



Office of Energy Projects Energy Infrastructure Update For January 2019

Natural Gas Highlights

- Dakota Natural Gas received a service area determination within which it may, without further Commission authorization, enlarge or expand its natural gas distribution facilities in order to supply a customer in Minnesota.
- Florida Gas received authorization for its East Louisiana Project, which involves construction and modifications at Compressor Station 10 in Perry County, MS and Mainline Valve 9-1 in Washington Parish, LA, in order to provide 75 MMcf/d of firm capacity to Entergy Louisiana.
- OkTex Pipeline received authorization to buy from ONEOK, and operate and maintain in interstate commerce, 2.5 miles of pipeline in Beckham County, OK.
- Columbia Gas received authorization to abandon and replace 14 miles of pipeline and related appurtenances from Keyser Station in Mineral County, WV to LaVale Station in Allegany County, MD.
- Columbia Gas received authorization for its KA1 North Launcher/Receiver Project facilities in Madison and Fayette Counties, KY, including installing bi-directional launchers, receivers, and mainline valves.
- Southern Star received authorization for its Blackwell Redundant Compression Project, which includes a new 4,760 HP compressor unit and other appurtenant and ancillary facilities in Kay County, OK.
- Spire Storage West received authorization to acquire Clear Creek Storage's underground natural gas storage facility in Uinta County, WY, and reaffirmation of its authorization to charge market based rates following the acquisition.
- Midship received an amendment to its certificate authorizing an approximately 0.8-mile reroute in Bryan County, OK in order to avoid a sensitive feature and address stakeholder concerns.
- National Fuel received authorization to abandon Zoar Wells 51-I and 56-I at its Zoar storage field in Erie County, NY. The proposed abandonment will not affect service to customers.
- Transco received authorization for partial abandonment of service at its Eminence Storage Field in Covington County, MS, including reduction of certified pressures and partial abandonment of storage capacity of Caverns 5, 6, and 7.
- Columbia Gas requests authorization for its Line 134 Replacement Project, which includes replacing 3.2 miles of pipeline in Armstrong and Butler Counties, PA. This project will not result in a change of pipeline capacity.
- Columbia Gas requests authorization for its VNG Suffolk No. 3 Meter Station Expansion Project in Suffolk County, VA, which includes replacing the meter station to increase the station's maximum delivery capacity from 3.7 to 12 MMcf/d.
- NGPL requests authorization for its Lockridge Extension Pipeline Project, including the construction of 16.8 miles of pipeline and other appurtenances in Ward, Reeves, and Pecos Counties, TX, to provide up to 500 MMcf/d of firm southbound transportation capacity.
- Southern Natural Gas requests authorization for its North Main System Upgrade Project, which would replace a tap and suction line at its McConnells Compressor station in Tuscaloosa County, AL in order to increase the firm transportation capacity on its North Main System by 5 MMcf/d.
- Colorado Interstate Gas requests authorization for its CIG High Plains Kiowa Lateral Expansion Project, including construction of 9.9 miles of new pipeline to provide up to 410 MMcf/d of transportation capacity from a natural gas processing plant to the CIG system in Weld County, CO.
- Florida Gas requests authorization for its Sanford Project, including modification and construction of certain natural gas pipeline facilities, including lateral looping and other appurtenant facilities in order to increase hourly flow rights from 15.7 to 17.2 MMBtu/hr to the FPL Sanford Plant in Volusia County, FL.
- Columbia Gas requests authorization to construct and operate seven new injection/withdrawal storage wells and related pipelines and appurtenances in Ashland, Holmes, Knox, and Richland Counties, OH. The new wells will not alter the field's capacity or deliverability.
- Monroe Gas Storage requests authorization to abandon certain certificated natural gas storage capacity, and reclassification of remaining storage capacity at its Monroe gas storage facility in Northeast Mississippi, which would reduce the working gas capacity of the field from 12 to 7 Bcf.



