

Office of Energy Projects

Energy Infrastructure Update

For November 2011

Natural Gas Highlights

- Questar placed into service its Mainline 104 Extension Project which provides 160 MMcf/d of incremental capacity for the transportation of natural gas supplies from the Uintah Basin in UT.
- Empire placed into service its Tioga County Extension Project which will enable Empire to reverse flow on its system and add 350 MMcf/d of new capacity to transport Marcellus Shale gas within PA and NY.
- Texas Eastern received authorization to construct and operate its TEAM 2012 Project which will provide an additional 200 MMcf/d of new capacity on its system from eastern OH and western PA to its mid-Atlantic market area.
- Central NY received authorization to construct and operate its MARC I Project. This project will enhance Central NY's system in PA by providing 550 MMcf/d of new capacity for the transportation of Marcellus Shale and storage gas.
- Dominion filed an application to construct and operate its Tioga Area Expansion Project which will provide 270 MMcf/d of new capacity for transportation of gas supplies within PA and NY.
- Transco commenced the Commission's pre-filing process for its Atlantic Access Project which will provide 1,350 MMcf/d of firm transportation capacity from receipt points in PA, WV, and NJ to Elba Express Pipeline in SC.

Natural Gas Activities in November 2011

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service	3			798.0	41.0	28,700
Certificated	2			750.0	55.3	52,380
Proposed	6			1,993.5	298.4	57,470
Storage						
Placed in Service	1	4.0	0			4,735
Certificated	1	5.0	0			0
Proposed	1	0.6	0			0
LNG						
Placed in Service	0	0	0			0
Certificated	0	0	0			0
Proposed	0	0	0			0

Source: Staff Database

Natural Gas Activities through November 30, 2011 Through November 30, 2010

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service	30			12,549.4	1,765.4	816,369
through November 30, 2010	27			11,364.8	835.6	421,688
Certificated	18			4,177.7	323.5	312,255
through November 30, 2010	21			8,921.4	1,560.8	517,454
Storage						
Placed in Service	9	40.5	2,555			30,218
through November 30, 2010	12	71.7	4,272			32,180
Certificated	13	181.4	4,495			143,010
through November 30, 2010	19	146.9	5,243			122,404
LNG						
Placed in Service	2	23.2	3,500			0
through November 30, 2010	1	4.22	400			0
Certificated	0	0	0			0
through November 30, 2010	0	0	0			0

Source: Staff Database

Office of Energy Projects
Energy Infrastructure Update
For November 2011

Hydropower Highlights

- On November 15, 2011, William Arkoosh filed an application for an original license for the proposed 1.23-MW Little Wood River Ranch II Project No. 14154. The proposed project would be located on the Little Wood River, approximately six miles west of Shoshone, in Lincoln County, Idaho.
- On November 22, 2011, Mahoning Hydropower, LLC filed an application for an original license for the proposed 0.65-MW Lake Milton Hydroelectric Project No. 13953. The proposed project would be located at an existing dam currently owned by the Ohio Department of Natural Resources on the Mahoning River, in Mahoning County, Ohio.
- On November 30, 2011, Parker Knoll Hydro, LLC filed an application for an original license for the proposed 1,000-MW Parker Knoll Pumped Storage Hydroelectric Project No. 13239. The proposed project would be located near the town of Richfield, in Piute County, Utah. The project would require the construction of two new reservoirs with an initial fill from the existing Otter Creek Reservoir.
- On November 23, 2011, DHAC issued to MacKay Bar Corporation, an Order Granting Exemption from Licensing (Conduit) for the Hettinger Project No. 13382, located at the MacKay Bar Corporation's irrigation pipeline in Idaho County, Idaho. The proposed project would develop 0.025 MW and generate about 10 megawatt hours annually.
- On November 28, 2011, DHAC issued to the Draper Irrigation Company, an Order Granting Exemption from Licensing (Conduit) for its Big Willow Hydro Project No. 14220, located in Salt Lake County, Utah. The project will develop 0.511 MW and generate 1,414 megawatt hours annually.
- On November 21, 2011, the Town of Basalt, Colorado filed an application for conduit exemption for the Basalt Project No. 14326, located in Eagle County, Colorado. The proposed project will develop 0.04 MW and generate about 300 MWh annually, and is the second conduit exemption application filed under the Colorado MOU.
- On November 18, 2011, DHAC issued to Friant Power Authority and Orange Cove Irrigation District orders amending the licenses for the Fishwater Release Project No. 11068 and the Friant Project No. 2892, located in Fresno and Madera Counties, California. The orders authorize the development of 5.2 MW and the generation of about 30,100 megawatt hours annually.

