

Generation and Transmission Planning

Highlights

- At March 31, 2012, 83,635 MW of capacity were in generation request queues for construction through 2018, compared to an average installed capacity of 183,000 MW in 2012 including the January 1, 2012, DEOK integration. Wind projects account for approximately 29,418 MW, 35.2 percent of the capacity in the queues, and combined-cycle projects account for 38,177 MW, 45.6 percent of the capacity in the queues.

A total of 955 MW of generation capacity retired in January through March 2012, and it is expected that a total of 18,825 MW will have retired from 2011 through 2019, with most of this capacity retiring by the end of 2015. Units planning to retire in 2012 make up up 6,012 MW, or 36 percent of all planned retirements.

Planned Generation and Retirements

Planned Generation Additions

Net revenues provide incentives to build new generation to serve PJM markets. While these incentives operate with a significant lag time and are based on expectations of future net revenue, the amount of planned new generation in PJM reflects investors' perception of the incentives provided by the combination of revenues from the PJM Energy, Capacity and Ancillary Service Markets. At March 31, 2012, 83,635 MW of capacity were in generation request queues for construction through 2018, compared to an average installed capacity of approximately 180,000 MW following the ATSI integration in 2011. Although it is clear that not all generation in the queues will be built, PJM has added capacity annually since 2000 (Table 11-1).¹ Overall, 373 MW of nameplate capacity were added in PJM in January through March 2012 (excluding the integration of the DEOK zone).

¹ The capacity additions are new MW by year, including full nameplate capacity of solar and wind facilities and are not net of retirements or deratings.

Table 11-1 Year-to-year capacity additions from PJM generation queue: Calendar years 2000 through March 31, 2012² (See 2011 SOM, Table 11-1)

	MW
2000	505
2001	872
2002	3,841
2003	3,524
2004	1,935
2005	819
2006	471
2007	1,265
2008	2,777
2009	2,516
2010	2,097
2011	5,008
January-March 2012	373

PJM Generation Queues

Generation request queues are groups of proposed projects. Queue A was open from February 1997 through January 1998; Queue B was open from February 1998 through January 1999; Queue C was open from February 1999 through July 1999 and Queue D opened in August 1999. After Queue D, a new queue was opened every six months until Queue T, when new queues began to open annually. Queue X was active through January 31, 2012.

Capacity in generation request queues for the seven year period beginning in 2012 and ending in 2018 decreased by 7,090 MW from 90,725 MW in 2011 to 83,635 MW in 2012, or 7.8 percent (Table 11-2).³ Queued capacity scheduled for service in 2012 decreased from 27,184 MW to 23,371 MW, or 14 percent. Queued capacity scheduled for service in 2013 decreased from 13,051 MW to 10,645 MW, or 18.4 percent. The 83,635 MW includes generation with scheduled in-service dates in 2011 and units still active in the queue with in-service dates scheduled before 2012, listed at nameplate capacity, although these units are not yet in service.

² The capacity described in this table refers to all installed capacity in PJM, regardless of whether the capacity entered the RPM auction.

³ See the 2011 State of the Market Report for PJM (March 10, 2011), pp. 205-206, for the queues in 2011.

Table 11-2 Queue comparison (MW): March 31, 2012 vs. December 31, 2011
(See 2011 SOM, Table 11-3)

	MW in the Queue	MW in the Queue	Year-to-Year Change	Year-to-Year Change
	2011	2012	(MW)	
2012	27,184	23,371	(3,813)	(14.0%)
2013	13,051	10,645	(2,406)	(18.4%)
2014	17,036	13,130	(3,906)	(22.9%)
2015	19,251	23,208	3,957	20.6%
2016	9,288	8,966	(323)	(3.5%)
2017	1,720	2,720	1,000	58.1%
2018	3,194	1,594	(1,600)	(50.1%)
Total	90,725	83,635	(7,090)	(7.8%)

Table 11-3 shows the amount of capacity active, in-service, under construction or withdrawn for each queue since the beginning of the Regional Transmission Expansion Plan (RTEP) Process and the total amount of capacity that had been included in each queue.⁴

