Rhode Island Energy Reporting Requirements - Affected System Operator Studies

# **Paragraph 4 Monthly Report**

July 17<sup>th</sup>, 2023

The Narragansett Electric Company (NECo) is experiencing Distributed Generation (DG) saturation in certain regions and at certain substations that indicate the potential need for an Affected System Operator (ASO) study that would affect three or more DG applications or more than 15 MW of DG capacity in the following 6 months. Below is a list of the specific regions and substations where NECo is experiencing DG saturation. This Paragraph 4 Monthly Report (Paragraph 4 Report) provides an update since NECO's previous Paragraph 4 Report on the potential need for an ASO study in such regions and substations, as well as the actions NECo is taking to prevent, mitigate, and prepare for such an occurrence while working with its transmission provider, New England Power (NEP). The information in this Paragraph 4 Report is in addition to the other information and reporting NECo is providing under the Reporting Requirements with respect to potential and ongoing ASO studies.

### Paragraph 4 Attachment

Paragraph 4 Attachment lists the substations with on-going ASO Studies currently being reported under the Reporting Requirements as well as substations for which any future applications over 1MW that propose to be connected to one of these substations will require an ASO study due to DG saturation over 5MW at an individual substation and/or over multiple substations fed from a common transmission injection point.

## **Potential ASO Studies for Pending Applications**

The below table lists the substations that have the potential need for an ASO study that would affect three or more DG applications or more than 15 MW of DG capacity in the following 6 months. Please note that these stations are not part of any of the ongoing ASO Studies. NECo identified the potential need because at least one of the Generator Notification Forms (GNFs) for each of these substations that was presented to ISO-NE was returned for further analysis.

