2019 New Jersey State Infrastructure Report
(January 1, 2019 – December 31, 2019)

May 2020
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   • Generation Portfolio Analysis
   • Transmission Analysis
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Executive Summary
(May 2020)

• **Existing Capacity:** Natural gas represents approximately 66.8 percent of the total installed capacity in the New Jersey service territory while nuclear represents approximately 23.6 percent. This differs from PJM where natural gas and nuclear are at 42.4 and 17.7 percent of total capacity.

• **Interconnection Requests:** Natural gas represents 45.3 percent of new interconnection requests in New Jersey, while wind represents approximately 32.8 percent of new requests.

• **Deactivations:** 3,473.4 MW in New Jersey gave notification of deactivation in 2019. All capacity associated with these notifications subsequently withdrew their deactivation.

• **RTEP 2019:** New Jersey’s 2019 RTEP projects total approximately $741.9 million in investment. Approximately 76.4 percent of that represents supplemental projects. These investment figures only represent RTEP projects that cost at least $5 million.
• **Load Forecast:** New Jersey’s load is projected to slightly decrease over the next ten years. Comparatively, the overall PJM RTO projected load growth rate is 0.3 percent.

• **2022/23 Capacity Market:** No Base Residual Auction was conducted in 2019. For the most recent auction results, please see the 2018 New Jersey State Infrastructure Report.

• **1/1/19 – 12/31/19 Market Performance:** New Jersey’s average hourly LMPs were generally below PJM average hourly LMPs.

• **Emissions:** 2019 average carbon dioxide emissions increased from 2018, while sulfur dioxide and nitrogen oxide emissions remained flat from 2018 levels.
Planning
Generation Portfolio Analysis
PJM – Existing Installed Capacity
(CIRs – as of Dec. 31, 2019)

Hydro, 8,332 MW
Solar, 791 MW
Oil, 9,424 MW

Wind, 1,239 MW
Coal, 52,838 MW

Nuclear, 32,653 MW
Waste, 849 MW
Natural Gas, 78,047 MW
New Jersey – Existing Installed Capacity
(CIRs – as of Dec. 31, 2019)

Natural Gas, 9,822 MW

Waste, 132 MW
Nuclear, 3,467 MW
Oil, 239 MW
Solar, 164 MW
Hydro, 425 MW
Coal, 459 MW

NJ 14,708 MW
PJM – Queued Capacity (MW) by Fuel Type
(Requested CIRs – as of Dec. 31, 2019)

- Solar, 35,759 MW
- Other, 40 MW
- Nuclear, 169 MW
- Oil, 27 MW
- Natural Gas, 34,990 MW
- Storage, 3,920 MW
- Wind, 6,240 MW
- Wood, 66 MW
- Coal, 96 MW
- Diesel, 4 MW
- Methane, 1 MW
- Hydro, 520 MW
New Jersey – Queued Capacity (MW) by Fuel Type
(Requested CIRs – as of Dec. 31, 2019)

Wind, **1,922 MW**
- Nameplate Capacity, 8,099 MW

Natural Gas, **2,655 MW**

Storage, **650 MW**

Solar, **631 MW**
- Nameplate Capacity, 1,085 MW

**NJ 5,858 MW**

*Note: Nameplate Capacity represents a generator’s rated full power output capability.*
New Jersey – Percentage of MW in Queue by Fuel Type
(Dec. 31, 2019)

- Natural Gas
- Solar
- Storage
- Wind

- RTO
  - Natural Gas
  - Solar
  - Wind
  - Storage
  - Wood
  - Coal
  - Hydro
  - Diesel
  - Methane
  - Nuclear
  - Other
  - Oil
# New Jersey – Interconnection Requests
(Unforced Capacity – as of Dec. 31, 2019)

