



## Office of Energy Projects Energy Infrastructure Update *For August 2016*

### Natural Gas Highlights

- First ECA Midstream began operating a previously non-jurisdictional pipeline located in Clearfield and Elk Counties, PA, as an interstate pipeline. The pipeline will provide 152 MMcf/d of bi-directional capacity from producing areas to Dominion Transmission and National Fuel with further deliveries to a power plant operated by NRG REMA, LLC in Shawville, PA.
- Texas Gas received authorization to place into service its Western KY Lateral Project which will provide 230 MMcf/d of capacity to TVA's electric generation plant located in Muhlenberg, KY.
- Transco received authorization to construct and operate its Dalton Expansion Project which will provide 448 MMcf/d of capacity from Transco's Station 210 in Mercer, NJ through the proposed Dalton Lateral to delivery points in Murray County, GA.
- Columbia received authorization to construct and operate a replacement line for portions of the SM-80 Project in Wayne County, WV which will allow Columbia to operate Line SM-80 at the original maximum allowable operating pressure.
- Dominion received authorization to construct and operate its Leidy South Project which will provide 155 MMcf/d of capacity from the Leidy interconnection in Clinton County, PA to delivery points in Loudoun County, VA for shippers with markets in the Mid-Atlantic region.
- Natural requested authorization to construct and operate its Gulf Coast Expansion Project which would provide 240 MMcf/d of southbound capacity from existing receipt points on Natural's Gulf Coast System in IL, AR, OK, and TX to delivery points on Natural's South Texas Zone in TX.
- WBI Energy requested authorization to construct and operate its Line Section 25 and the Charbonneau #6 Expansion Projects which would provide 62 MMcf/d of capacity from new receipts points on its existing system in Williams and McKenzie Counties, ND to an existing interconnection with Northern Border Pipeline at WBI Energy's Charbonneau and Glen Ullin Compressor Stations in northwestern and south central ND.
- Columbia requested authorization to construct and operate its Central Virginia Connector Project which would provide 45 MMcf/d of capacity on its existing system in Goochland and Louisa Counties, VA.
- Transco requested authorization to construct and operate its Gulf Connector Expansion Project which would provide 475 MMcf/d of bi-directional capacity from Transco's Station 65 Zone 3 Pool in St. Helena Parish, LA to new delivery points in Wharton and San Patricio Counties, TX.
- Tennessee requested authorization to construct and operate its Lone Star Project which would provide 300 MMcf/d of capacity for Corpus Christi Liquefaction from a receipt point at the existing interconnection with Gulf South Pipeline on Tennessee's existing 500 Line in Jasper County, MS to a delivery point with Corpus Christi Pipeline on Tennessee's 100 Line in San Patricio County, TX.
- EcoElectrica requested authorization to utilize an existing spare LNG vaporizer unit at its existing import terminal in Penuelas, Puerto Rico to supply natural gas to Puerto Rico Electric Power Authority. The operation of this unit would increase the deliverability from the terminal by 93 MMcf/d for a total sendout of 279 MMcf/d.
- The Commission dismissed and terminated the proceedings of Downeast Liquefaction, Downeast LNG, and Downeast Pipeline to site, construct, and operate an import and export LNG terminal in Washington County, ME and associated pipeline facilities which would have provided 600 MMcf/d to the proposed terminal. The Downeast LNG terminal would have provided an import and export deliverability of 500 MMcf/d and 450 MMcf/d, respectively.
- The Commission vacated the authorization granted to Tallulah Gas Storage to construct and operate its salt dome natural gas storage facility and associated pipeline facilities (Tallulah Gas Storage Project) located in Madison Parish, LA. The Tallulah Gas Storage Project would have provided 24 Bcf of working gas.



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### Natural Gas Activities in August 2016

| Status                           | No. of Projects | Storage Capacity (Bcf) | Deliverability (MMcf/d) | Capacity (MMcf/d) | Miles of Pipeline | Compression (HP) |
|----------------------------------|-----------------|------------------------|-------------------------|-------------------|-------------------|------------------|
| <b>Pipeline</b>                  |                 |                        |                         |                   |                   |                  |
| Placed in Service                | 2               |                        |                         | 382.0             | 39.1              | 0                |
| Certificated                     | 4               |                        |                         | 603.0             | 119.8             | 67,665           |
| Proposed                         | 5               |                        |                         | 1,122.0           | 1.4               | 87,500           |
| <b>Storage</b>                   |                 |                        |                         |                   |                   |                  |
| Placed in Service                | 0               | 0.0                    | 0.0                     |                   |                   | 0                |
| Certificated                     | 0               | 0.0                    | 0.0                     |                   |                   | 0                |
| Proposed                         | 0               | 0.0                    | 0.0                     |                   |                   | 0                |
| <b>LNG (Import &amp; Export)</b> |                 |                        |                         |                   |                   |                  |
| Placed in Service                | 0               | 0                      | 0                       |                   |                   | 0                |
| Certificated (Import/Export)     | 0               | 0                      | 0                       |                   |                   | 0                |
| Proposed (Import)                | 1               | 0                      | 93                      |                   |                   | 0                |