# Rhode Island Energy Reporting Requirements - Affected System Operator Studies

BRISTOL SUBSTATION  CHASE HILL SUBSTATION  CApital >15MW  DAVISVILLE SUBSTATION  COastal >15MW  DEXTER SUBSTATION  COastal >15MW  DIVISION ST SUBSTATION  COastal <5MW  DRUMROCK SUBSTATION  COastal Setween 5MW and 15MW  DRUMROCK SUBSTATION  COastal Setween 5MW and 15MW  HOPKINS HILL SUBSTATION  COastal >15MW  JEPSON SUBSTATION  COastal >15MW  JOHNSTON SUBSTATION  COastal >15MW  KENT COUNTY SUBSTATION  COastal >15MW  KENYON SUBSTATION  COastal >15MW  KILVERT ST. SUBSTATION  COastal Between 5MW and 15MW  LAFAYETTE SUBSTATION  COastal >15MW  NASONVILLE SUBSTATION  COastal >15MW  NASONVILLE SUBSTATION  COastal >15MW  NEW LONDON AVE SUBSTATION  COastal >15MW  PAWTUCKET SUBSTATION  COastal Setween 5MW and 15MW  PAWTUCKET SUBSTATION  COastal Between 5MW and 15MW  POINT STREET SUBSTATION  Capital Between 5MW and 15MW  POINT STREET SUBSTATION  Capital Between 5MW and 15MW  PUTNAM PIKE SUBSTATION  Capital Between 5MW and 15MW  POINT STREET SUBSTATION  Capital Between 5MW and 15MW  PUTNAM PIKE SUBSTATION  Capital Between 5MW and 15MW  PAPLES SUBSTATION  Capital Between 5MW and 15MW  STAPLES SUBSTATION  Capital Between 5MW and 15MW	Substation Name	Region	DG Penetration Level
DAVISVILLE SUBSTATION  DEXTER SUBSTATION  Capital  DIVISION ST SUBSTATION  Coastal  Coastal  Coastal  Coastal  Coastal  Coastal  DRUMROCK SUBSTATION  Coastal  DRUMROCK SUBSTATION  Coastal  HOPKINS HILL SUBSTATION  Coastal  JEPSON SUBSTATION  Coastal  JOHNSTON SUBSTATION  Coastal  C	BRISTOL SUBSTATION	Coastal	Between 5MW and 15MW
DEXTER SUBSTATION  DIVISION ST SUBSTATION  Coastal <5MW  DRUMROCK SUBSTATION  Capital Between 5MW and 15MW  HOPKINS HILL SUBSTATION  Coastal >15MW  JEPSON SUBSTATION  Coastal >15MW  JOHNSTON SUBSTATION  Capital >15MW  KENT COUNTY SUBSTATION  Coastal >15MW  KENYON SUBSTATION  Coastal >15MW  KENYON SUBSTATION  Coastal >15MW  KILVERT ST. SUBSTATION  Coastal Between 5MW and 15MW  LAFAYETTE SUBSTATION  Coastal >15MW  NASONVILLE SUBSTATION  Coastal >15MW  NEW LONDON AVE SUBSTATION  Coastal >15MW  OLD BAPTIST ROAD SUBSTATION  Coastal >15MW  PAWTUCKET SUBSTATION  Capital Between 5MW and 15MW  POINT STREET SUBSTATION  Capital Between 5MW and 15MW  POINT STREET SUBSTATION  Capital Between 5MW and 15MW  PUTNAM PIKE SUBSTATION  Capital Between 5MW and 15MW	CHASE HILL SUBSTATION	Capital	>15MW
DIVISION ST SUBSTATION  DRUMROCK SUBSTATION  Capital  Between 5MW and 15MW  HOPKINS HILL SUBSTATION  Coastal  JEPSON SUBSTATION  Coastal  JOHNSTON SUBSTATION  Coastal  Between 5MW and 15MW  Coastal  LAFAYETTE SUBSTATION  Coastal  Coastal	DAVISVILLE SUBSTATION	Coastal	>15MW
DRUMROCK SUBSTATION Capital Between 5MW and 15MW HOPKINS HILL SUBSTATION Coastal >15MW  JEPSON SUBSTATION Coastal >15MW  JOHNSTON SUBSTATION Capital >15MW  KENT COUNTY SUBSTATION Coastal >15MW  KENYON SUBSTATION Coastal >15MW  KENYON SUBSTATION Coastal >15MW  KILVERT ST. SUBSTATION Coastal Between 5MW and 15MW  LAFAYETTE SUBSTATION Coastal >15MW  NASONVILLE SUBSTATION Capital >15MW  NEW LONDON AVE SUBSTATION Coastal >15MW  OLD BAPTIST ROAD SUBSTATION Coastal >15MW  PAWTUCKET SUBSTATION Capital Between 5MW and 15MW  POINT STREET SUBSTATION Capital Between 5MW and 15MW  POINT STREET SUBSTATION Capital Between 5MW and 15MW  PUTNAM PIKE SUBSTATION Capital Between 5MW and 15MW  PUTNAM PIKE SUBSTATION Capital Between 5MW and 15MW  RIVERSIDE SUBSTATION Capital Between 5MW and 15MW	DEXTER SUBSTATION	Capital	>15MW