Hydropower Activities in November 2011

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
Filed								
License	2	1.880	1	1,000.000	0	0	3	1,001.880
5-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	0	0	0	0	0	0	0	0
Conduit Exemption	1	0.040	0	0	0	0	1	0.040
Issued								
License	0	0	0	0	0	0	0	0
5-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	1	5.200	0	0	0	0	1	5.200
Conduit Exemption	2	0.536	0	0	0	0	2	0.536
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

Office of Energy Projects

Energy Infrastructure Update

For November 2011

Hydropower Activities Year to Date (through November 30, 2011)

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
Filed								
License	14	351.808	1	1,000.000	1	0.300	16	1,352.108
5-MW Exemption	5	1.695	0	0	0	0	5	1.695
Capacity Amendment	10	63.420	0	0	0	0	10	63.420
Conduit Exemption	13	10.216	0	0	0	0	13	10.216
Issued								
License	7	72.910	0	0	0	0	7	72.910
5-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	13	50.217	0	0	0	0	13	50.217
Conduit Exemption	9	2.419	0	0	0	0	9	2.419
Placed in Service								
License	2	13.000	0	0	0	0	2	13.000
5-MW Exemption	2	0.375	0	0	0	0	2	0.375
Capacity Amendment	1	3.000	0	0	0	0	1	3.000
Conduit Exemption	5	21.365	0	0	0	0	5	21.365

Source: Staff Database

Electric Generation Highlights

- Port Authority of New York & New Jersey and World Trade Center Properties, LLC's combined 4.8 MW fuel cells came online. The UTC Power fuel cells consume natural gas to produce heat and power. The fuel cells will supply 30 percent of the electricity need of the WTC Freedom Tower and WTC II, III and IV.
- NextEra Energy Resources' 100.8 MW Minco II Wind Farm in Grady and Caddo Counties, Oklahoma is online. The project consists of 63 1.6-MW turbines. Google has a 20-year power purchase agreement with NextEra to power its data center near Pryor.
- Third Planet Windpower LLC's 40.5 MW Petersburg Wind Farm in Boone County, Nebraska is online. The project consists of 27 GE 1.5-MW turbines. The energy is contracted to Omaha Public Power District for 20 years.
- BP Solar and Metlife's 32 MW Long Island Solar Farm, located at the US Department of Energy's Brookhaven National Laboratory on Long Island, New York is online. The project consists of 164,000 photovoltaic panels, the largest solar facility installed in the Northeast. The power is sold to Long Island Power Authority under a 20-year power purchase agreement.
- Constellation Solar New Jersey LLC's 7.8 MW Vineland Solar in Vineland, New Jersey is online. This is Vineland's third solar installation, increasing the city's solar generation capacity to 12 MW. The power is sold to Vineland Municipal Electric Utility under a 25-year power purchase agreement.
- Cinnamon Bay LLC's 4 MW Edgeboro Landfill Solar in East Brunswick, New Jersey is online. The Edgeboro Landfill was closed in the mid-1980s. The solar project consists of 9,000 solar panels installed on the covered landfill, the largest operating solar field on a landfill in New Jersey. On site is also a 9.6 MW landfill gas-to-energy facility
- KDC Solar LLC's 3.25 MW rooftop solar facility at the United Stationers Supply Co warehouse in Cranbury, New Jersey is online. The power generated will supply 100% of the power needs of United Stationers.
- Richmond Energy LLC's 6.4 MW landfill gas-to-energy project at the Old Dominion Landfill in Henrico County, Virginia is online. The power generated is sold to Old Dominion Electric Cooperative under a long-term agreement.
- Methane Power Inc's 3 MW landfill gas-to energy project at the Wayne County Landfill near Raleigh, North Carolina is online. The power generated is sold to Progress Energy Carolinas.
- Synergy Biodigester's 1.4 MW biogas plant Synergy Dairy in Wyoming County, New York is in operation. The biodigester is a co-digester which produces clean energy from animal and food waste. The energy generated will be sold into the Western New York grid.
- U.S. General Service Administration's 3.5 MW solar project at the Denver Federal Center Phase II in Lakewood, Colorado is online. The project consists of 14,352 solar panels on 14 carport structures and an installation of field arrays. This project, combined with two other completed solar projects will provide 15% of the electricity needs of the campus.