<table>
<thead>
<tr>
<th></th>
<th>Active</th>
<th></th>
<th>Suspended</th>
<th></th>
<th>Under Construction</th>
<th></th>
<th>In Service</th>
<th></th>
<th>Complete</th>
<th></th>
<th>Withdrawn</th>
<th></th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Projects</td>
<td>Capacity (MW)</td>
<td>No. of Projects</td>
<td>Capacity (MW)</td>
<td>No. of Projects</td>
<td>Capacity (MW)</td>
<td>No. of Projects</td>
<td>Capacity (MW)</td>
<td>No. of Projects</td>
<td>Capacity (MW)</td>
<td>No. of Projects</td>
<td>Capacity (MW)</td>
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<tr>
<td>Non-Renewable</td>
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<td></td>
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<tr>
<td>Coal</td>
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<td>0.0</td>
<td>0</td>
<td>0.0</td>
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<td>1</td>
<td>15.0</td>
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<tr>
<td>Diesel</td>
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<td>0.0</td>
<td>1</td>
<td>8.0</td>
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<tr>
<td>Natural Gas</td>
<td>9</td>
<td>1,650.2</td>
<td>2</td>
<td>275.0</td>
<td>3</td>
<td>730.2</td>
<td>76</td>
<td>7,796.9</td>
<td>176</td>
<td>50,434.3</td>
<td>266</td>
<td>60,886.6</td>
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<tr>
<td>Nuclear</td>
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<td>0.0</td>
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<td>0</td>
<td>0.0</td>
<td>6</td>
<td>381.0</td>
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<tr>
<td>Oil</td>
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<td>0</td>
<td>0.0</td>
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<td>0.0</td>
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<td>35.0</td>
<td>8</td>
<td>945.0</td>
<td>10</td>
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<td>6</td>
<td>45.5</td>
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<td>Storage</td>
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<td>4</td>
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<td>3</td>
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<td>35</td>
<td>20.0</td>
<td>76</td>
<td>670.4</td>
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<tr>
<td>Renewable</td>
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<tr>
<td>Biomass</td>
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<td>0.0</td>
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<td>3</td>
<td>17.3</td>
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<td>0.0</td>
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<td>20.5</td>
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<td>0.0</td>
<td>16</td>
<td>45.3</td>
<td>9</td>
<td>40.6</td>
<td>25</td>
<td>85.9</td>
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<tr>
<td>Solar</td>
<td>31</td>
<td>583.8</td>
<td>5</td>
<td>6.8</td>
<td>22</td>
<td>40.2</td>
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<td>224.0</td>
<td>465</td>
<td>1,456.8</td>
<td>624</td>
<td>2,311.6</td>
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<tr>
<td>Wind</td>
<td>13</td>
<td>1,922.4</td>
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<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>0.0</td>
<td>19</td>
<td>605.0</td>
<td>33</td>
<td>2,527.4</td>
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<tr>
<td>Grand Total</td>
<td>83</td>
<td>4,806.9</td>
<td>11</td>
<td>281.8</td>
<td>28</td>
<td>770.4</td>
<td>209</td>
<td>8,510.7</td>
<td>724</td>
<td>54,580.6</td>
<td>1,055</td>
<td>68,950.4</td>
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</tr>
</tbody>
</table>

Note: The "Under Construction" column includes both “Engineering and Procurement” and “Under Construction” project statuses.
New Jersey – Progression History of Interconnection Requests

Applications Received by PJM

Feasibility Studies Issued

Impact Studies Issued

Facilities Studies Issued

Facilities Constructed

Projects withdrawn after final agreement

<table>
<thead>
<tr>
<th>Projects withdrawn</th>
<th>Nameplate Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interconnection Service Agreements</td>
<td>2,595 MW</td>
</tr>
<tr>
<td>Wholesale Market Participation Agreements</td>
<td>370 MW</td>
</tr>
</tbody>
</table>

This graphic shows the final state of generation submitted in all PJM queues that reached in-service operation, began construction, or was suspended or withdrawn as of Dec. 31, 2019.
New Jersey – Generation Deactivation Notifications Received in 2019
## New Jersey – Generation Deactivation Notifications Received in 2019

<table>
<thead>
<tr>
<th>Unit</th>
<th>TO Zone</th>
<th>Fuel Type</th>
<th>Deactivation Notice</th>
<th>Projected/Actual Deactivation Date</th>
<th>Withdrawn Deactivation Date</th>
<th>Age (Years)</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salem 2</td>
<td>PSEG</td>
<td>Nuclear</td>
<td>4/16/2019</td>
<td>4/1/2020</td>
<td>4/19/2019</td>
<td>38</td>
<td>1142.1</td>
</tr>
<tr>
<td>Salem 1</td>
<td>PSEG</td>
<td>Nuclear</td>
<td>4/16/2019</td>
<td>10/1/2020</td>
<td>4/19/2019</td>
<td>42</td>
<td>1153</td>
</tr>
<tr>
<td>Hope Creek 1</td>
<td>PSEG</td>
<td>Nuclear</td>
<td>4/16/2019</td>
<td>10/1/2019</td>
<td>4/19/2019</td>
<td>33</td>
<td>1178.3</td>
</tr>
</tbody>
</table>
Planning
Transmission Infrastructure Analysis
Please note that PJM historically used $5 million as the threshold for listing projects in the RTEP report. Beginning in 2018, it was decided to increase this cutoff to $10 million. All RTEP projects with costs totaling at least $5 million are included in this state report. However, only projects that are $10 million and above are displayed on the project maps.