HOPKINS HILL SUBSTATION  JEPSON SUBSTATION  JOHNSTON SUBSTATION  KENT COUNTY SUBSTATION  KENT COUNTY SUBSTATION  KENYON SUBSTATION  KILVERT ST. SUBSTATION  Coastal  LAFAYETTE SUBSTATION  NASONVILLE SUBSTATION  NEW LONDON AVE SUBSTATION  Coastal  Coastal  Coastal  S15MW  Coastal  S15MW  Coastal  S15MW  Coastal  S15MW  Coastal  S15MW  Coastal  NEW LONDON AVE SUBSTATION  Coastal  Coastal  Coastal  S15MW  Coastal  Coastal  S15MW  Coastal  Coastal  S15MW  Coastal  Coastal  Coastal  Coastal  S15MW  Coastal  Coastal  Coastal  Coastal  S15MW  Coastal  Coastal  Coastal  Coastal  Coastal  S15MW  Coastal  Coastal  Coastal  Coastal  S15MW  Coastal  Coa	DIVISION ST SUBSTATION	Coastal	<5MW
JEPSON SUBSTATION  JOHNSTON SUBSTATION  KENT COUNTY SUBSTATION  KENYON SUBSTATION  KENYON SUBSTATION  KENYON SUBSTATION  KILVERT ST. SUBSTATION  LAFAYETTE SUBSTATION  NASONVILLE SUBSTATION  NEW LONDON AVE SUBSTATION  Coastal  Coastal  S15MW  NEW LONDON AVE SUBSTATION  Coastal  Coastal  S15MW  NEW LONDON AVE SUBSTATION  Coastal  Coastal  S15MW  Coastal  S15MW  Coastal  Coastal  S15MW  Coastal  Coastal  Coastal  S15MW  Coastal  Coastal  S15MW  Coastal  Coastal  Coastal  S15MW  Coastal  Coastal  S15MW  Coastal  Coastal  Coastal  S15MW  Coastal  S15MW  PUTNAM PIKE SUBSTATION  Capital  Capital  Capital  Capital  Capital  Between 5MW and 15MW  PUTNAM PIKE SUBSTATION  Capital	DRUMROCK SUBSTATION	Capital	Between 5MW and 15MW
JOHNSTON SUBSTATION  KENT COUNTY SUBSTATION  KENYON SUBSTATION  KENYON SUBSTATION  KILVERT ST. SUBSTATION  LAFAYETTE SUBSTATION  Coastal  NASONVILLE SUBSTATION  NEW LONDON AVE SUBSTATION  OLD BAPTIST ROAD SUBSTATION  PAWTUCKET SUBSTATION  Capital  Capital  Coastal  Coastal	HOPKINS HILL SUBSTATION	Coastal	>15MW
KENT COUNTY SUBSTATION  KENYON SUBSTATION  KILVERT ST. SUBSTATION  LAFAYETTE SUBSTATION  Coastal  NASONVILLE SUBSTATION  NEW LONDON AVE SUBSTATION  Coastal	JEPSON SUBSTATION	Coastal	>15MW
KENYON SUBSTATIONCoastal>15MWKILVERT ST. SUBSTATIONCoastalBetween 5MW and 15MWLAFAYETTE SUBSTATIONCoastal>15MWNASONVILLE SUBSTATIONCapital>15MWNEW LONDON AVE SUBSTATIONCoastal>15MWOLD BAPTIST ROAD SUBSTATIONCoastal>15MWPAWTUCKET SUBSTATIONCapitalBetween 5MW and 15MWPOINT STREET SUBSTATIONCapitalBetween 5MW and 15MWPUTNAM PIKE SUBSTATIONCapital>15MWRIVERSIDE SUBSTATIONCapitalBetween 5MW and 15MW	JOHNSTON SUBSTATION	Capital	>15MW
KILVERT ST. SUBSTATION  LAFAYETTE SUBSTATION  NASONVILLE SUBSTATION  NEW LONDON AVE SUBSTATION  OLD BAPTIST ROAD SUBSTATION  PAWTUCKET SUBSTATION  POINT STREET SUBSTATION  Capital  Capital  Between 5MW and 15MW  Capital  Between 5MW and 15MW  Capital  Between 5MW and 15MW  PUTNAM PIKE SUBSTATION  Capital  Capital  STATION  Capital  Capital  Setween 5MW and 15MW  Capital  PUTNAM PIKE SUBSTATION  Capital  Capital  Capital  Capital  Between 5MW and 15MW  RIVERSIDE SUBSTATION  Capital	KENT COUNTY SUBSTATION	Coastal	>15MW