Source: Staff Database

### Natural Gas Activities through August 31, 2016 January through August 31, 2015

| Status                           | No. of Projects | Storage Capacity (Bcf) | Deliverability (MMcf/d) | Capacity (MMcf/d) | Miles of Pipeline | Compression (HP) |
|----------------------------------|-----------------|------------------------|-------------------------|-------------------|-------------------|------------------|
| <b>Pipeline</b>                  |                 |                        |                         |                   |                   |                  |
| Placed in Service                | 19              |                        |                         | 3,264.3           | 189.1             | 93,695           |
| through August 31, 2015          | 16              |                        |                         | 5,505.7           | 203.5             | 127,925          |
| Certificated                     | 41              |                        |                         | 14,014.9          | 1,117.6           | 1,112,119        |
| through August 31, 2015          | 24              |                        |                         | 6,711.0           | 326.5             | 234,818          |
| <b>Storage</b>                   |                 |                        |                         |                   |                   |                  |
| Placed in Service                | 0               | 0.0                    | 0                       |                   |                   | 0                |
| through August 31, 2015          | 3               | 3.4                    | 53                      |                   |                   | 0                |
| Certificated                     | 0               | 0.0                    | 0                       |                   |                   | 0                |
| through August 31, 2015          | 2               | 2.7                    | 0                       |                   |                   | 0                |
| <b>LNG (Import &amp; Export)</b> |                 |                        |                         |                   |                   |                  |
| Placed in Service                | 1               | 0                      | 700                     |                   |                   | 0                |
| through August 31, 2015          | 0               | 0                      | 0                       |                   |                   | 0                |
| Certificated (Import/Export)     | 4               | 10.2                   | 3,181                   |                   |                   | 0                |
| through August 31, 2015          | 1               | 0                      | 1,400                   |                   |                   | 0                |

Source: Staff Database



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### Hydropower Highlights (nonfederal)

There were no hydropower activities this month.

#### Hydropower Project Activities Year to Date (through August 31, 2016)

| Status                   | Conventional |               | Pumped Storage |               | Hydrokinetic |               | Total No. of Projects | Total Capacity (MW) |
|--------------------------|--------------|---------------|----------------|---------------|--------------|---------------|-----------------------|---------------------|
|                          | No.          | Capacity (MW) | No.            | Capacity (MW) | No.          | Capacity (MW) |                       |                     |
| <b>Filed</b>             |              |               |                |               |              |               |                       |                     |
| License                  | 2.5          | 50.049        | 0.5            | 300.000       | 0            | 0             | 3                     | 350.049             |
| 10-MW Exemption          | 1            | 0.360         | 0              | 0             | 0            | 0             | 1                     | 0.360               |
| Capacity Amendment       | 1            | 0.100         | 0              | 0             | 0            | 0             | 1                     | 0.100               |
| Conduit Exemption        | 2            | 0.530         | 0              | 0             | 0            | 0             | 2                     | 0.530               |
| <b>Issued</b>            |              |               |                |               |              |               |                       |                     |
| License                  | 6            | 51.062        | 0              | 0             | 0            | 0             | 6                     | 51.062              |
| 10-MW Exemption          | 1            | 0.220         | 0              | 0             | 0            | 0             | 1                     | 0.220               |
| Capacity Amendment       | 3            | 6.310         | 0              | 0             | 0            | 0             | 3                     | 6.310               |
| Conduit Exemption        | 0            | 0             | 0              | 0             | 0            | 0             | 0                     | 0                   |
| <b>Placed in Service</b> |              |               |                |               |              |               |                       |                     |
| License                  | 3.5          | 204.700       | 0              | 0             | 0            | 0             | 3.5                   | 204.700             |
| 10-MW Exemption          | 0            | 0             | 0              | 0             | 0            | 0             | 0                     | 0                   |
| Capacity Amendment       | 2.5          | 26.500        | 0              | 0             | 0            | 0             | 2.5                   | 26.500              |
| Conduit Exemption        | 0            | 0             | 0              | 0             | 0            | 0             | 0                     | 0                   |