Table 11-3 Capacity in PJM queues (MW): At March 31, 2012^{5,6} (See 2011 SOM, Table 11-4)

Queue	Active	In-Service	Under Construction	Withdrawn	Total
A Expired 31-Jan-98	0	8,103	0	17,347	25,450
B Expired 31-Jan-99	0	4,646	0	14,957	19,602
C Expired 31-Jul-99	0	531	0	3,471	4,002
D Expired 31-Jan-00	0	851	0	7,182	8,033
E Expired 31-Jul-00	0	795	0	8,022	8,817
F Expired 31-Jan-01	0	52	0	3,093	3,145
G Expired 31-Jul-01	0	1,086	555	17,409	19,050
H Expired 31-Jan-02	0	703	0	8,422	9,124
I Expired 31-Jul-02	0	103	0	3,728	3,831
J Expired 31-Jan-03	0	40	0	846	886
K Expired 31-Jul-03	0	148	150	2,345	2,643
L Expired 31-Jan-04	20	257	0	4,014	4,290
M Expired 31-Jul-04	0	505	150	3,828	4,482
N Expired 31-Jan-05	177	2,279	38	7,913	10,407
O Expired 31-Jul-05	746	1,471	880	4,495	7,592
P Expired 31-Jan-06	413	2,825	545	4,908	8,690
Q Expired 31-Jul-06	908	1,504	3,358	8,643	14,413
R Expired 31-Jan-07	2,666	1,216	178	18,394	22,455
S Expired 31-Jul-07	2,237	3,198	621	11,337	17,393
T Expired 31-Jan-08	8,836	950	287	17,473	27,546
U Expired 31-Jan-09	5,208	254	543	26,852	32,857
V Expired 31-Jan-10	8,104	188	1,762	6,766	16,820
W Expired 31-Jan-11	11,109	101	1,037	12,160	24,408
X Expired 31-Jan-12	27,530	6	137	4,380	32,053
Y Expires 31-Jan-13	5,439	0	0	5	5,444
Total	73,394	31,811	10,241	217,987	333,433

Data presented in Table 11-4 show that through the first three months of 2012, 40.1 percent of total in-service capacity from all the queues was from Queues A and B and an additional 6.8 percent was from Queues C, D and E.⁷ As of March 31, 2012, 31.8 percent of the capacity in Queues A and B has been placed in service, and 9.5 percent of all queued capacity has been placed in service.

⁴ Projects listed as active have been entered in the queue and the next phase can be under construction, in-service or withdrawn. At any time, the total number of projects in the queues is the sum of active projects and under-construction projects.

⁵ The 2012 State of the Market Report for PJM contains all projects in the queue including reratings of existing generating units and energy only resources.

⁶ Projects listed as partially in-service are counted as in-service for the purposes of this analysis.

⁷ The data for Queue Y include projects through March 31, 2012.

The data presented in Table 11-4 show that for successful projects there is an average time of 809 days between entering a queue and the in-service date. The data also show that for withdrawn projects, there is an average time of 491 days between entering a queue and completion or exiting. For each status, there is substantial variability around the average results.

Table 11-4 Average project queue times (days): At March 31, 2012 (See 2011 SOM, Table 11-5)

Status	Average (Days)	Standard Deviation	Minimum	Maximum
Active	851	606	0	3,610
In-Service	809	673	0	3,602
Suspended	2,214	1,029	704	4,162
Under Construction	1,307	815	0	5,083
Withdrawn	491	496	0	3,186

Distribution of Units in the Queues

A more detailed examination of the queue data permits some additional conclusions. The geographic distribution of generation in the queues shows that new capacity is being added disproportionately in the west, and includes a substantial amount of wind capacity. At March 31, 2012, 83,635 MW of capacity were in generation request queues for construction through 2018, compared to an average installed capacity of 183,000 MW in 2012 including the January 1, 2012, DEOK integration. Wind projects account for approximately 29,418 MW, 35.2 percent of the capacity in the queues, and combined-cycle projects account for 38,177 MW, 45.6 percent of the capacity in the queues. There has been a substantial increase in combined cycle units added to the queues. On March 31, 2012, there were 38,177 MW of capacity from combined cycle units in the queue, compared to 34,788 MW in 2011, an increase of 9.7 percent.

