

Office of Energy Projects

Energy Infrastructure Update

For October 2012

Natural Gas Highlights

- Tennessee received authorization to place into service the remaining facilities of its Northeast Supply Diversification Project which will provide 145 MMcf/d of incremental capacity along Tennessee's Line 300 located in PA and NJ.
- Dominion received authorization to place into service its Ellisburg to Craigs Project. This project will provide 150 MMcf/d of additional capacity which will be leased to Tennessee for its Northeast Supply Diversification Project.
- Dominion received authorization to place into service its Northeast Expansion Project. This project will provide 200 MMcf/d of firm capacity for the delivery of PA area production to markets in the Northeast and Mid-Atlantic.
- Texas Eastern received authorization to place into service its TEAM 2012 Project which will provide 200 MMcf/d of firm capacity from receipt points in eastern OH and western PA to delivery points in Texas Eastern's market area.
- El Paso received authorization to reconfigure its Willcox Compressor Station in Cochise County, AZ (Willcox Lateral 2013 Expansion Project) and to increase the export capacity at three border crossings with Mexico by 185 MMcf/d.
- Tennessee requests authorization to construct and operate its Rose Lake Expansion Project. This project will provide 230 MMcf/d of firm transportation capacity on Tennessee's system in northeastern PA for markets in the Northeast.

Natural Gas Activities in October 2012

| Status | No. of Projects | Storage Capacity (Bcf) | Deliverability (MMcf/d) | Capacity (MMcf/d) | Miles of Pipeline | Compression (HP) |
|----------------------------------|-----------------|------------------------|-------------------------|-------------------|-------------------|------------------|
| Pipeline | | | | | | |
| Placed in Service | 6 | | | 732.4 | 17.2 | 78,220 |
| Certificated | 2 | | | 175.0 | 0.1 | 0 |
| Proposed | 2 | | | 247.5 | 0.0 | 27,066 |
| Storage | | | | | | |
| Placed in Service | 0 | 0.0 | 0 | | | 0 |
| Certificated | 0 | 0.0 | 0 | | | 0 |
| Proposed | 0 | 0.0 | 0 | | | 0 |
| LNG (Import & Export) | | | | | | |
| Placed in Service | 0 | 0 | 0 | | | 0 |
| Certificated (Export) | 0 | 0 | 0 | | | 0 |
| Proposed (Export) | 0 | 0 | 0 | | | 0 |

Source: Staff Database

Natural Gas Activities through October 31, 2012 Through October 31, 2011

| Status | No. of Projects | Storage Capacity (Bcf) | Deliverability (MMcf/d) | Capacity (MMcf/d) | Miles of Pipeline | Compression (HP) |
|---|-----------------|------------------------|-------------------------|---------------------|-------------------|--------------------|
| Pipeline | | | | | | |
| Placed in Service through October 31, 2011 | 18 28 | | | 2,526.5 11,761.4 | 240.0 1,735.8 | 163,260 787,669 |
| Certificated through October 31, 2011 | 19 16 | | | 4,055.3 3,427.7 | 195.0 268.2 | 92,660 259,875 |
| Storage | | | | | | |
| Placed in Service through October 31, 2011 | 10 10 | 54.7 38.5 | 880 2,504 | | | 80,100 25,483 |
| Certificated through October 31, 2011 | 9 12 | 76.8 176.4 | 2,940 4,495 | | | 85,755 143,010 |
| LNG (Import & Export) | | | | | | |
| Placed in Service through October 31, 2011 | 0 2 | 0 23.2 | 0 3,500 | | | 0 0 |
| Certificated (Export) through October 31, 2011 | 1 0 | 0 0 | 2,600 0 | | | 0 0 |