For a complete list of all RTEP projects, please visit the “RTEP Upgrades & Status – Transmission Construction Status” page on pjm.com.

New Jersey – RTEP Baseline Projects
(Greater than $10 million)

Note: Baseline upgrades are those that resolve a system reliability criteria violation.
## New Jersey – RTEP Baseline Projects
(Greater than $5 million)

<table>
<thead>
<tr>
<th>Map ID</th>
<th>Project</th>
<th>Description</th>
<th>Projected In-Service Date</th>
<th>Project Cost ($M)</th>
<th>TO Zone</th>
<th>TEAC Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>b3130</td>
<td>Construct seven new 34.5 kV circuits on existing pole lines (53.5 miles), rebuild two 34.5 kV circuits (total of 5.5 miles) and install a second 115/34.5 kV transformer.</td>
<td>6/1/2016</td>
<td>$175.0</td>
<td>JCP&amp;L</td>
<td>8/3/2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construct a new 34.5 kV circuit from Oceanview to Allenhurst 34.5 kV (4.0 miles).</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Construct a new 34.5 kV circuit from Atlantic to Red Bank 34.5 kV (12.0 miles).</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Construct a new 34.5 kV circuit from Freneau to Taylor Lane 34.5 kV (6.5 miles).</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Construct a new 34.5 kV circuit from Keyport to Belford 34.5 kV (6.0 miles).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construct a new 34.5 kV circuit from Red Bank to Belford 34.5 kV (5.0 miles).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construct a new 34.5 kV circuit from Werner to Clark Street (7.0 miles).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construct a new 34.5 kV circuit from Atlantic to Freneau (13.0 miles).</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Rebuild the Atlantic-Camp Woods Switch Point (3.5 miles) 34.5 kV circuit.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Rebuild/re-conductor the Allenhurst-Elberon (2.0 miles) 34.5 kV circuit.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Install second 115/34.5 kV Transformer at Werner Substation.</td>
<td></td>
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</tr>
</tbody>
</table>
New Jersey – RTEP Network Projects
(Greater than $5 million)

New Jersey had no network project upgrades in 2019.

Note: Network upgrades are new or upgraded facilities required primarily to eliminate reliability criteria violations caused by proposed generation, merchant transmission or long term firm transmission service requests, as well as certain direct connection facilities required to interconnect proposed generation projects.
New Jersey – TO Supplemental Projects
(Greater than $10 million)

Note: Supplemental projects are transmission expansions or enhancements that are not required for compliance with PJM criteria and are not state public policy projects according to the PJM Operating Agreement. These projects are used as inputs to RTEP models, but are not required for reliability, economic efficiency or operational performance criteria, as determined by PJM.
<table>
<thead>
<tr>
<th>Map ID</th>
<th>Project</th>
<th>Description</th>
<th>Projected In-Service Date</th>
<th>Project Cost ($M)</th>
<th>TO Zone</th>
<th>TEAC Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>s1823</td>
<td>Build a new Walnut Avenue 69 kV substation. Eliminate Clark substation. Transfer load from nearby heavily loaded Aldene, Warinanco and Westfield substation to the new station.</td>
<td>4/30/2023</td>
<td>$143.0</td>
<td>PSEG</td>
<td>1/25/2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Purchase property to accommodate new construction of Walnut Ave 69 kV substation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Install a 69 kV bus with two 69/13 kV transformers at Walnut Ave.</td>
<td>5/30/2023</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construct a new 69 kV circuit between Vauxhall and the new Walnut Avenue station.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Loop the Front Street to Springfield Road 69 kV circuit into Walnut Avenue station.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>s1824</td>
<td>Build new 69 kV substation in North Brunswick. Transfer load from nearby heavily loaded Adams, Bennetts Lane and Brunswick to the new station.</td>
<td>4/30/2023</td>
<td>$129.0</td>
<td>PSEG</td>
<td>1/25/2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Purchase property to accommodate construction of the new 69 kV substation in North Brunswick.</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Install a 69 kV breaker-and-a-half bus with two 69/13 kV transformers at North Brunswick.</td>
<td>3/30/2023</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Loop the Bennetts Lane Brunswick 69 kV circuit into the new North Brunswick station.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Construct a new 69 kV circuit between the new North Brunswick station and the customer substation.</td>
<td></td>
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</tr>
</tbody>
</table>
## New Jersey – TO Supplemental Projects