Table 11-5 shows the projects under construction or active as of March 31, 2012, by unit type and control zone. Most of the steam projects (93.2 percent of the MW) and most of the wind projects (94.0 percent of the MW) are outside the Eastern MAAC (EMAAC)⁸ and Southwestern MAAC (SWMAAC)⁹

⁸ EMAAC consists of the AECO, DPL, JCPL, PECO and PSEG Control Zones.

⁹ SWMAAC consists of the BGE and Pepco Control Zones.

locational deliverability areas (LDAs).¹⁰ Of the total capacity additions, only 18,106 MW, or 21.6 percent, are projected to be in EMAAC, while 8,221 MW or 9.8 percent are projected to be constructed in SWMAAC. Of total capacity additions, 35,747 MW, or 42.7 percent of capacity, is being added inside MAAC zones. Overall, 68.5 percent of capacity is being added outside EMAAC and SWMAAC, and 57.3 percent of capacity is being added outside MAAC zones.

Wind projects account for approximately 29,418 MW of capacity or 35.1 percent of the capacity in the queues and combined-cycle projects account for 38,177 MW of capacity or 45.6 percent of the capacity in the queues.¹¹ Wind projects account for 3,629 MW of capacity in MAAC LDAs, or 10.1 percent. While there are no wind projects in the SWMAAC LDA, in the EMAAC LDA wind projects account for 1,774 MW of capacity, or 9.8 percent.

Table 11-5 Capacity additions in active or under-construction queues by control zone (MW): At March 31, 2012 (See 2011 SOM, Table 11-6)

	CC	CT	Diesel	Hydro	Nuclear	Solar	Steam	Storage	Wind	Total
AECO	2,217	706	11	0	0	599	15	0	1,419	4,967
AEP	3,475	0	71	70	0	132	1,124	0	12,025	16,896
AP	930	0	18	105	0	232	597	0	1,085	2,966
ATSI	2,192	72	29	0	30	75	135	0	849	3,381
BGE	678	256	29	0	1,640	2	132	0	0	2,737
ComEd	1,080	444	103	23	607	95	1,366	0	10,028	13,745
DAY	0	0	2	112	0	23	12	0	935	1,084
DEOK	0	135	0	0	0	0	0	0	0	135
DLCO	0	0	0	5	91	0	0	0	0	96
Dominion	5,991	595	4	0	1,669	85	352	20	868	9,584
DPL	1,526	56	0	0	0	316	22	30	335	2,285
JCPL	3,514	27	30	0	0	992	0	0	0	4,562
Met-Ed	1,910	0	18	0	39	83	0	0	0	2,050
PECO	698	7	10	0	490	10	0	3	0	1,217
PENELEC	905	20	24	0	0	36	146	0	1,605	2,736
Pepco	5,468	0	6	0	0	10	0	0	0	5,484
PPL	4,126	11	4	3	100	106	34	0	250	4,634
PSEG	3,468	1,110	9	0	50	312	105	2	20	5,075
Total	38,177	3,439	367	318	4,716	3,106	4,040	55	29,418	83,635

¹⁰ See the 2011 State of the Market Report for PJM, Volume II, Appendix A, "PJM Geography" for a map of PJM LDAs.

¹¹ Since wind resources cannot be dispatched on demand, PJM rules previously required that the unforced capacity of wind resources be derated to 20 percent of installed capacity until actual generation data are available. Beginning with Queue U, PJM derates wind resources to 13 percent of installed capacity. PJM derates solar resources to 38 percent of installed capacity. Based on the derating of 29,418 MW of wind resources and 3,106 MW of solar resources, the 83,635 MW currently active in the queue would be reduced to 56,115 MW.