LAFAYETTE SUBSTATIONCoastal>15MWNASONVILLE SUBSTATIONCapital>15MWNEW LONDON AVE SUBSTATIONCoastal>15MWOLD BAPTIST ROAD SUBSTATIONCoastal>15MWPAWTUCKET SUBSTATIONCapitalBetween 5MW and 15MWPOINT STREET SUBSTATIONCapitalBetween 5MW and 15MWPUTNAM PIKE SUBSTATIONCapital>15MWRIVERSIDE SUBSTATIONCapitalBetween 5MW and 15MW	KENYON SUBSTATION	Coastal	>15MW
NASONVILLE SUBSTATION  NEW LONDON AVE SUBSTATION  OLD BAPTIST ROAD SUBSTATION  PAWTUCKET SUBSTATION  POINT STREET SUBSTATION  PUTNAM PIKE SUBSTATION  RIVERSIDE SUBSTATION  Capital  Capital  Capital  Setween 5MW and 15MW  Capital  Capital  Capital  Setween 5MW and 15MW  Capital	KILVERT ST. SUBSTATION	Coastal	Between 5MW and 15MW
NEW LONDON AVE SUBSTATION  OLD BAPTIST ROAD SUBSTATION  PAWTUCKET SUBSTATION  POINT STREET SUBSTATION  PUTNAM PIKE SUBSTATION  RIVERSIDE SUBSTATION  Capital  Capital	LAFAYETTE SUBSTATION	Coastal	>15MW
OLD BAPTIST ROAD SUBSTATION  PAWTUCKET SUBSTATION  POINT STREET SUBSTATION  PUTNAM PIKE SUBSTATION  RIVERSIDE SUBSTATION  Capital  Capital  Capital  Capital  Capital  Capital  Between 5MW and 15MW  Capital	NASONVILLE SUBSTATION	Capital	>15MW
PAWTUCKET SUBSTATION Capital Between 5MW and 15MW POINT STREET SUBSTATION Capital Between 5MW and 15MW PUTNAM PIKE SUBSTATION Capital >15MW RIVERSIDE SUBSTATION Capital Between 5MW and 15MW	NEW LONDON AVE SUBSTATION	Coastal	>15MW
POINT STREET SUBSTATION Capital Between 5MW and 15MW PUTNAM PIKE SUBSTATION Capital RIVERSIDE SUBSTATION Capital Between 5MW and 15MW	OLD BAPTIST ROAD SUBSTATION	Coastal	>15MW
PUTNAM PIKE SUBSTATION  Capital >15MW  RIVERSIDE SUBSTATION  Capital Between 5MW and 15MW	PAWTUCKET SUBSTATION	Capital	Between 5MW and 15MW
RIVERSIDE SUBSTATION Capital Between 5MW and 15MW	POINT STREET SUBSTATION	Capital	Between 5MW and 15MW
·	PUTNAM PIKE SUBSTATION	Capital	>15MW
STAPLES SUBSTATION Capital Between 5MW and 15MW	RIVERSIDE SUBSTATION	Capital	Between 5MW and 15MW
	STAPLES SUBSTATION	Capital	Between 5MW and 15MW
TIVERTON SUBSTATION Coastal >15MW	TIVERTON SUBSTATION	Coastal	>15MW
TOWER HILL SUBSTATION Coastal >15MW	TOWER HILL SUBSTATION	Coastal	>15MW
VALLEY SUBSTATION Coastal Between 5MW and 15MW	VALLEY SUBSTATION	Coastal	Between 5MW and 15MW
WAMPANOAG SUBSTATION Coastal Between 5MW and 15MW	WAMPANOAG SUBSTATION	Coastal	Between 5MW and 15MW
WARREN SUBSTATION Capital Between 5MW and 15MW	WARREN SUBSTATION	Capital	Between 5MW and 15MW
WASHINGTON SUBSTATION Coastal Between 5MW and 15MW	WASHINGTON SUBSTATION	Coastal	Between 5MW and 15MW
WEST CRANSTON SUBSTATION Capital >15MW	WEST CRANSTON SUBSTATION	Capital	>15MW
WEST GREENVILLE SUBSTATION Capital >15MW	WEST GREENVILLE SUBSTATION	Capital	>15MW
WESTERLY SUBSTATION Coastal <5MW	WESTERLY SUBSTATION	Coastal	<5MW
WICKFORD JUNCTION SUBSTATION Coastal >15MW	WICKFORD JUNCTION SUBSTATION	Coastal	>15MW
WOOD RIVER SUBSTATION Coastal >15MW	WOOD RIVER SUBSTATION	Coastal	>15MW
WOONSOCKET SUBSTATION Coastal >15MW	WOONSOCKET SUBSTATION	Coastal	>15MW