(Greater than $5 million)

<table>
<thead>
<tr>
<th>Map ID</th>
<th>Project</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>s1825</td>
<td>Build a new 69 kV substation at Texas Avenue and transfer load from nearby heavily loaded Lawrence to the new station. Purchase neighboring property to accommodate construction of the new Texas Avenue 69 kV substation. Install a 69 kV bus with two 69/13 kV transformers at the New Texas Ave 69 kV Substation. Loop the Ewing Hamilton 69 kV circuit into the new Texas Avenue station. Construct a new 69 kV circuit between Lawrence and the new Texas Avenue station.</td>
</tr>
<tr>
<td>4</td>
<td>s1831</td>
<td>Build a new 230 kV substation in Mansfield: Install a 230 kV bus with two 230/13 kV transformers, cut and loop the Bustleton-Crosswicks 230 kV line into the 230 kV bus, Transfer load from nearby heavily loaded Bustleton and Crosswicks to the new station.</td>
</tr>
<tr>
<td>5</td>
<td>s2069</td>
<td>Rebuild 69 kV line from Moss Mill-Motts Farm substations. All structures, conductor and static wire will be replaced with new steel poles, conductor and OPGW.</td>
</tr>
<tr>
<td>6</td>
<td>s2070</td>
<td>Rebuild 69 kV line from Churchtown-Paulsboro substations. All structures, conductor and static wire will be replaced with new steel poles, conductor and optical grounding wire communications.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Project ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>s1825</td>
<td>Build a new 69 kV substation at Texas Avenue and transfer load from nearby heavily loaded Lawrence to the new station. Purchase neighboring property to accommodate construction of the new Texas Avenue 69 kV substation. Install a 69 kV bus with two 69/13 kV transformers at the New Texas Ave 69 kV Substation. Loop the Ewing Hamilton 69 kV circuit into the new Texas Avenue station. Construct a new 69 kV circuit between Lawrence and the new Texas Avenue station.</td>
</tr>
<tr>
<td>4</td>
<td>s1831</td>
<td>Build a new 230 kV substation in Mansfield: Install a 230 kV bus with two 230/13 kV transformers, cut and loop the Bustleton-Crosswicks 230 kV line into the 230 kV bus, Transfer load from nearby heavily loaded Bustleton and Crosswicks to the new station.</td>
</tr>
<tr>
<td>5</td>
<td>s2069</td>
<td>Rebuild 69 kV line from Moss Mill-Motts Farm substations. All structures, conductor and static wire will be replaced with new steel poles, conductor and OPGW.</td>
</tr>
<tr>
<td>6</td>
<td>s2070</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project ID</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>s1825</td>
<td>Build a new 69 kV substation at Texas Avenue and transfer load from nearby heavily loaded Lawrence to the new station. Purchase neighboring property to accommodate construction of the new Texas Avenue 69 kV substation. Install a 69 kV bus with two 69/13 kV transformers at the New Texas Ave 69 kV Substation. Loop the Ewing Hamilton 69 kV circuit into the new Texas Avenue station. Construct a new 69 kV circuit between Lawrence and the new Texas Avenue station.</td>
</tr>
<tr>
<td>4</td>
<td>s1831</td>
<td>Build a new 230 kV substation in Mansfield: Install a 230 kV bus with two 230/13 kV transformers, cut and loop the Bustleton-Crosswicks 230 kV line into the 230 kV bus, Transfer load from nearby heavily loaded Bustleton and Crosswicks to the new station.</td>
</tr>
<tr>
<td>5</td>
<td>s2069</td>
<td>Rebuild 69 kV line from Moss Mill-Motts Farm substations. All structures, conductor and static wire will be replaced with new steel poles, conductor and OPGW.</td>
</tr>
<tr>
<td>6</td>
<td>s2070</td>
<td>Rebuild 69 kV line from Churchtown-Paulsboro substations. All structures, conductor and static wire will be replaced with new steel poles, conductor and optical grounding wire communications.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Project ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>s1825</td>
<td>Build a new 69 kV substation at Texas Avenue and transfer load from nearby heavily loaded Lawrence to the new station. Purchase neighboring property to accommodate construction of the new Texas Avenue 69 kV substation. Install a 69 kV bus with two 69/13 kV transformers at the New Texas Ave 69 kV Substation. Loop the Ewing Hamilton 69 kV circuit into the new Texas Avenue station. Construct a new 69 kV circuit between Lawrence and the new Texas Avenue station.</td>
</tr>
<tr>
<td>4</td>
<td>s1831</td>
<td>Build a new 230 kV substation in Mansfield: Install a 230 kV bus with two 230/13 kV transformers, cut and loop the Bustleton-Crosswicks 230 kV line into the 230 kV bus, Transfer load from nearby heavily loaded Bustleton and Crosswicks to the new station.</td>
</tr>
<tr>
<td>5</td>
<td>s2069</td>
<td>Rebuild 69 kV line from Moss Mill-Motts Farm substations. All structures, conductor and static wire will be replaced with new steel poles, conductor and OPGW.</td>
</tr>
<tr>
<td>6</td>
<td>s2070</td>
<td>Rebuild 69 kV line from Churchtown-Paulsboro substations. All structures, conductor and static wire will be replaced with new steel poles, conductor and optical grounding wire communications.</td>
</tr>
</tbody>
</table>
## New Jersey – TO Supplemental Projects