There are potentially significant implications for future congestion, the role of firm and interruptible gas supply and natural gas supply infrastructure, if older steam units are replaced by units burning natural gas. (Table 11-6)

Table 11-6 Capacity additions in active or under-construction queues by LDA (MW): At March 31, 2012¹² (See 2011 SOM, Table 11-7)

	CC	CT	Diesel	Hydro	Nuclear	Solar	Steam	Storage	Wind	Total
EMAAC	11,422	1,906	60	0	540	2,228	142	35	1,774	18,106
SWMAAC	6,146	256	35	0	1,640	12	132	0	0	8,221
WMAAC	6,941	31	46	3	139	225	180	0	1,855	9,420
Non-MAAC	13,668	1,246	226	315	2,397	641	3,586	20	25,789	47,887
Total	38,177	3,439	367	318	4,716	3,106	4,040	55	29,418	83,635

Table 11-7 shows existing generation by unit type and control zone. Existing steam (mainly coal and residual oil) and nuclear capacity is distributed across control zones.

A potentially significant change in the distribution of unit types within the PJM footprint is likely as a combined result of the location of generation resources in the queue (Table 11-5) and the location of units likely to retire. In both the EMAAC and SWMAAC LDAs, the capacity mix is likely to shift to more natural gas-fired combined cycle (CC) and combustion turbine (CT) capacity. The western part of the PJM footprint is also likely to see a shift to more natural gas-fired capacity due to changes in environmental regulations and natural gas costs, but likely will maintain a larger amount of coal steam capacity than eastern zones.

¹² WMAAC consists of the Met-Ed, PENELEC, and PPL Control Zones.

Table 11-7 Existing PJM capacity: At April 1, 2012¹³ (By zone and unit type (MW)) (See 2011 SOM, Table 11-8)

	CC	CT	Diesel	Hydroelectric	Nuclear	Solar	Steam	Storage	Wind	Total
AECO	154	667	21	0	0	40	1,110	0	8	1,998
AEP	4,912	3,676	59	1,073	2,094	0	21,716	0	1,553	35,083
AP	1,129	1,180	36	80	0	0	8,451	27	799	11,702
ATSI	685	1,661	52	0	2,134	0	7,998	0	0	12,530
BGE	0	835	7	0	1,705	0	3,007	0	0	5,554
ComEd	1,763	7,178	86	0	10,421	0	6,275	0	2,145	27,868
DAY	0	1,369	48	0	0	1	4,368	0	0	5,785
DEOK	0	842	0	0	0	0	2,350	0	0	3,192
DLCO	244	15	0	6	1,777	0	1,244	0	0	3,286
Dominion	4,025	3,761	167	3,589	3,558	0	8,283	0	0	23,383
DPL	1,125	1,773	96	0	0	0	1,825	0	0	4,819
External	974	990	0	66	439	0	6,289	0	185	8,943
JCPL	1,693	1,225	33	400	615	22	15	0	0	4,003
Met-Ed	2,041	416	42	20	805	0	844	0	0	4,167
PECO	3,209	836	4	1,642	4,541	3	1,505	1	0	11,741
PENELEC	0	344	46	513	0	0	6,834	0	630	8,366
Pepco	230	1,327	12	0	0	0	4,679	0	0	6,248
PPL	1,810	618	49	581	2,470	0	5,518	0	220	11,265
PSEG	3,080	2,863	5	5	3,493	88	2,005	0	0	11,539
Total	27,073	31,573	761	7,975	34,051	154	94,315	28	5,539	201,469

¹³ The capacity described in this section refers to all installed capacity in PJM, regardless of whether the capacity entered the RPM auction.

Table 11-8 shows the age of PJM generators by unit type.

Table 11-8 PJM capacity (MW) by age: at April 1, 2012 (See 2011 SOM Table 11-9)

Age (years)	Combined Cycle		Combustion Turbine		Diesel	Hydroelectric	Nuclear	Solar	Steam	Storage	Wind	Total
	Cycle		Turbine									
Less than 11	19,000		8,820		400	11	0	154	2,495	28	5,505	36,413
11 to 20	6,047		13,019		113	48	0	0	3,261	0	34	22,522
21 to 30	1,584		1,700		55	3,448	15,359	0	8,475	0	0	30,622
31 to 40	244		3,123		43	105	16,344	0	29,514	0	0	49,373
41 to 50	198		4,911		135	2,915	2,349	0	30,493	0	0	41,001
51 to 60	0		0		15	379	0	0	16,963	0	0	17,357
61 to 70	0		0		0	0	0	0	2,939	0	0	2,939
71 to 80	0		0		0	284	0	0	95	0	0	379
81 to 90	0		0		0	549	0	0	79	0	0	628
91 to 100	0		0		0	151	0	0	0	0	0	151
101 and over	0		0		0	84	0	0	0	0	0	84
Total	27,073		31,573		761	7,975	34,051	154	94,315	28	5,539	201,469