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Natural Gas Activities in January 2019

| Status | No. of Projects | Storage Capacity (Bcf) | Deliverability (MMcf/d) | Capacity (MMcf/d) | Miles of Pipeline | Compression (HP) |
|----------------------------------|-----------------|------------------------|-------------------------|-------------------|-------------------|------------------|
| Pipeline | | | | | | |
| Placed in Service | 0 | | | 0 | 0 | 0 |
| Certificated | 2 | | | 75 | 0 | 4,760 |
| Proposed | 4 | | | 915 | 30 | 0 |
| Storage | | | | | | |
| Placed in Service | 0 | 0.0 | 0.0 | | | 0 |
| Certificated | 0 | 0.0 | 0.0 | | | 0 |
| Proposed | 0 | 0.0 | 0.0 | | | 0 |
| LNG (Import & Export) | | | | | | |
| Placed in Service (Export) | 0 | 0 | 0 | | | 0 |
| Certificated (Import/Export) | 0 | 0 | 0 | | | 0 |
| Proposed (Import/Export) | 0 | 0 | 0 | | | 0 |

Source: Staff Database

Natural Gas Activities through January 31, 2019 January 1 through January 31, 2018

| Status | No. of Projects | Storage Capacity (BCF) | Deliverability (MMcf/d) | Capacity (MMcf/d) | Miles of Pipeline | Compression (HP) |
|--|-----------------|------------------------|-------------------------|-------------------|-------------------|------------------|
| Pipeline | | | | | | |
| Placed in Service through January 31, 2018 | 0 0 | | | 0.0 0 | 0.0 0 | 0 0 |
| Certificated through January 31, 2018 | 2 7 | | | 75.0 1,868 | 0.3 132 | 4,760 83,215 |
| Storage | | | | | | |
| Placed in Service through January 31, 2018 | 0 0 | 0.0 0 | 0.0 0 | | | 0 0 |
| Certificated through January 31, 2018 | 0 0 | 0.0 0 | 0.0 0 | | | 0 0 |
| LNG (Import & Export) | | | | | | |
| Placed in Service (Export) through January 31, 2018 | 0 0 | 0.0 0 | 0.0 0 | | | 0 0 |
| Certificated (Import/Export) through January 31, 2018 | 0 0 | 0.0 0 | 0.0 0 | | | 0 0 |

Source: Staff Database



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Hydropower Highlights (nonfederal)

- Great River Hydro, LLC filed an application to increase the capacity of its Deerfield River Project No. 2323 from 76.910 MW to 77.140 MW. The project is located on the Deerfield River in Berkshire and Franklin Counties, MA, and Bennington and Windham Counties, VT.

Hydropower Project Activities in January 2019

| Status | Conventional | | Pumped Storage | | Hydrokinetic | | Total No. of Projects | Total Capacity (MW) |
|--------------------------|--------------|---------------|----------------|---------------|--------------|---------------|-----------------------|---------------------|
| | No. | Capacity (MW) | No. | Capacity (MW) | No. | Capacity (MW) | | |
| Filed | | | | | | | | |
| License | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10-MW Exemption | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Capacity Amendment | 1 | 0.230 | 0 | 0 | 0 | 0 | 1 | 0.230 |
| Conduit Exemption | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Issued | | | | | | | | |
| License | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10-MW Exemption | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Capacity Amendment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conduit Exemption | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Placed in Service | | | | | | | | |
| License | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10-MW Exemption | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Capacity Amendment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conduit Exemption | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: Staff Database

Electric Generation Highlights

- Lackawanna Energy Center LLC's 465.0 MW natural gas-fired Lackawanna Energy Center expansion in Lackawanna County, PA is online.
- Upstream Wind Energy LLC's 202.5 MW Upstream Wind Energy Project in Antelope County, NE is online.
- Pine River Wind Energy LLC's 161.3 MW Pine River Wind Park in Gratiot County, MI is online.
- Copenhagen Wind Farm LLC's 80.0 MW Copenhagen Wind Farm in Lewis County, NY is online. The power generated is sold to Narragansett Electric Co under long-term contract.
- Mendota Hills LLC's 75.4 MW Mendota Hills Wind Expansion in Lee County, IL is online. The power generated is sold to Commonwealth Edison Co under long-term contract.
- ColGreen North Shore LLC's 74.8 MW Col Green North Shore Solar Farm in Riverside County, CA is online. The power generated is sold to Centrica plc under long-term contract.
- Florida Power & Light Co.'s 74.5 MW Interstate Solar Energy Center in Saint Lucie County, FL is online.
- Florida Power & Light Co.'s 74.5 MW Miami Dade Solar Energy Center in Miami Dade County, FL is online.
- Florida Power & Light Co.'s 74.5 MW Pioneer Trail Solar Energy Center in Volusia County, FL is online.
- Florida Power & Light Co.'s 74.5 MW Sunshine Gateway Solar Energy Center in Columbia County, FL is online.
- Tampa Electric Co.'s 74.5 MW Lithia Solar Project in Hillsborough County, FL is online.
- Tampa Electric Co.'s 61.0 MW Grange Hall Solar Project in Hillsborough County, FL is online.
- Peony Solar LLC's 60.1 MW Peony Solar LLC in Orangeburg County, SC is online.
- Tampa Electric Co.'s 35.0 MW Bonnie Mine Solar Project in Polk County, FL is online.
- Trico Electric Coop Inc.'s 10.0 MW Avion Community Solar Project in Pima County, AZ is online.
- Marina Energy LLC's 9.0 MW DSM Solar Project expansion in Warren County, NJ is online.