(Greater than $5 million)

<table>
<thead>
<tr>
<th>Map ID</th>
<th>Project</th>
<th>Description</th>
<th>Projected In-Service Date</th>
<th>Project Cost ($M)</th>
<th>TO Zone</th>
<th>TEAC Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>s2071</td>
<td>Rebuild 69 kV line from Mickleton-Valero-Paulsboro substations. All structures, conductor and static wire will be replaced with new steel poles, conductor and optical grounding wire communication.</td>
<td>12/31/2023</td>
<td>$10.0</td>
<td>AE</td>
<td>1/25/2019</td>
</tr>
<tr>
<td>8</td>
<td>s2077</td>
<td>Construct a new Echelon 230 kV bus by tapping the existing New Freedom-Marlton 230 kV circuit and install two 230/13 kV transformers at the Echelon substation.</td>
<td>6/1/2024</td>
<td>$39.0</td>
<td>PSEG</td>
<td>10/21/2019</td>
</tr>
<tr>
<td>9</td>
<td>s1806</td>
<td>Windsor and East Windsor related upgrade (JCPL-2018-001). East Windsor-Windsor 230 kV: Convert 2.6 miles 1590 ACSR six-wire circuit to two three-wire circuits. Expand Windsor 230 kV bus to an eight breaker-and-a-half 230 kV station. Install four new 34.5 kV breakers and one new 230-34.5 kV transformer at Windsor. East Windsor Substation – Install one new 230 kV breaker.</td>
<td>12/31/2020</td>
<td>$32.4</td>
<td>JCP&amp;L</td>
<td>11/28/2018</td>
</tr>
<tr>
<td>10</td>
<td>s1807</td>
<td>Pequest River 115 kV ring bus. Expand Pequest River substation to a five breaker 115 kV ring bus. Loop in the Gilbert-Pequest River-Flanders (S919) 115 kV line into the 115 kV ring bus.</td>
<td>6/1/2020</td>
<td>$17.5</td>
<td>JCP&amp;L</td>
<td>11/28/2018</td>
</tr>
<tr>
<td>Map ID</td>
<td>Project</td>
<td>Description</td>
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<tr>
<td>11</td>
<td>s1809</td>
<td>Morristown 230 &amp; 34.5 kV Substation Reconfiguration.</td>
<td></td>
<td>$22.6</td>
<td>JCP&amp;L</td>
<td>11/28/2018</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construct a four breaker 230 kV ring bus at Morristown.</td>
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<td></td>
<td>Construct a 34.5 kV breaker-and-a-half station with 18 breakers at Morristown.</td>
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<td></td>
<td>Replace the Morristown No. 5 and No. 6 230-34.5 kV with 230-34.5 kV 168 MVA transformers.</td>
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<td>Replace all overdutied breakers at Whippany 230 kV and 34 kV substations.</td>
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<td></td>
<td>s2099</td>
<td>Reconfigure the existing Newport 69/12 kV substation to a Ring Bus and add 2nd 69/12 kV transformer.</td>
<td>5/31/2023</td>
<td>$7.0</td>
<td>AE</td>
<td>1/25/2019</td>
</tr>
</tbody>
</table>
Planning
Load Forecast
PJM Annual Load Forecasts

