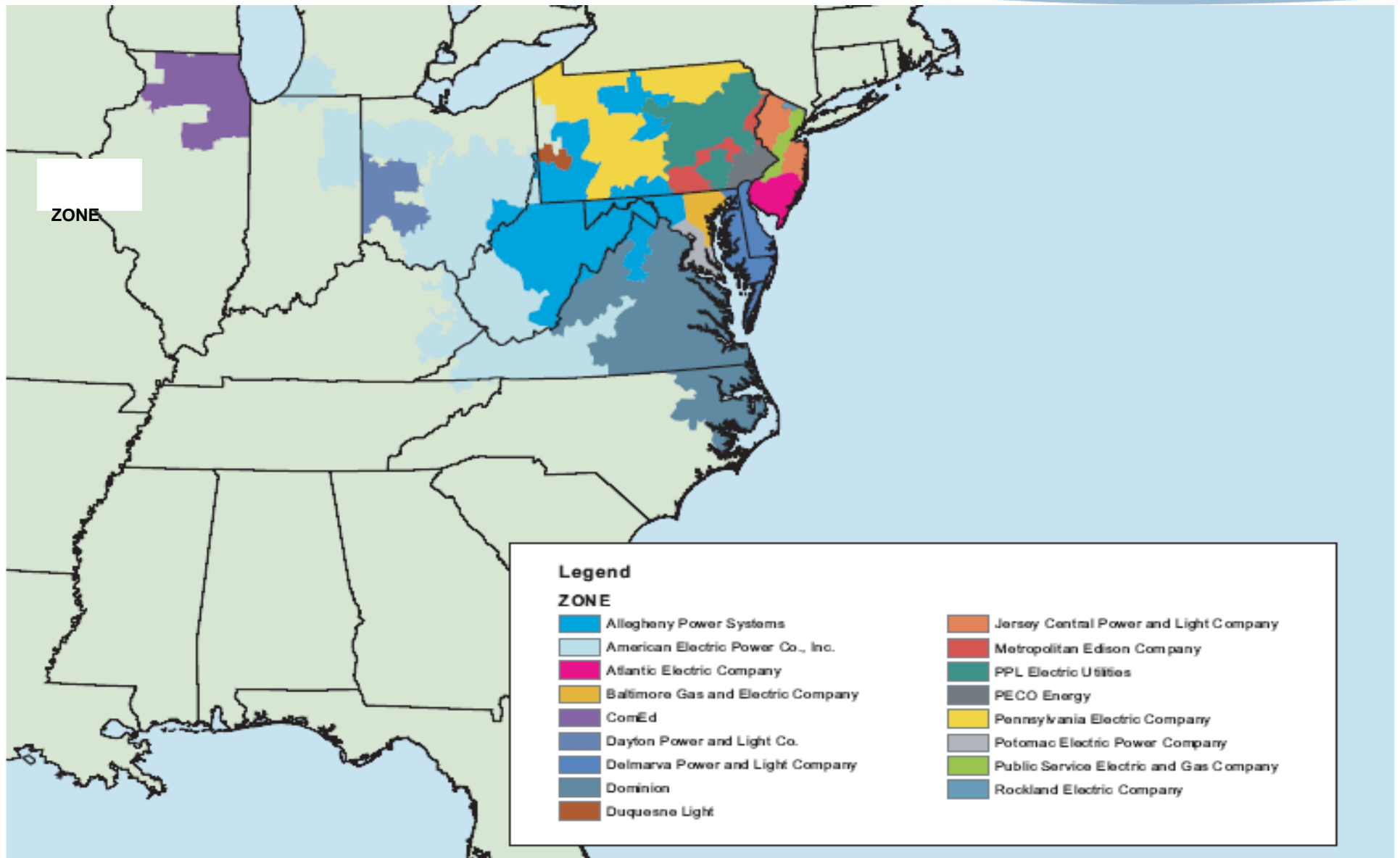


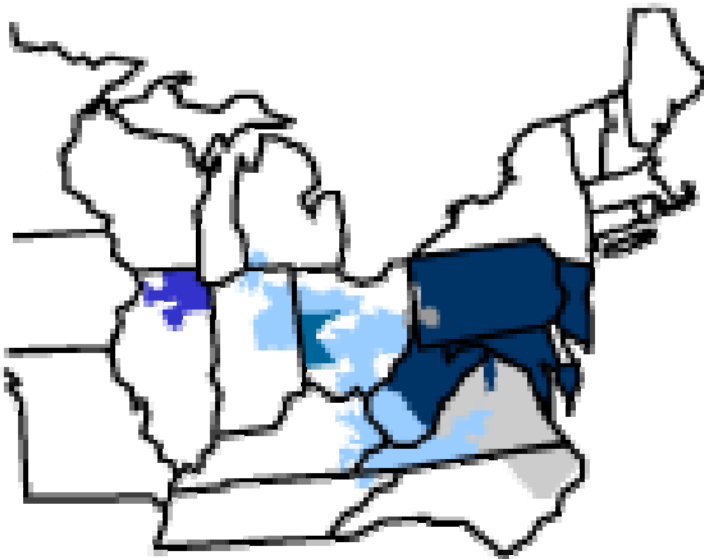


Working to Perfect the Flow of Energy

RGGI Leakage Workshop

*Joe Kerecman
June 15, 2006*





PJM RTO

