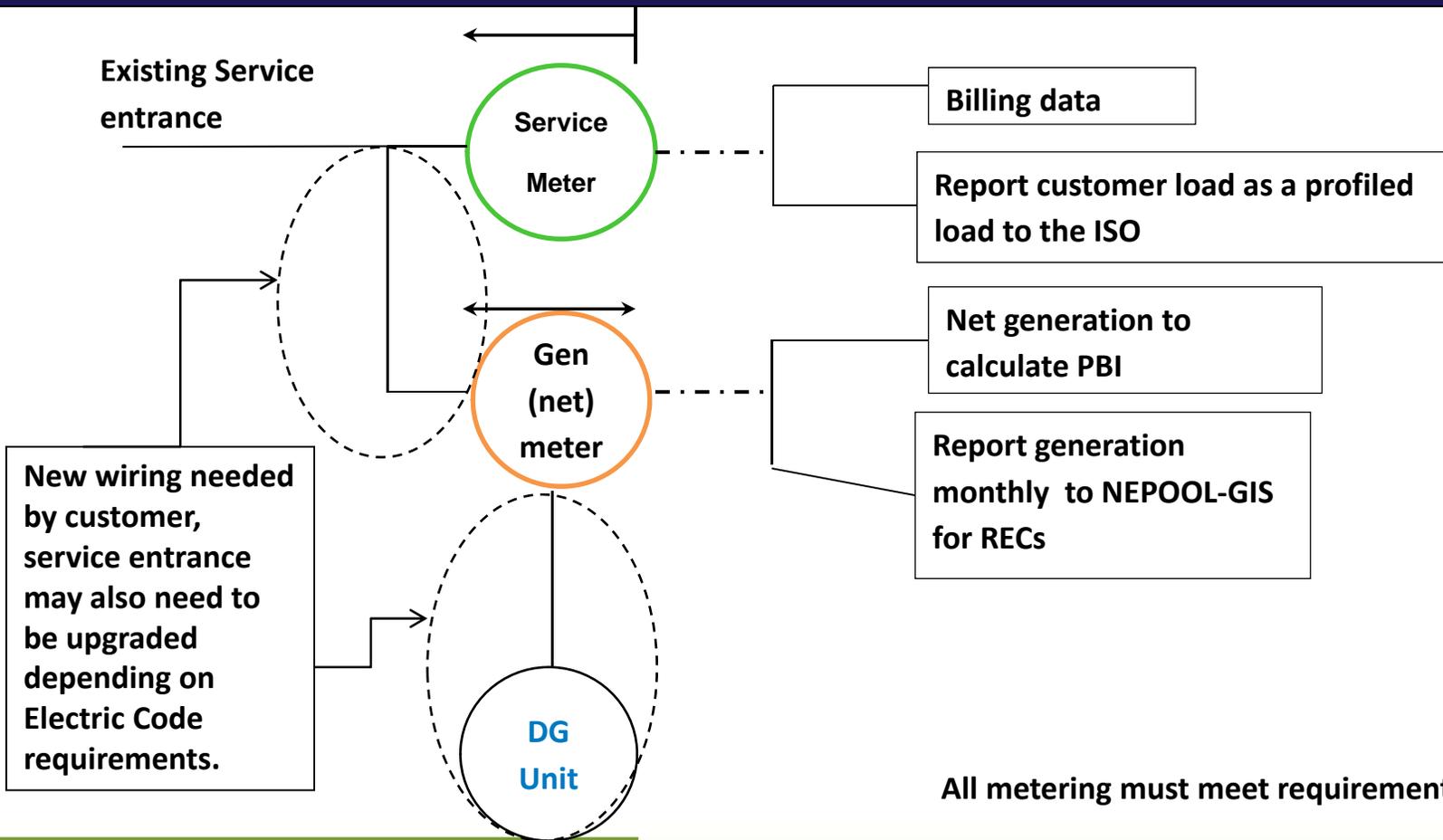
- Projects larger than 250 kW (Medium, Commercial, Large Scale Solar and Large DG)
 - May be eligible for Expedited process
 - If aggregate DG in the area is higher than 15% of peak load, will likely go to the Standard process (ISRDRG will take 55 business days, whole process can take approximately 120 business days)
- Application for interconnection must take place prior to applying for a Certificate
 - Enrollment Application requires executed interconnection service agreement (ISA) or completed ISRDRG