(PJM RTO Summer Peak Demand Forecast)

Load (MW)

- 2013
- 2014
- 2015
- 2016
- 2018
- 2019
- 2020

2014 2017 2020 2023 2026 2029 2032 2035

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New Jersey – 2019 Load Forecast Report

The summer and winter peak megawatt values reflect the amount of forecasted load to be served by each transmission owner in the noted state. Amounts were calculated based on the average share of each transmission owner’s real-time summer and winter peak load in those areas over the past five years.

The Load Forecast was produced prior to COVID-19 and will be updated before the next Base Residual Auction to reflect changes in load patterns.
Markets
Market Analysis
New Jersey – Average Daily Load and LMP
(Jan. 1, 2019 – Dec. 31, 2019)

Note: The price spike in late January reflects severe cold weather across the RTO footprint that impacted outage rates and cumulative demand.
The spike in October reflects the Performance Assessment Interval event that occurred on October 2nd.
New Jersey’s average hourly LMPs were generally below the PJM average hourly LMP.
New Jersey – Net Energy Import/Export Trend
(May 2019 – April 2020)

Positive values represent exports and negative values represent imports.
Operations
Emissions Data
2005 – 2019 PJM Average Emissions

**CO₂ (lbs/MWh)**

- 1,300
- 1,250
- 1,200
- 1,150
- 1,100
- 1,050
- 1,000
- 950
- 900
- 850
- 800

**SO₂ and NOₓ (lbs/MWh)**

- 10
- 9
- 8
- 7
- 6
- 5
- 4
- 3
- 2
- 1
- 0

- Carbon Dioxide
- Nitrogen Oxides
- Sulfur Dioxides
New Jersey – Average Emissions (lbs/MWh)

(February 7, 2020)

**Carbon Dioxide (CO₂)**
- 2005: 670 lbs/MWh
- 2006: 610 lbs/MWh
- 2007: 620 lbs/MWh
- 2008: 650 lbs/MWh
- 2009: 500 lbs/MWh
- 2010: 550 lbs/MWh
- 2011: 600 lbs/MWh
- 2012: 650 lbs/MWh
- 2013: 700 lbs/MWh
- 2014: 700 lbs/MWh
- 2015: 700 lbs/MWh
- 2016: 700 lbs/MWh
- 2017: 700 lbs/MWh
- 2018: 700 lbs/MWh
- 2019: 700 lbs/MWh

**Sulfur Dioxides (SO₂)**
- 2005: 400 lbs/MWh
- 2006: 450 lbs/MWh
- 2007: 500 lbs/MWh
- 2008: 550 lbs/MWh
- 2009: 600 lbs/MWh
- 2010: 650 lbs/MWh
- 2011: 700 lbs/MWh
- 2012: 700 lbs/MWh
- 2013: 700 lbs/MWh
- 2014: 700 lbs/MWh
- 2015: 700 lbs/MWh
- 2016: 700 lbs/MWh
- 2017: 700 lbs/MWh
- 2018: 700 lbs/MWh
- 2019: 700 lbs/MWh

**Nitrogen Oxides (NOₓ)**
- 2005: 400 lbs/MWh
- 2006: 450 lbs/MWh
- 2007: 500 lbs/MWh
- 2008: 550 lbs/MWh
- 2009: 600 lbs/MWh
- 2010: 650 lbs/MWh
- 2011: 700 lbs/MWh
- 2012: 700 lbs/MWh
- 2013: 700 lbs/MWh
- 2014: 700 lbs/MWh
- 2015: 700 lbs/MWh
- 2016: 700 lbs/MWh
- 2017: 700 lbs/MWh
- 2018: 700 lbs/MWh
- 2019: 700 lbs/MWh