Source: Staff Database

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Hydropower Highlights

- City of Monroe, UT was issued an Order Granting Exemption from Licensing (Conduit) for the 0.037 MW Monroe Cold Spring Project No. 14441, in Sevier County, UT.
- Placer County Water Agency was issued an Order Granting Exemption from Licensing (Conduit) for the 0.380 MW for the Lincoln Metering Station Conduit Project No. 14444, in Placer County, CA.
- Whitestone Power and Communications was issued a 5-year pilot project license for the proposed 0.100 MW Whitestone Poncelet River-In-Stream-Energy-Conversion Pilot Project No. 13305. The hydrokinetic project will be located on the Tanana River at its confluence with the Delta River, near the town of Delta Junction, AK.
- Free Flow Power Corporation, on behalf of its subsidiaries, filed seven original license applications for projects to be located on the Muskingum River at existing locks and dams owned by the State of Ohio in Washington, Morgan, and Muskingum counties, OH. The proposed projects include the 3.0 MW Beverly Lock and Dam Water Power Project No. 13404; the 4 MW Devola Lock and Dam Water Power Project No. 13405; the 4.0 MW Malta Lock and Dam Water Power Project No. 13406; the 5.0 MW Lowell Lock and Dam Water Power Project No. 13407; the 3.0 MW Philo Lock and Dam Water Power Project No. 13408; the 4.0 MW Rokeby Lock and Dam Water Power Project No. 13411; and the 2.0 MW Zanesville Lock and Dam Water Power Project No. 13412.
- City of Avenal Utilities Department filed an application for Exemption from Licensing (Conduit) for the 0.110 MW California Tank 4 Hydro Project No. 14463, located in King County, CA.
- Wisconsin Electric Power Company (WEPCo) filed an application to amend its license for the Twin Falls Project No. 11831, located on the Menominee River in both MI and WI. WEPCo proposes to demolish the project's existing 6.1 MW powerhouse (located on the MI side of the river) and build a new 9.0 MW powerhouse (located on the WI side of the river), resulting in a net project increase of 2.9 MW.

Hydropower Activities in October 2012

| Status | Conventional | | Pumped Storage | | Hydrokinetic | | Total No. of Projects | Total Capacity (MW) |
|--------------------------|--------------|---------------|----------------|---------------|--------------|---------------|-----------------------|---------------------|
| | No. | Capacity (MW) | No. | Capacity (MW) | No. | Capacity (MW) | | |
| Filed | | | | | | | | |
| License | 7 | 25.000 | 0 | 0 | 0 | 0 | 7 | 25.000 |
| 5-MW Exemption | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Capacity Amendment | 1 | 2.900 | 0 | 0 | 0 | 0 | 1 | 2.900 |
| Conduit Exemption | 1 | 0.110 | 0 | 0 | 0 | 0 | 1 | 0.110 |
| Issued | | | | | | | | |
| License | 0 | 0 | 0 | 0 | 1 | 0.100 | 1 | 0.100 |
| 5-MW Exemption | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Capacity Amendment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conduit Exemption | 2 | 0.417 | 0 | 0 | 0 | 0 | 2 | 0.417 |
| Placed in Service | | | | | | | | |
| License | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5-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

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Hydropower Activities Year to Date (through October 31, 2012)

| Status | Conventional | | Pumped Storage | | Hydrokinetic | | Total No. of Projects | Total Capacity (MW) |
|--------------------------|--------------|---------------|----------------|---------------|--------------|---------------|-----------------------|---------------------|
| | No. | Capacity (MW) | No. | Capacity (MW) | No. | Capacity (MW) | | |
| Filed | | | | | | | | |
| License | 13 | 48.655 | 0 | 0 | 2 | 1.100 | 15 | 49.755 |
| 5-MW Exemption | 3 | 0.931 | 0 | 0 | 0 | 0 | 3 | 0.931 |
| Capacity Amendment | 4 | 11.940 | 0 | 0 | 0 | 0 | 4 | 11.940 |
| Conduit Exemption | 17 | 4.475 | 0 | 0 | 0 | 0 | 17 | 4.475 |
| Issued | | | | | | | | |
| License | 11 | 88.985 | 0 | 0 | 4 | 2.950 | 15 | 91.935 |
| 5-MW Exemption | 2 | 1.125 | 0 | 0 | 0 | 0 | 2 | 1.125 |
| Capacity Amendment | 11 | 58.382 | 3 | 149.500 | 0 | 0 | 14 | 207.882 |
| Conduit Exemption | 14 | 12.882 | 0 | 0 | 0 | 0 | 14 | 12.882 |
| Placed in Service | | | | | | | | |
| License | 2 | 8.530 | 0 | 0 | 0 | 0 | 2 | 8.530 |
| 5-MW Exemption | 1 | 0.170 | 0 | 0 | 0 | 0 | 1 | 0.170 |
| Capacity Amendment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conduit Exemption | 1 | 1.000 | 0 | 0 | 0 | 0 | 1 | 1.000 |