Office of Energy Projects

Energy Infrastructure Update

For November 2011

New Generation In-Service (New Build and Expansion)

Primary Fuel Type	November 2011		January – November 2011 Cumulative		January – November 2010 Cumulative	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	0	0	12	1,680	24	6,382
Natural Gas	12	5	88	9,666	76	5,978
Nuclear	0	0	0	0	0	0
Oil	0	0	6	15	7	205
Water	0	0	11	47	12	24
Wind	2	141	101	4,069	62	3,382
Biomass	7	12	67	267	91	312
Geothermal Steam	0	0	6	25	1	5
Solar	10	54	159	593	57	163
Waste Heat	0	0	1	135	4	98
Other	0	0	10	20	0	0
Total	31	212	461	16,517	334	16,549

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

Total Installed Operating Generation Capacity

Primary Fuel Type	Installed Capacity (GW)	% of Total Capacity
Coal	343.51	29.95%
Natural Gas	477.94	41.67%
Nuclear	108.42	9.45%
Oil	52.95	4.62%
Water	99.56	8.68%
Wind	43.74	3.81%
Biomass	13.62	1.19%
Geothermal Steam	3.40	0.30%
Solar	1.75	0.15%
Waste Heat	0.96	0.08%
Other	1.04	0.09%
Total	1,146.90	100.00%

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

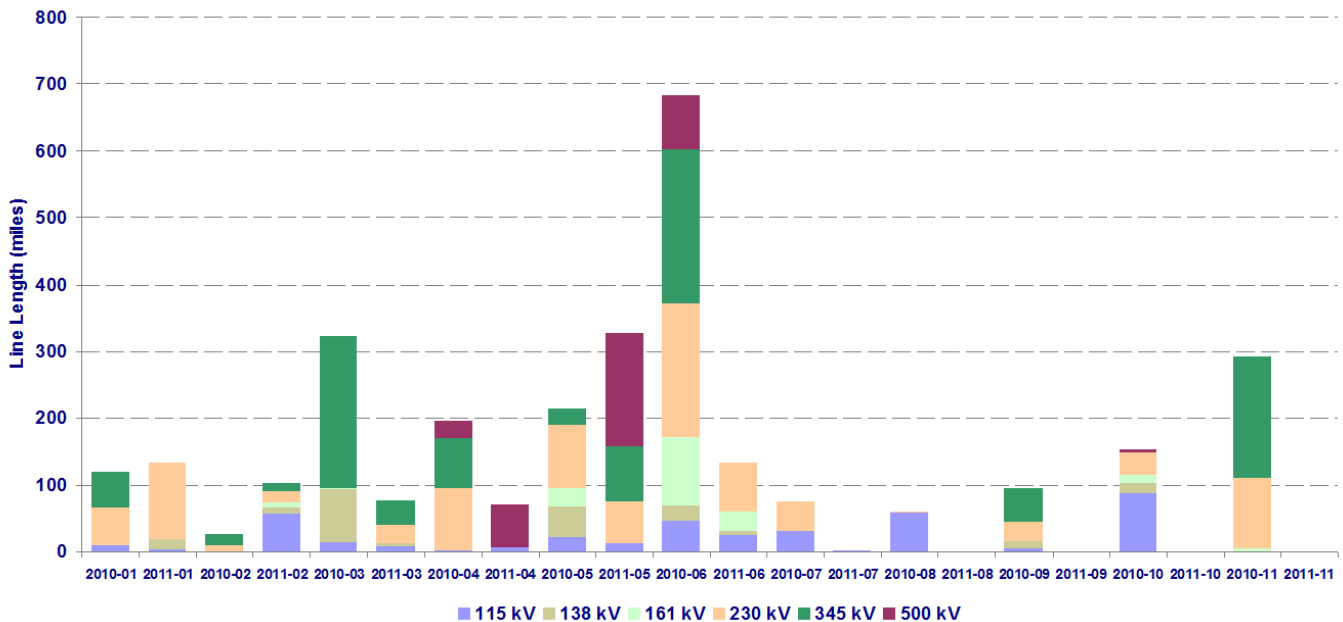
Office of Energy Projects Energy Infrastructure Update *For November 2011*