Source: Staff Database

### Electric Generation Highlights

- Los Vientos Windpower IV LLC's 200 MW Los Vientos Windpower Phase 2 Expansion Project in Starr County, TX is online. The power generated is sold to Austin Energy under long-term contract.
- Odell Wind Farm LLC's 200 MW Odell Wind Farm Project in Jackson County, MN is online. The power generated is sold to Xcel Energy Inc. under long-term contract.
- WED Coventry One LLC's 12 MW WED Coventry Wind Phase 1 Project in Kent County, RI is online. The power generated is sold to National Grid U.S.A. under long-term contract.
- RE Mustang LLC's 132 MW RE Mustang Solar Phase 1 Project in Kings County, CA is online. Portions of the power generated are sold to Marin Clean Energy and Sonoma Clean Power Authority under long-term contracts.
- Granite Mountain Solar East LLC's 130.4 MW Granite Mountain Solar Project in Iron County, UT is online. The power generated is sold to PacifiCorp under long-term contract.
- Iron Springs Solar LLC's 80 MW Iron Springs Solar Project in Iron County, UT is online. The power generated is sold to PacifiCorp under long-term contract.
- Five Points Solar Park, LLC's 60 MW Five Points Solar Park in Fresno County, CA is online. The power generated is sold to the University of California under long-term contract.
- Antelope Big Sky Ranch LLC's 26.3 MW Antelope Big Sky Ranch Solar Project in Los Angeles County, CA is online. The power generated is sold to Southern California Public Power Authority under long-term contract.
- Consolidated Edison Development Inc.'s 8 MW Future Generation Wind Project in Plymouth County, MA is online.
- SolarCity Corp.'s 4.7 MW Ash Mountain Solar Farm Project in New London County, CT is online.
- SolarCity Corp.'s 3 MW Fort Carson Housing Solar Project in El Paso County, CO is online. The power generated is sold to United States Army and Balfour Beatty PLC under long-term contracts.



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- Mosaic Co.'s 15 MW waste heat Uncle Sam Expansion Project in Saint James Parish, LA is online. The power generated is sold on-site to IMC Phosphates Co. under long-term contract.

### New Generation In-Service (New Build and Expansion)

| Primary Fuel Type | August 2016  |                         | January – August 2016 Cumulative |                         | January – August 2015 Cumulative |                         |
|-------------------|--------------|-------------------------|----------------------------------|-------------------------|----------------------------------|-------------------------|
|                   | No. of Units | Installed Capacity (MW) | No. of Units                     | Installed Capacity (MW) | No. of Units                     | Installed Capacity (MW) |
| Coal              | 0            | 0                       | 3                                | 45                      | 2                                | 6                       |
| Natural Gas       | 0            | 0                       | 63                               | 7,007                   | 54                               | 4,254                   |
| Nuclear           | 0            | 0                       | 0                                | 0                       | 0                                | 0                       |
| Oil               | 0            | 0                       | 5                                | 12                      | 13                               | 18                      |
| Water             | 0            | 0                       | 27                               | 228                     | 20                               | 151                     |
| Wind              | 9            | 420                     | 34                               | 2,661                   | 32                               | 3,492                   |
| Biomass           | 4            | 4                       | 25                               | 54                      | 25                               | 261                     |
| Geothermal Steam  | 0            | 0                       | 0                                | 0                       | 1                                | 45                      |
| Solar             | 17           | 451                     | 209                              | 2,839                   | 192                              | 1,414                   |
| Waste Heat        | 1            | 15                      | 1                                | 15                      | 0                                | 0                       |
| Other *           | 1            | 0                       | 5                                | 0                       | 9                                | 0                       |
| <b>Total</b>      | <b>32</b>    | <b>890</b>              | <b>372</b>                       | <b>12,861</b>           | <b>348</b>                       | <b>9,641</b>            |

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC which include plants with nameplate capacity of 1 MW or greater. The data may be subject to update.

### Total Available Installed Generating Capacity

|                  | Installed Capacity (GW) | % of Total Capacity |
|------------------|-------------------------|---------------------|
| Coal             | 293.73                  | 25.01%              |
| Natural Gas      | 509.90                  | 43.42%              |
| Nuclear          | 107.36                  | 9.14%               |
| Oil              | 44.98                   | 3.83%               |
| Water            | 100.35                  | 8.55%               |
| Wind             | 76.66                   | 6.53%               |
| Biomass          | 16.64                   | 1.42%               |
| Geothermal Steam | 3.88                    | 0.33%               |
| Solar            | 18.79                   | 1.60%               |
| Waste Heat       | 1.17                    | 0.10%               |
| Other*           | 0.76                    | 0.07%               |
| <b>Total</b>     | <b>1,174.23</b>         | <b>100.00%</b>      |

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC which include plants with nameplate capacity of 1 MW or greater. 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.