Metering for DG < 60 KWs for Residential and Small C/I

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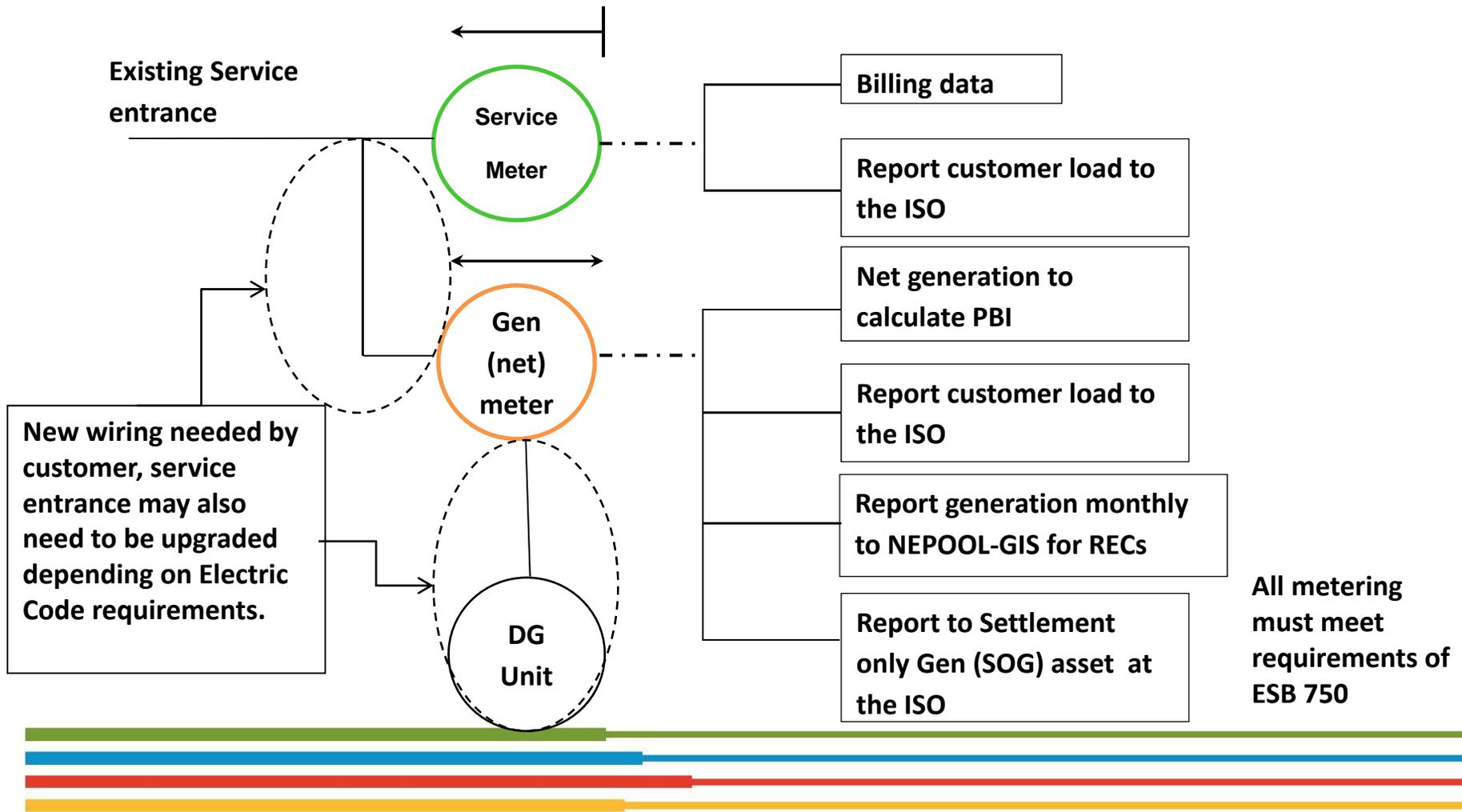


All metering must meet requirements of ESB 750

Metering for all DG > 60 kWs, and all interval metered customers

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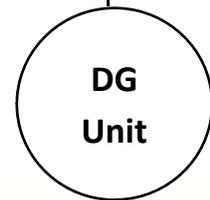
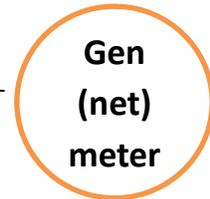
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Stand alone DG projects

All wiring supplied by customer
All metering must meet requirements of ESB 750

Utility



Net generation to calculate PBI

Report customer load to the ISO

Report generation monthly to the ISO/NEPOOL-GIS for RECs

Report to Settlement only Gen (SOG) asset at the ISO





RE Growth Tariffs

- Tariffs provide guarantee of PBI payments for the term specified in the applicable tariff supplement
- Applicant/customer needs to abide by the terms of the tariff
- Once awarded a Certificate of Eligibility, applicant may not terminate without consent of Company
- 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