Table 11-9 shows the effect that the new generation in the queues would have on the existing generation mix, assuming that all non-hydroelectric generators in excess of 40 years of age retire by 2018. The expected role of gas-fired generation depends largely on projects in the queues and continued retirement of coal-fired generation.

Without the planned coal-fired capability in EMAAC, new gas-fired capability would represent 74.2 percent of all new capability in EMAAC and 81.2 percent when the derating of wind capacity is reflected.

There is a planned addition of 1,640 MW of nuclear capacity in SWMAAC. Without the planned nuclear capability in SWMAAC, new gas-fired capability would represent 97.2 percent of all new capability in the SWMAAC. In 2018, this would mean that CC and CT generators would comprise 60.9 percent of total capability in SWMAAC.

In Non-MAAC zones, if older units retire, a substantial amount of coal-fired generation would be replaced by wind generation if the units in the generation queues are constructed.¹⁴ In these zones, 89.0 percent of all generation 40 years or older is steam (primarily coal). With the retirement of these units in 2018, wind farms would comprise 21.5 percent of total capacity in Non-MAAC zones, if all queued capacity is built.

¹⁴ Non-MAAC zones consist of the AEP, AP, ComEd, DAY, DLCO, and Dominion Control Zones.

Table 11-9 Comparison of generators 40 years and older with slated capacity additions (MW): Through 2018¹⁵ (See 2011 SOM, Table 11-10)

Area	Unit Type	Capacity of Generators 40 Years or Older	Percent of Area Total	Capacity of Generators of All Ages	Percent of Area Total	Additional Capacity through 2018	Estimated Capacity 2018	Percent of Area Total
EMAAC	Combined Cycle	198	2.2%	9,261	27.2%	11,422	20,485	46.6%
	Combustion Turbine	2,484	28.0%	7,364	21.6%	1,906	6,786	15.4%
	Diesel	51	0.6%	159	0.5%	60	168	0.4%
	Hydroelectric	2,042	23.0%	2,047	6.0%	0	620	1.4%
	Nuclear	615	6.9%	8,648	25.4%	540	8,574	19.5%
	Solar	0	0.0%	153	0.4%	2,228	2,380	5.4%
	Steam	3,472	39.2%	6,460	18.9%	142	3,130	7.1%
	Storage	0	0.0%	1	0.0%	35	36	0.1%
	Wind	0	0.0%	8	0.0%	1,774	1,782	4.1%
	EMAAC Total	8,861	100.0%	34,100	100.0%	18,106	43,960	100.0%
SWMAAC	Combined Cycle	0	0.0%	230	1.9%	6,146	6,376	43.1%
	Combustion Turbine	777	14.8%	2,162	18.3%	256	1,640	11.1%
	Diesel	0	0.0%	19	0.2%	35	54	0.4%
	Nuclear	0	0.0%	1,705	14.4%	1,640	3,345	22.6%
	Solar	0	0.0%	0	0.0%	12	12	0.1%
	Steam	4,459	85.2%	7,686	65.1%	132	3,359	22.7%
	SWMAAC Total	5,236	100.0%	11,801	100.0%	8,221	14,787	100.0%
WMAAC	Combined Cycle	0	0.0%	3,851	16.2%	6,941	10,792	76.6%
	Combustion Turbine	559	6.1%	1,377	5.8%	31	850	6.0%
	Diesel	46	0.5%	136	0.6%	46	136	1.0%
	Hydroelectric	887	9.6%	1,113	4.7%	3	1,116	7.9%
	Nuclear	0	0.0%	3,275	13.8%	139	3,414	24.2%
	Solar	0	0.0%	0	0.0%	225	225	1.6%
	Steam	7,737	83.8%	13,195	55.4%	180	5,639	40.0%
	Storage	0	0.0%	0	0.0%	0	0	0.0%
	Wind	0	0.0%	850	3.6%	1,855	2,705	19.2%
	WMAAC Total	9,228	100.0%	23,798	100.0%	9,420	14,084	100.0%
Non-MAAC	Combined Cycle	0	0.0%	13,731	10.4%	13,668	27,399	19.3%
	Combustion Turbine	1,092	2.8%	20,671	15.7%	1,246	20,825	14.7%
	Diesel	53	0.1%	447	0.3%	226	621	0.4%
	Hydroelectric	1,434	3.7%	4,814	3.7%	315	5,129	3.6%
	Nuclear	1,734	4.4%	20,423	15.5%	2,397	21,086	14.9%
	Solar	0	0.0%	1	0.0%	641	642	0.5%
	Steam	34,903	89.0%	66,974	50.8%	3,586	35,657	25.1%
	Storage	0	0.0%	27	0.0%	20	48	0.0%
	Wind	0	0.0%	4,682	3.6%	25,789	30,471	21.5%
	Non-MAAC Total	39,215	100.0%	131,771	100.0%	47,887	141,877	100.0%
All Areas	Total	62,539		201,469		83,635	214,708	