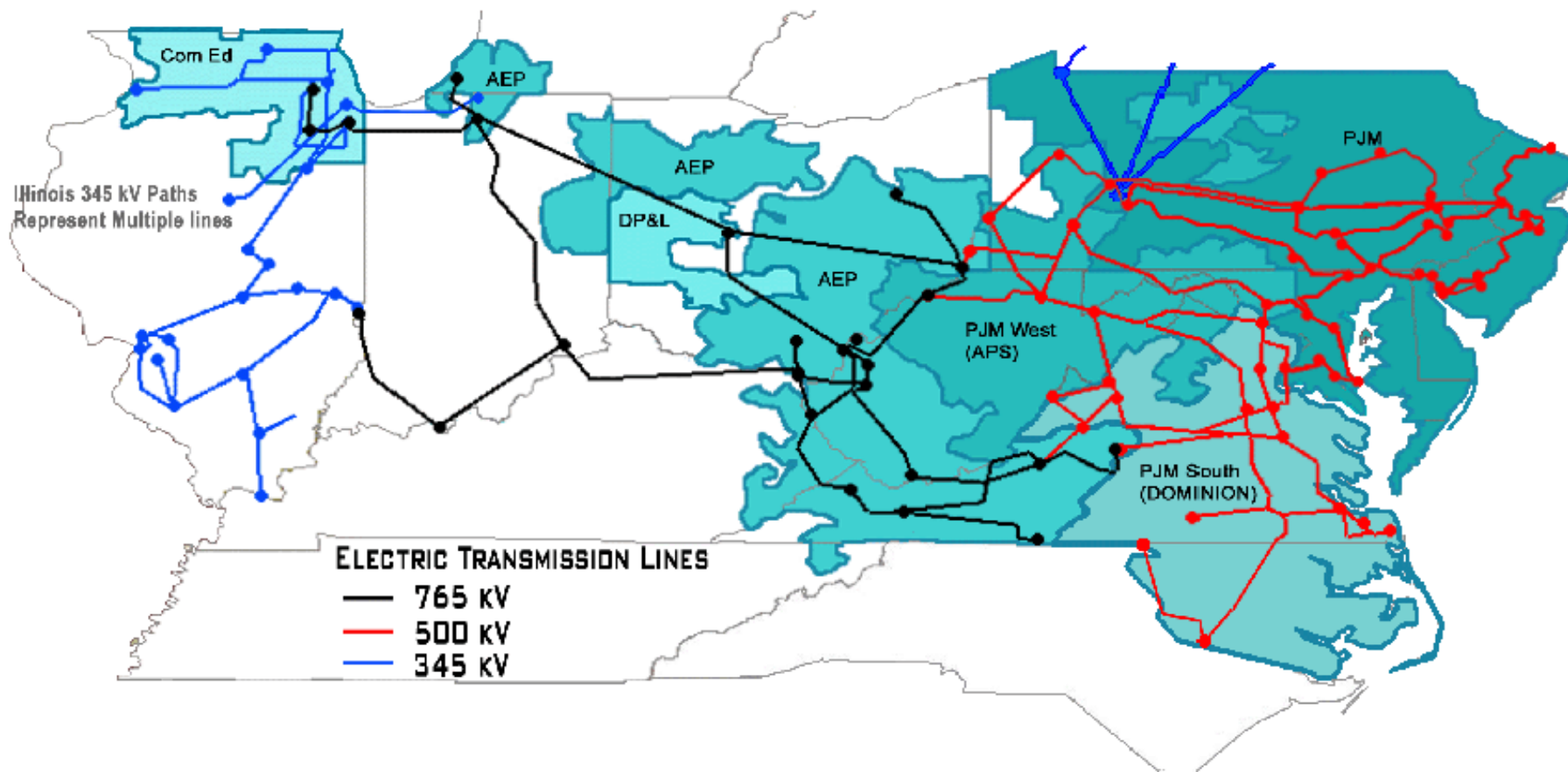
Generating Units	1,082
Generation Capacity	163,806 MW
Peak Load	133,763 MW
Annual Energy	700 million MW
Area (Square Miles)	164,260
Miles of Transmission	56,070