Net-Metering Provision vs. RE Growth Program

- RE Growth Customers who opt to receive RE Growth bill credits must meet the eligibility criteria specified in the Net Metering Provision (sizing of unit, etc.)
- Customers can receive RE Growth bill credits OR choose to receive compensation for eligible generation under the Net Metering Provision
 - If latter, they will not be eligible for participation in RE Growth Program for that system
- RE Growth Customers that are eligible can revert to receive compensation under the Net Metering Provision *at the conclusion* of the term specified in the applicable tariff supplement

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 for net metering
 - Customer must ensure that retail delivery service account is in good standing prior to receiving bill credits
 - Customer/Applicant must pay all outstanding charges, incl. interconnection

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 potential bill credit on customer's electric service account and cash payment to designated recipient
- Customer's monthly bill will reflect:
 - Billing of on-site usage at applicable retail delivery service and commodity charges
 - Bill credit based upon the lesser of the customer's onsite usage 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



■ <u>Delivery Service</u>		
■ Customer Charge		\$ 5.00
■ Delivery Service Chgs	\$0.07131 x 700 kWh	\$ 49.92
■ <u>Supply Service (National Grid)</u>		
■ Energy Charges	\$0.08359 x 700 kWh	<u>\$ 58.51</u>
➤ Total Electric Service Charges		\$113.43



Illustrative (1) Electric Bill – Residential RE Growth Program



■ <u>Electric Service Bill</u>		
■ <u>Delivery Service</u>		
Customer Charge		\$ 5.00
Delivery Service Charges	\$0.07131 x 700 kWh	\$ 49.92
■ <u>Supply Service (National Grid)</u>		
Energy Charges	\$0.08359 x 700 kWh	<u>\$ 58.51</u>
	Current Charges	<u>\$113.43</u>
■ <u>Performance-Based Incentive Payment</u>		
■ PBI Payment	\$0.2500 x 1000 kWh	\$250.00
■ <u>Bill Credit</u>		
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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■ <u>Electric Service Bill</u>		
■ <u>Delivery Service</u>		
Customer Charge		\$ 5.00
Delivery Service Charges	\$0.07131 x 700 kWh	\$ 49.92
■ <u>Supply Service (National Grid)</u>		
Energy Charges	\$0.18000 x 700 kWh	<u>\$126.00</u>
	Current Charges	\$180.92
■ <u>Performance-Based Incentive Payment</u>		
■ PBI Payment \$0.2500 x 700 kWh \$175.00		
■ <u>Bill Credit</u>		
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)
<i>Total due National Grid</i>	
\$5.00	

➤ PBI Payment	\$175.00
➤ Bill Credit	(\$175.92)
<i>Recipient Cash Payment</i>	
\$0	



Non-Residential Projects: Billing of PBI Payments

- Billing 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”, 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
- Billing 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

Illustrative Electric Bill – Non-Residential: Option 1

- **Electric Service Bill**

Delivery Service

Customer Charge (Small C&I) \$ 10.00

- **Performance-Based Incentive Payment**

PBI Payment $\$0.2500 \times 1000$ \$250.00

➤ Total Due Customer/Recipient \$240.00





Updates and Transfers

- 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 are anticipated with sales of the systems themselves
- Such transfers must be made in writing and signed by the current Applicant, and provided to National Grid
- Will align with transfers of Interconnection Agreements

Segmentation and Expansion

- To protect against abuses of the class and ceiling price definitions, the Program provides limitations on additional systems and expansions of existing systems
- 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)
 - After 24 months allowed
 - Net metered only allowed
- Expansion of existing systems is not allowed: Generation consistently greater than certified maximum may result in loss of Certificate and tariff eligibility

Rollout and Communication

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- Once PUC order is received and program details are finalized, National Grid will provide communication to customers via web, social media and other means to promote the Program
- Clear FAQs and webpage guides to application process will be developed
- Notification of competitive solicitations will occur approximately four weeks ahead of enrollment period opening via email and other channels

Next Steps

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- Seeking DG Board and public feedback on the draft Program Enrollment Rules and Tariffs
- Public comments should be provided to the Board -- requested by Oct. 20 -- which will then forward them to National Grid
- National Grid hopes to receive all comments by Oct. 24 for best consideration
- National Grid will file proposed Enrollment Rules and Tariffs with RIPUC by Nov. 15