¹⁵ Percentages shown in Table 11-9 are based on unrounded, underlying data and may differ from calculations based on the rounded values in the tables.

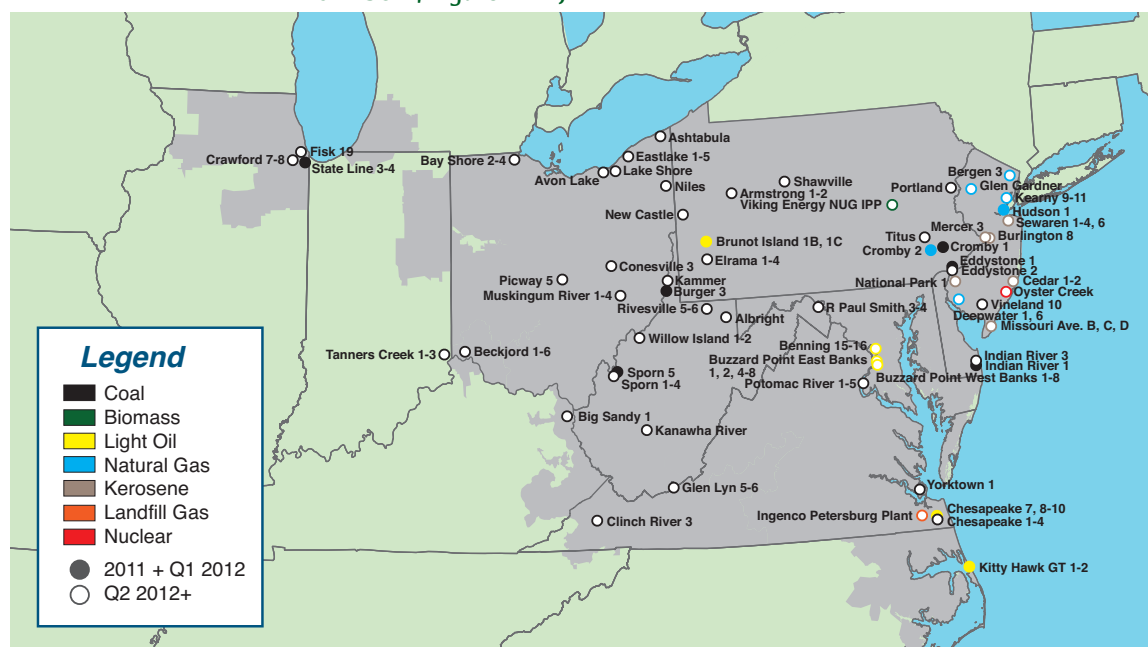
Planned Deactivations

As shown in Table 11-11, 16,547.7 MW are planning to deactivate by the end of calendar year 2019. Units planning to retire in 2012 make up 6,012 MW, or 36 percent of all planned retirements. Of planned deactivations in 2012, approximately 2,185 MW, or 36.3 percent are located in the ATSI zone. Overall, 3,951.1 MW, or 23.8 percent of all retirements, are expected in the AEP zone. Figure 11-1 shows plant retirements throughout the PJM footprint, with retirements in nearly every PJM state. A total of 1,322.3 MW retired in 2011, and a total of 955 MW retired between January and March 2012. It is expected that a total of 18,824.7 MW will have retired by 2019, with most of this capacity retiring by the end of 2015.

Table 11-10 Summary of PJM unit retirements (MW): Calendar year 2011 through 2019¹⁶ (See 2011 SOM, Table 11-11)

	MW
Retirements 2011	1,322.3
Retirements 2012	955.0
Planned Retirements 2012	6,012.0
Planned Retirements Post-2012	10,535.4
Total	18,824.7

Figure 11-1 Unit retirements in PJM Calendar year 2011 through 2019 (See 2011 SOM, Figure 11-1)