Source: Staff Database

Electric Generation Highlights

- Georgia Power Co.'s 840 MW natural gas-fired Jack McDonough Unit CC3 expansion project in Cobb County, Georgia is online. This is the third 840 MW combined cycle unit installed at the McDonough-Atkinson plant. The three natural-gas fired units are replacements of the retired coal-fueled units. These units are designed to recycle cooling water through the cooling towers to reduce the thermal impact on the Chattahoochee River.
- Mariposa Energy LLC's 200 MW natural gas-fired project in Alameda County, California is online. The electricity generated is sold to PG&E under long-term contract.
- Boulder, Colorado's 5 MW Boulder Canyon hydroelectric plant is online. The project was made possible by the \$1.8 million grant from the U.S. Department of Energy for the extensive modernization it required. Boulder Canyon was originally opened in 1910.
- EDF Renewable Energy's 101 MW Spearville 3 Wind project in Ford County, Kansas is online. Spearville 3 consists of 63 GE XLE 1.6 MW wind turbines. The electricity produced is sold to KCP&L under long-term contract.
- NextEra Energy Resources' 400 MW Limon I and II Wind Energy Center in Lincoln County, Colorado is online. This is a twin 200 MW facility, each Limon project consists of 125 GE 1.6 MW wind turbines. The electricity generated is sold to Xcel Energy under long-term contract.
- Golden Valley Electric Association's 24.6 MW Eva Creek Wind Farm in Denali Borough, Alaska is online. Eva Creek consists of 12 RePower Systems AG 2.05 MW turbines, is Alaska's largest wind energy project.
- AltaGas Ltd and Black Hills Energy's 28.8 MW Busch Ranch Wind Phase I in Huerfano County, Colorado is online. Busch Ranch consists of 16 Vestas Wind Systems V100 1.8 MW turbines. AltaGas' 50 percent interest in the electricity generated is sold to Black Hills Energy under a long-term contract. Busch Ranch Phase II with 61.2 MW is expected to come online in September 2013.
- Bethel Wind Energy LLC's 36 MW Hawkeye Wind Farm in Fayette County, Iowa is online. Hawkeye Wind consists of 15 Nordex N100 2.5 MW turbines. The electricity generated is sold to Central Iowa Power Cooperative under long-term contract.
- Siete Solar LLC's 25 MW Queen Creek Solar Farm in Maricopa County, Arizona is online. The electricity generated is sold to Salt River Project under long-term contract.
- SunPower Corp's 13.8 MW photovoltaic system at Naval Air Weapon Station China Lake in Kern County, California is online. The electricity generated is sold to the U.S. Department of Navy under long-term contract.

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- Capital Dynamics' 6 MW Swan Creek MPA in Middlesex, New Jersey is online. The electricity generated by this roof-mounted photovoltaic system is sold to US Foods under a long-term contract.
- Broadwalk Renewables LLC's 33 MW landfill gas-to-energy facility at Olinda Alpha in Orange County, California is online. This project is a recipient of a \$10 million stimulus grant from the U.S. Department of Energy. The electricity generated is sold to Anaheim Public Utilities Department under long-term contract.
- Dfo Partnership's 34 MW landfill gas-to-energy H Power expansion project in Honolulu County, Hawaii is online. The electricity generated will supply 8 percent of the electricity consumed in Oahu.
- Anaergia Services' 2.8 MW fuel cell power plant at Inland Empire Utilities Agency's (IEUA) Water Recycling Plant in Ontario, California is online. This is the largest fuel cell operating on digester gas in the U.S. The electricity generated is sold to IEUA under long-term contract.