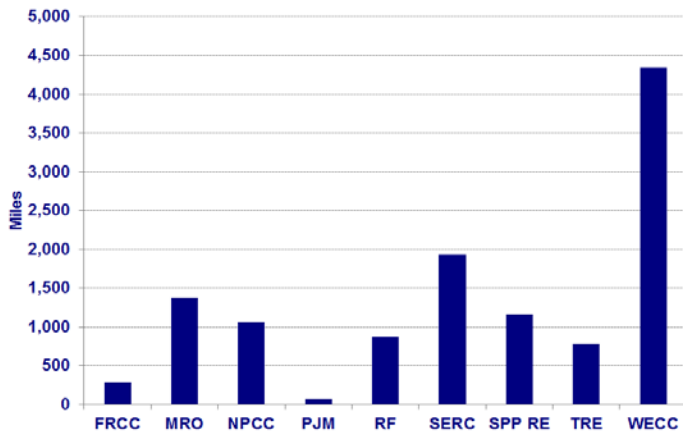
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## Electric Transmission Highlights

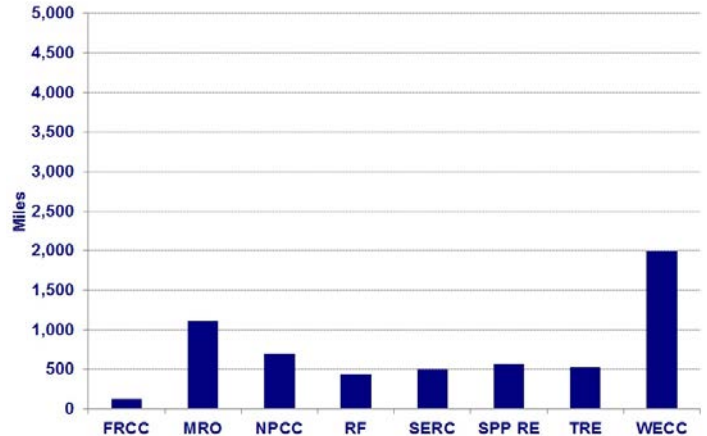
- American Transmission Company has completed the 65 mile, 138 kV Holmes - Old Mead Road Transmission Project. The Bay Lake Project cost approximately \$101.6 million and is located in MI.

| Voltage (kV) | Transmission Projects Completed |             |                                  |                                    | Proposed Transmission Projects In-Service by August 2018 |          |
|--------------|---------------------------------|-------------|----------------------------------|------------------------------------|--|----------|
|              | August 2016                     | August 2015 | January – August 2016 Cumulative | January – December 2015 Cumulative | High Probability of Completion                           | All      |
|              | Line Length (miles)             |             |                                  |                                    |  |          |
| ≤230         | 65.0                            | 46.3        | 228.4                            | 682.3                              | 2,655.8  | 5,069.6  |
| 345          | 0.0                             | 89.3        | 163.4                            | 1,230.5                            | 2,401.9  | 3,927.7  |
| 500          | 0.0                             | 0.0         | 43.0                             | 355.0                              | 925.3  | 2,884.3  |
| Total U.S.   | 65.0                            | 135.6       | 434.8                            | 2,267.8                            | 5,983.0  | 11,881.6 |

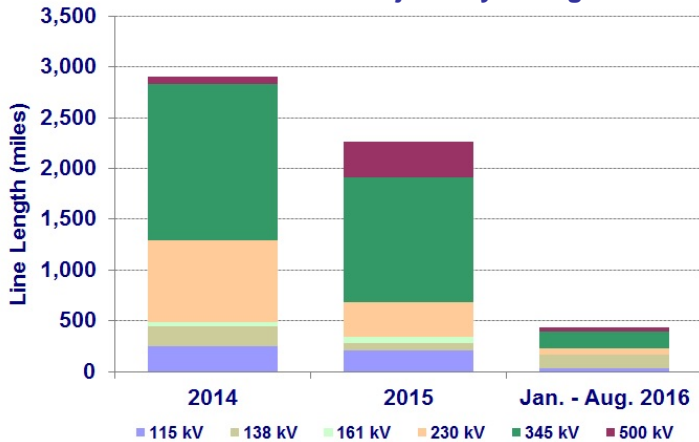
**All Transmission Projects with a Proposed In-Service Date by August 2018**



**Transmission Projects with a High Probability of being completed by August 2018**



**New Transmission Projects by Voltage**



**Sources:** Data derived from Staff Database and U.S. Electric Transmission Projects ©2016 The C Three Group, LLC.

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