¹⁶ These totals include the retirements of Fisk 19 and Crawford 7&8.

Table 11–11 Planned deactivations of PJM units in Calendar year 2012 as of April 1, 2012¹⁷ (See 2011 SOM, Table 11–12)

Unit	Zone	MW	Projected Deactivation Date
Beckjord 1	DEOK	94.0	01-May-12
Viking Energy NUG IPP	PPL	16.0	01-May-12
Benning 15-16	Pepco	548.0	31-May-12
Buzzard Point East Banks 1, 2, 4-8	Pepco	112.0	31-May-12
Buzzard Point West Banks 1-8	Pepco	128.0	31-May-12
Eddystone 2	PECO	309.0	31-May-12
Niles	ATSI	217.0	01-Jun-12
Elrama 1-4	DLCO	460.0	01-Jun-12
Kearny 10-11	PSEG	250.0	01-Jun-12
Vineland 10	AECO	23.0	01-Sep-12
Albright	APS	283.0	01-Sep-12
Armstrong 1-2	APS	343.0	01-Sep-12
R Paul Smith 3-4	APS	115.0	01-Sep-12
Rivesville 5-6	APS	121.0	01-Sep-12
Willow Island 1-2	APS	217.0	01-Sep-12
Ashtabula	ATSI	210.0	01-Sep-12
Bay Shore 2-4	ATSI	419.0	01-Sep-12
Eastlake 1-5	ATSI	1,149.0	01-Sep-12
Lake Shore	ATSI	190.0	01-Sep-12
Potomac River 1-5	Pepco	482.0	01-Oct-12
Fisk 19	ComEd	326.0	31-Dec-12
Total		6,012.0	

¹⁷ See "Pending Deactivation Requests" <<http://pjm.com/planning/generation-retirements/~media/planning/gen-retire/pending-deactivation-requests.ashx>> (Accessed April 15, 2012).

Table 11–12 Planned deactivations of PJM units after calendar year 2012, as of April 1, 2012 (See 2011 SOM, Table 11–13)