New Generation In-Service (New Build and Expansion)

| Primary Fuel Type | October 2012 | | January – October 2012 Cumulative | | January – October 2011 Cumulative | |
|-------------------|--------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|
| | No. of Units | Installed Capacity (MW) | No. of Units | Installed Capacity (MW) | No. of Units | Installed Capacity (MW) |
| Coal | 0 | 0 | 3 | 2,276 | 14 | 1,865 |
| Natural Gas | 5 | 1,040 | 67 | 5,702 | 87 | 9,421 |
| Nuclear | 0 | 0 | 1 | 125 | 0 | 0 |
| Oil | 0 | 0 | 9 | 16 | 35 | 119 |
| Water | 1 | 5 | 9 | 12 | 15 | 48 |
| Wind | 10 | 594 | 92 | 5,403 | 107 | 3,675 |
| Biomass | 3 | 69 | 79 | 409 | 91 | 370 |
| Geothermal Steam | 0 | 0 | 7 | 123 | 7 | 31 |
| Solar | 10 | 59 | 167 | 1,032 | 200 | 602 |
| Waste Heat | 0 | 0 | 1 | 3 | 2 | 136 |
| Other | 0 | 0 | 2 | 0 | 11 | 0 |
| Total | 29 | 1,767 | 437 | 15,100 | 569 | 16,267 |

Source: Data derived from Ventyx Global LLC, Velocity Suite.

Total Installed Operating Generating Capacity

| | Installed Capacity (GW) | % of Total Capacity |
|------------------|-------------------------|---------------------|
| Coal | 337.61 | 29.30% |
| Natural Gas | 484.26 | 42.03% |
| Nuclear | 106.77 | 9.27% |
| Oil | 49.73 | 4.32% |
| Water | 98.07 | 8.51% |
| Wind | 52.40 | 4.55% |
| Biomass | 14.47 | 1.26% |
| Geothermal Steam | 3.62 | 0.31% |
| Solar | 3.49 | 0.30% |
| Waste Heat | 0.81 | 0.07% |
| Other | 1.03 | 0.09% |
| Total | 1,152.27 | 100.00% |

Source: Data derived from Ventyx Global LLC, Velocity Suite.

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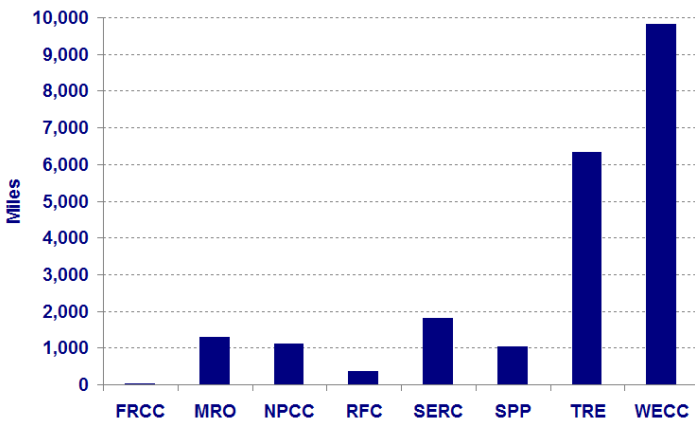
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Electric Transmission Highlights