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New Generation In-Service (New Build and Expansion)

| Primary Fuel Type | January 2019 | | January 2018 | |
|-------------------|--------------|-------------------------|--------------|-------------------------|
| | No. of Units | Installed Capacity (MW) | No. of Units | Installed Capacity (MW) |
| Coal | 0 | 0 | 0 | 0 |
| Natural Gas | 1 | 465 | 3 | 40 |
| Nuclear | 0 | 0 | 3 | 30 |
| Oil | 0 | 0 | 3 | 8 |
| Water | 0 | 0 | 0 | 0 |
| Wind | 4 | 519 | 12 | 1,226 |
| Biomass | 0 | 0 | 0 | 0 |
| Geothermal Steam | 0 | 0 | 1 | 19 |
| Solar | 18 | 631 | 44 | 711 |
| Waste Heat | 0 | 0 | 0 | 0 |
| Other * | 0 | 0 | 3 | 5 |
| Total | 23 | 1,615 | 69 | 2,039 |

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC. The data may be subject to update.

* "Other" includes purchased steam, tires, and miscellaneous technology such as batteries, fuel cells, energy storage, and fly wheel.

Total Available Installed Generating Capacity

| | Installed Capacity (GW) | % of Total Capacity |
|------------------|-------------------------|---------------------|
| Coal | 264.49 | 22.06% |
| Natural Gas | 528.19 | 44.05% |
| Nuclear | 107.98 | 9.01% |
| Oil | 41.67 | 3.48% |
| Water | 100.33 | 8.37% |
| Wind | 97.18 | 8.11% |
| Biomass | 16.11 | 1.34% |
| Geothermal Steam | 3.85 | 0.32% |
| Solar | 37.10 | 3.09% |
| Waste Heat | 1.36 | 0.11% |
| Other* | 0.78 | 0.06% |
| Total | 1,199.02 | 100.00% |

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC. The data may be subject to update.



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Proposed Generation Additions and Retirements by February 2022

| Primary Fuel Type | Additions | | Retirements | |
|-------------------|--------------|-------------------------|--------------|-------------------------|
| | No. of Units | Installed Capacity (MW) | No. of Units | Installed Capacity (MW) |
| Coal | 1 | 17 | 54 | 15,982 |
| Natural Gas | 265 | 69,206 | 94 | 9,279 |
| Nuclear | 12 | 11,481 | 9 | 9,052 |
| Oil | 18 | 732 | 25 | 2,115 |
| Water | 238 | 14,677 | 18 | 528 |
| Wind | 538 | 100,163 | 0 | 0 |
| Biomass | 53 | 572 | 27 | 140 |
| Geothermal Steam | 18 | 913 | 0 | 0 |
| Solar | 2,394 | 77,069 | 5 | 2 |
| Waste Heat | 3 | 34 | 0 | 0 |
| Other * | 91 | 453 | 1 | 2 |
| Total | 3,631 | 275,317 | 233 | 37,100 |

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC. The data may be subject to update.

* "Other" includes purchased steam, tires, and miscellaneous technology such as batteries, fuel cells, energy storage, and fly wheel.

Electric Transmission Highlights

- American Electric Power announced plans to increase their four year forward transmission capital expenditure plans by \$1.7 billion.