Electric Transmission Highlights

- The Midwest Independent Transmission System Operator (MISO) Transmission Expansion Plan proposes 214 new projects. The plan expects to spend \$6.5 billion over 10 years. This includes the 765 kV Reynolds-Greentown transmission project in Indiana.
- On November 10, the California Public Utilities Commission (PUC) granted the City of Chino Hills a motion to stay construction on a portion of the Tehachapi transmission project until alternative routes are reviewed. The PUC has instructed Southern California Edison to submit testimony on alternate routes and placing the line underground by Jan. 10, 2012. The PUC has not issued a timeline for the review of the testimony or the final decision.
- On November 28, the North American Electric Reliability Corporation (NERC) released its 2011 Long-Term Reliability Assessment. The report stated that transmission growth was responding to the increased demand for integrating and delivering new resources. It stated that the construction of transmission projects is consistent with projections.

Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by November 2013	
	November 2011	November 2010	January – November 2011 Cumulative	January – November 2010 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	0	109.4	476.0	1,259.5	3,017.3	5,886.9
345	0	182.0	132.4	859.5	4,617.6	6,065.2
500	0	0	236.0	112.0	1,734.8	6,028.5
Total U.S.	0	291.4	844.4	2,231.0	9,369.7	17,980.6

**Completed Transmission Projects
As of November 30, 2011**



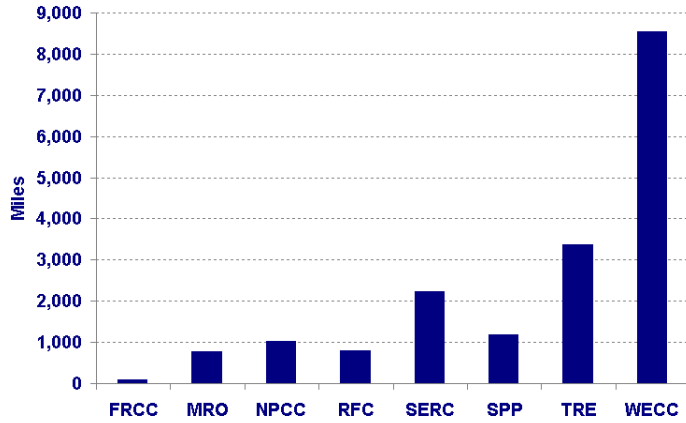
Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©2011 The C-Three Group, LLC

Office of Energy Projects

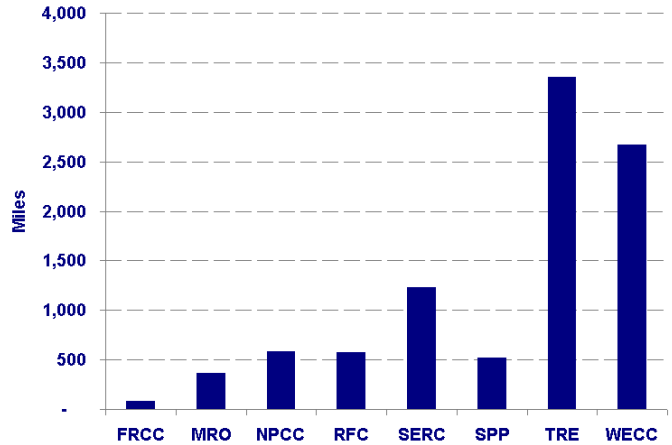
Energy Infrastructure Update

For November 2011

All Transmission Projects with a Proposed In-Service Date by November 2013



Transmission Projects with a High Probability of being completed by November 2013



Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©2011 The C-Three Group, LLC

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