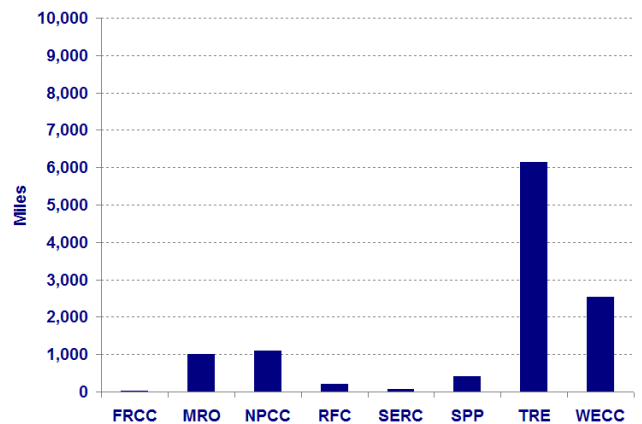
- Independent Transmission Company (ITC) submitted the ITC Great Plains Expansion Project to the Southwest Power Pool Inc. (SPP). The plan consist of five 345 kV transmission projects totaling 2,700 miles.
- The 500 kV, 145 mile Susquehanna to Roseland transmission line received a final route approval from the National Park Service. The interstate line from Berwick, PA, to Roseland, NJ is expected to be in service by mid-2015. The project also encountered another delay when Earthjustice and several other environmental groups filed a lawsuit against the NPS for approving the transmission route that crosses 4.3 miles of Park Service land.

| Voltage (kV) | Transmission Projects Completed | | | | Proposed Transmission Projects In-Service by October 2014 | |
|-------------------|---------------------------------|--------------|-----------------------------------|------------------------------------|---|-----------------|
| | October 2012 | October 2011 | January – October 2012 Cumulative | January – December 2011 Cumulative | High Probability of Completion | All |
| | Line Length (miles) | | | | | |
| ≤230 | 0 | 26.0 | 366.2 | 929.3 | 1,470.5 | 4,950.7 |
| 345 | 0 | 0 | 654.8 | 516.5 | 8,135.5 | 10,076.2 |
| 500 | 0 | 0 | 170.1 | 262.0 | 1,862.0 | 6,859.0 |
| Total U.S. | 0 | 26.0 | 1,191.1 | 1,707.8 | 11,468.0 | 21,885.9 |

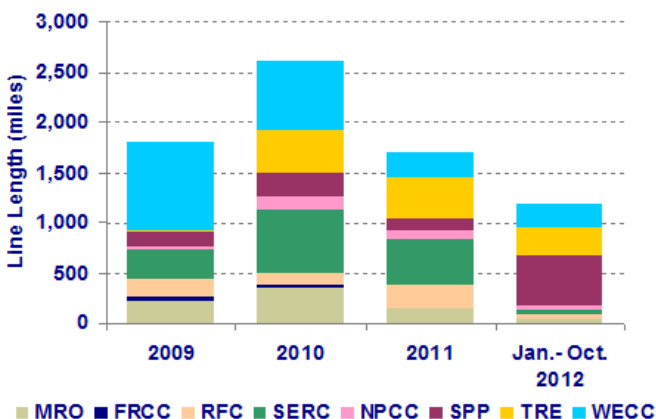
All Transmission Projects with a Proposed In-Service Date by October 2014



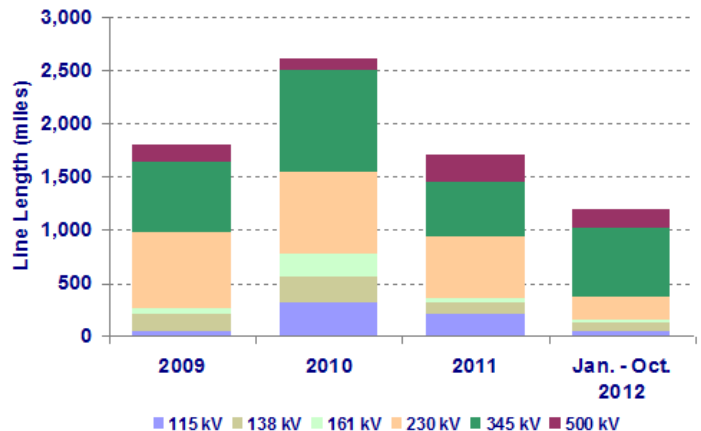
Transmission Projects with a High Probability of being completed by October 2014



New Transmission Projects by Region



New Transmission Projects by Voltage



Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©2012 The C Three Group, LLC

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