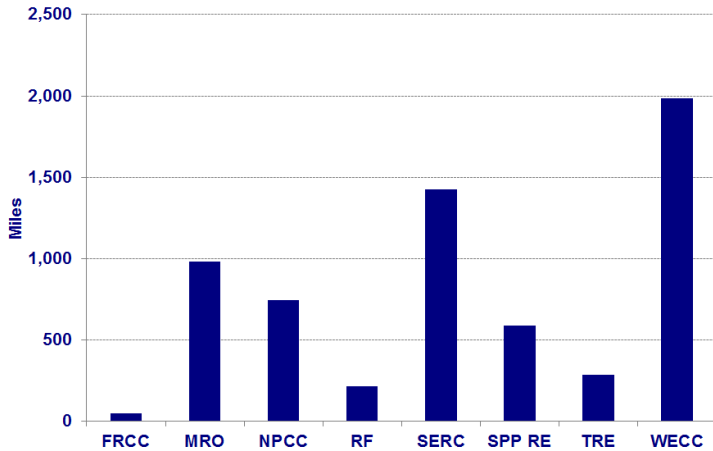
| Voltage (kV) | Transmission Projects Completed | | | Proposed Transmission Projects In-Service by February 2021 | |
|-------------------|---------------------------------|--------------|------------------------------------|--|----------------|
| | January 2019 | January 2018 | January – December 2018 Cumulative | High Probability of Completion | All |
| | Line Length (miles) | | | | |
| ≤230 | 0.0 | 30.0 | 327.3 | 580.1 | 1,815.5 |
| 345 | 0.0 | 0.0 | 714.5 | 1,076.0 | 2,759.0 |
| 500 | 0.0 | 0.0 | 69.4 | 766.0 | 1,697.4 |
| Total U.S. | 0.0 | 30.0 | 1,111.2 | 2,422.1 | 6,271.9 |

Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©The C Three Group, LLC.

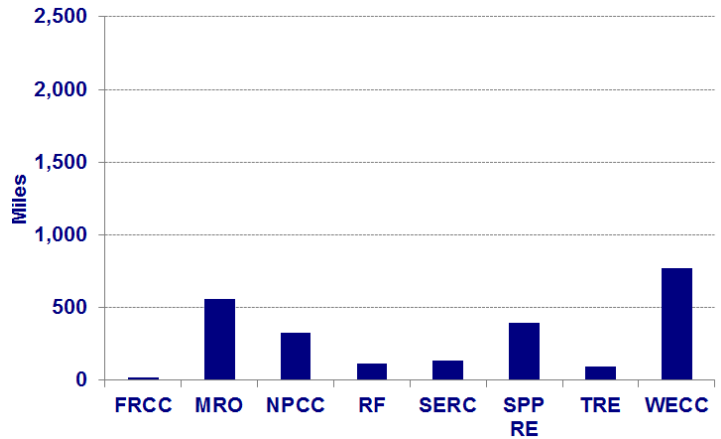


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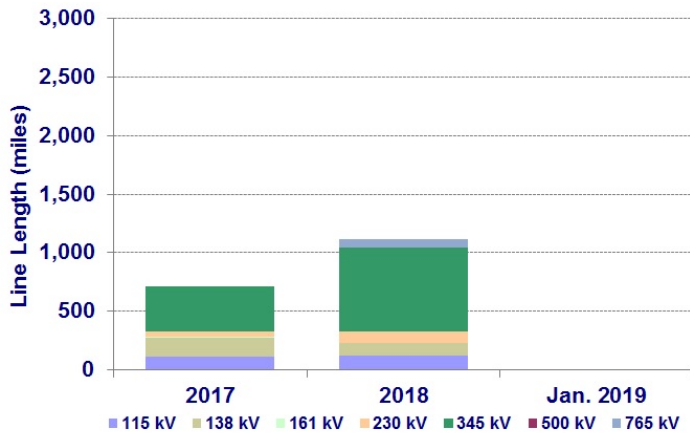
All Transmission Projects with a Proposed In-Service Date by February 2021



Transmission Projects with a High Probability of being completed by February 2021



New Transmission Projects by Voltage



Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©The C Three Group, LLC.

Disclaimer: This Report contains analyses, presentations, and conclusions that may be based on or derived from the data sources cited, but do not necessarily reflect the positions or recommendations of the data providers.