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#### Action Plan/Next Steps

NECo is taking the following actions to prevent, mitigate, and prepare for such an occurrence for the above applications:

- NECo will continue to submit notification to NEP for all pre-ISA projects as soon as they reach the 20-business day mark during the distribution impact study stage.
- For the substations listed above, NECo will provide NEP the list of pending applications for NEP to consider as part of its initial assessment in coordination with ISO-NE as to what level of ASO study will be required.
- NECo will provide notification to the PUC and send notifications to affected customers per Paragraph 1 or Paragraph 5 and Paragraph 6 of the Reporting Requirements.

## **Potential ASO Studies for Future Applications**

The below table indicates the list of substations where an ASO study will be required for any future application connecting to that substation. Future applications to these substations for over 1 MW will require ASO studies due to DG saturation at these substations. This applies to substations that are currently in Western RI Area ASO Study #3 and one currently in individual study; Chase Hill Substation, Davisville Substation, Kent County Substation, Putnam Pike Substation, Tower Hill Substation, Wood River Substation, and Riverside Substation respectively.

Substation Name	Region	DG Penetration Level
BRISTOL SUBSTATION	Coastal	Between 5MW and 15MW
CHASE HILL SUBSTATION	Capital	>15MW
DAVISVILLE SUBSTATION	Coastal	>15MW
DEXTER SUBSTATION	Capital	>15MW
DRUMROCK SUBSTATION	Capital	Between 5MW and 15MW
FARNUM PIKE SUBSTATION	Capital	>15MW
HIGHLAND PARK SUBSTATION	Capital	<5MW
HOPE VALLEY SUBSTATION	Coastal	<5MW
HOPKINS HILL SUBSTATION	Coastal	>15MW
JEPSON SUBSTATION	Coastal	>15MW
JOHNSTON SUBSTATION	Capital	>15MW
KENT COUNTY SUBSTATION	Coastal	>15MW
KENYON SUBSTATION	Coastal	>15MW
KILVERT ST. SUBSTATION	Coastal	Between 5MW and 15MW
LAFAYETTE SUBSTATION	Coastal	>15MW
NASONVILLE SUBSTATION	Capital	>15MW
NEW LONDON AVE SUBSTATION	Coastal	>15MW
OLD BAPTIST ROAD SUBSTATION	Coastal	>15MW

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PAWTUCKET SUBSTATION	Capital	Between 5MW and 15MW
POINT STREET SUBSTATION	Capital	Between 5MW and 15MW
PUTNAM PIKE SUBSTATION	Capital	>15MW
RIVERSIDE SUBSTATION	Capital	Between 5MW and 15MW
STAPLES SUBSTATION	Capital	Between 5MW and 15MW
TIVERTON SUBSTATION	Coastal	>15MW
TOWER HILL SUBSTATION	Coastal	>15MW
VALLEY SUBSTATION	Coastal	Between 5MW and 15MW
WAMPANOAG SUBSTATION	Coastal	Between 5MW and 15MW
WARREN SUBSTATION	Capital	Between 5MW and 15MW
WASHINGTON SUBSTATION	Coastal	Between 5MW and 15MW
WEST CRANSTON SUBSTATION	Capital	>15MW
WEST KINGSTON SUBSTATION	Coastal	<5MW
WESTERLY SUBSTATION	Coastal	<5MW
WICKFORD JUNCTION SUBSTATION	Coastal	>15MW
WOOD RIVER SUBSTATION	Coastal	>15MW
WOONSOCKET SUBSTATION	Coastal	>15MW

# Action Plan/Next Step

NECO is taking the following actions to prevent, mitigate, and prepare for such an occurrence for the above applications:

- NECo will publish on its website (<a href="https://ngus.force.com/s/article/RI-DG-Group-Transmission-Study-Update">https://ngus.force.com/s/article/RI-DG-Group-Transmission-Study-Update</a>), the above list of substations that will require ASO study for future applications.
- In all future pre-application reports in these areas, NECo will notify the proposed project of the status of a likely ASO study in the future if the request may be served from one of the substations mentioned above.

## Force Majeure Event

NECo is informing all new applicants that due to the developing COVID-19 crisis, NECO declared a Force Majeure Event (Event) pursuant to the Standards for Connecting Distributed Generation, RIPUC No. 2180 ("Tariff") Section 3.0., that the Company will notify customers whose DG project is directly impacted by this Event, and that all customers will be kept informed of the scope and duration (to extent known) of this Force Majeure Event and of the steps the Company is taking to mitigate the effects of the Event on its performance through periodic updates on the Company's distributed generation website: <a href="https://ngus.force.com/s/article/RI-Force-Majeure-Declarations">https://ngus.force.com/s/article/RI-Force-Majeure-Declarations</a>