Unit	Zone	MW	Projected Deactivation Date
Ingenco Petersburg Plant	Dominion	2.9	31-May-13
Indian River 3	DPL	169.7	31-Dec-13
Big Sandy 2	AEP	278.0	31-Dec-14
Clinch River 3	AEP	230.0	31-Dec-14
Conesville 3	AEP	165.0	31-Dec-14
Glen Lyn 5-6	AEP	325.0	31-Dec-14
Kammer	AEP	600.0	31-Dec-14
Kanawha River	AEP	400.0	31-Dec-14
Muskingum River 1-4	AEP	790.0	31-Dec-14
Picway 5	AEP	95.0	31-Dec-14
Sporn	AEP	580.0	31-Dec-14
Tanners Creek 1-3	AEP	488.1	31-Dec-14
Crawford 7-8	ComEd	532.0	31-Dec-14
Chesapeake 1-2	Dominion	222.0	31-Dec-14
Yorktown 1	Dominion	159.0	31-Dec-14
Portland	Met-Ed	401.0	07-Jan-15
Beckjord 2-6	DEOK	1,024.0	01-Apr-15
Avon Lake	ATSI	732.0	16-Apr-15
New Castle	ATSI	330.5	16-Apr-15
Titus	Met-Ed	243.0	16-Apr-15
Shawville	PENELEC	597.0	16-Apr-15
Glen Gardner	JCPL	160.0	01-May-15
Kearny 9	PSEG	21.0	01-May-15
Cedar 1-2	AECO	67.7	31-May-15
Deepwater 1, 6	AECO	158.0	31-May-15
Missouri Ave B, C, D	AECO	60.0	31-May-15
Bergen 3	PSEG	21.0	01-Jun-15
Burlington 8	PSEG	21.0	01-Jun-15
Mercer 3	PSEG	115.0	01-Jun-15
National Park 1	PSEG	21.0	01-Jun-15
Sewaren 1-4, 6	PSEG	558.0	01-Jun-15
Chesapeake 3-4	Dominion	354.0	31-Dec-15
Oyster Creek	JCPL	614.5	31-Dec-19
Total		10,535.4	

Table 11–13 HEDD Units in PJM as of March 31, 2012¹⁸ (See 2011 SOM, Table 11–14)

Unit	Zone	MW
Carlls Corner 1-2	AECO	72.6
Cedar Station 1-3	AECO	66.0
Cumberland 1	AECO	92.0
Mickleton 1	AECO	72.0
Middle Street 1-3	AECO	75.3
Missouri Ave. B,C,D	AECO	60.0
Sherman Ave.	AECO	92.0
Vineland West CT	AECO	26.0
Forked River 1-2	JCPL	65.0
Gilbert 4-7, 9, C1-C4	JCPL	446.0
Glen Gardner A1-A4, B1-B4	JCPL	160.0
Lakewood 1-2	JCPL	316.1
Parlin NUG	JCPL	114.0
Sayreville C1-C4	JCPL	224.0
South River NUG	JCPL	299.0
Werner C1-C4	JCPL	212.0
Bayonne	PSEG	118.5
Bergen 3	PSEG	21.0
Burlington 111-114, 121-124, 91-94, 8	PSEG	557.0
Camden	PSEG	145.0
Eagle Point 1-2	PSEG	127.1
Edison 11-14, 21-24, 31-34	PSEG	504.0
Elmwood	PSEG	67.0
Essex 101-104, 111-114, 121,124	PSEG	536.0
Kearny 9-11, 121-124	PSEG	446.0
Linden 1-2	PSEG	1,230.0
Mercer 3	PSEG	115.0
National Park	PSEG	21.0
Newark Bay	PSEG	120.2
Pedricktown	PSEG	120.3
Salem 3	PSEG	38.4
Sewaren 6	PSEG	105.0
Total		6,663.5

¹⁸ See "Current New Jersey Turbines that are HEDD Units," <http://www.state.nj.us/dep/workgroups/docs/apcrule_20110909turbinelist.pdf> (Accessed April 1, 2012)

Actual Generation Deactivations in 2012

Table 11-14 shows unit deactivations for 2012.¹⁹ A total of 955 MW retired in January through March 2012, including 440.0 MW from American Electric Power Company, Inc., and 515.0 MW from Edison International. The retirements were 955.0 MW of coal steam generation. Of these retirements, 440.0 MW were in the AEP zone, and 515.0 MW were in the ComEd zone.

Table 11-14 Unit deactivations: January through March 2012 (See 2011 SOM, Table 11-15)

Company	Unit Name	ICAP	Primary Fuel	Zone Name	Age (Years)	Retirement Date
American Electric Power Company, Inc.	Sporn 5	440.0	Coal	AEP	51	Feb 13, 2012
Edison International	State Line 3	197.0	Coal	ComEd	56	Mar 25, 2012
Edison International	State Line 4	318.0	Coal	ComEd	51	Mar 25, 2012

¹⁹ "PJM Generator Deactivations," PJM.com <<http://pjm.com/planning/generation-retirements/gr-summaries.aspx>> (April 15, 2012).