Population Served	51 Million
States (+ D.C.)	13 states + D.C.
Members	350+
Transmission Customers	100+

PJM - Full Service RTO

- Control Area Operator
- Transmission Provider
- Market Administrator
- Regional Transmission Planner
- NERC Reliability Coordinator

PJM - Backbone Transmission Systems



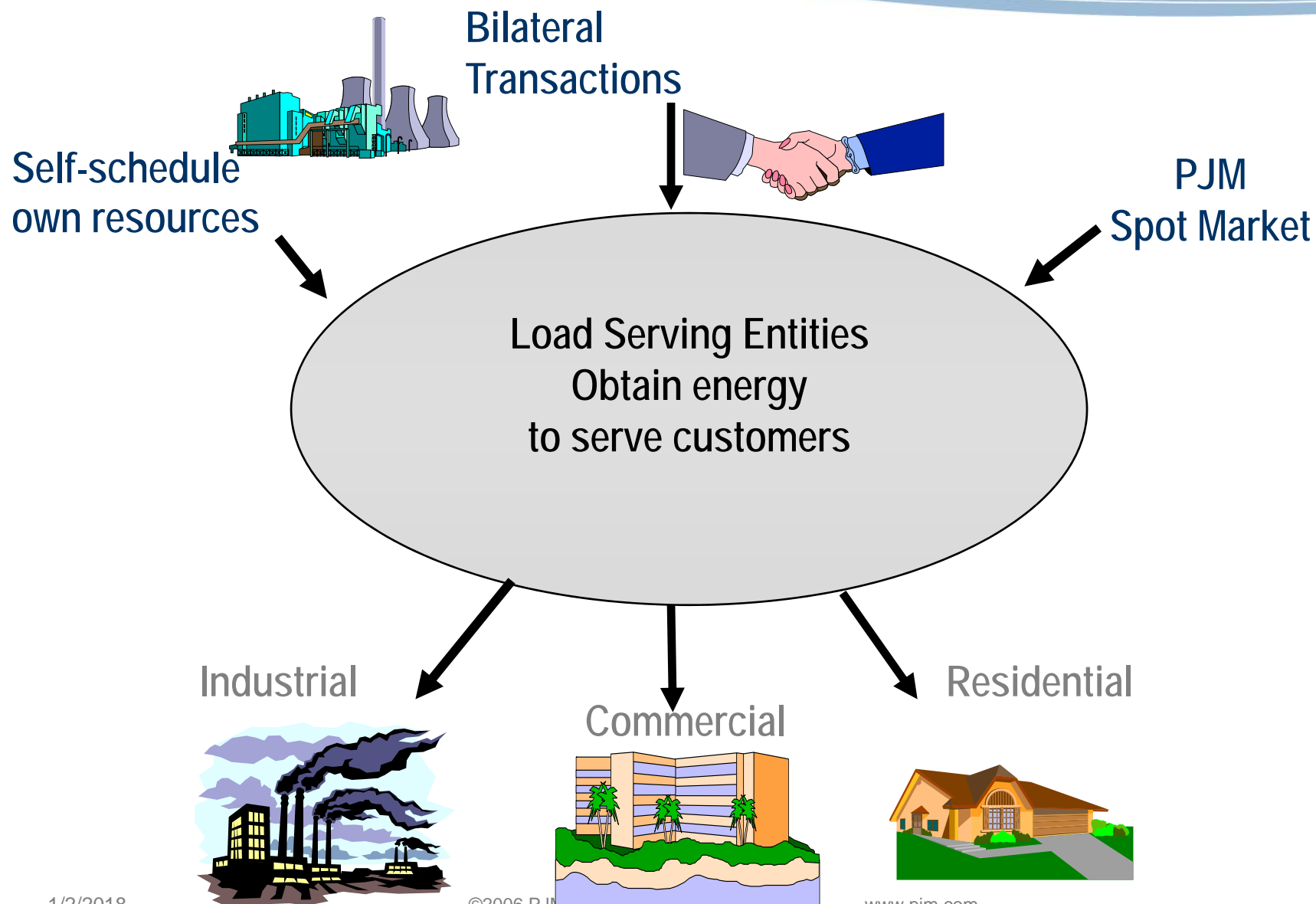
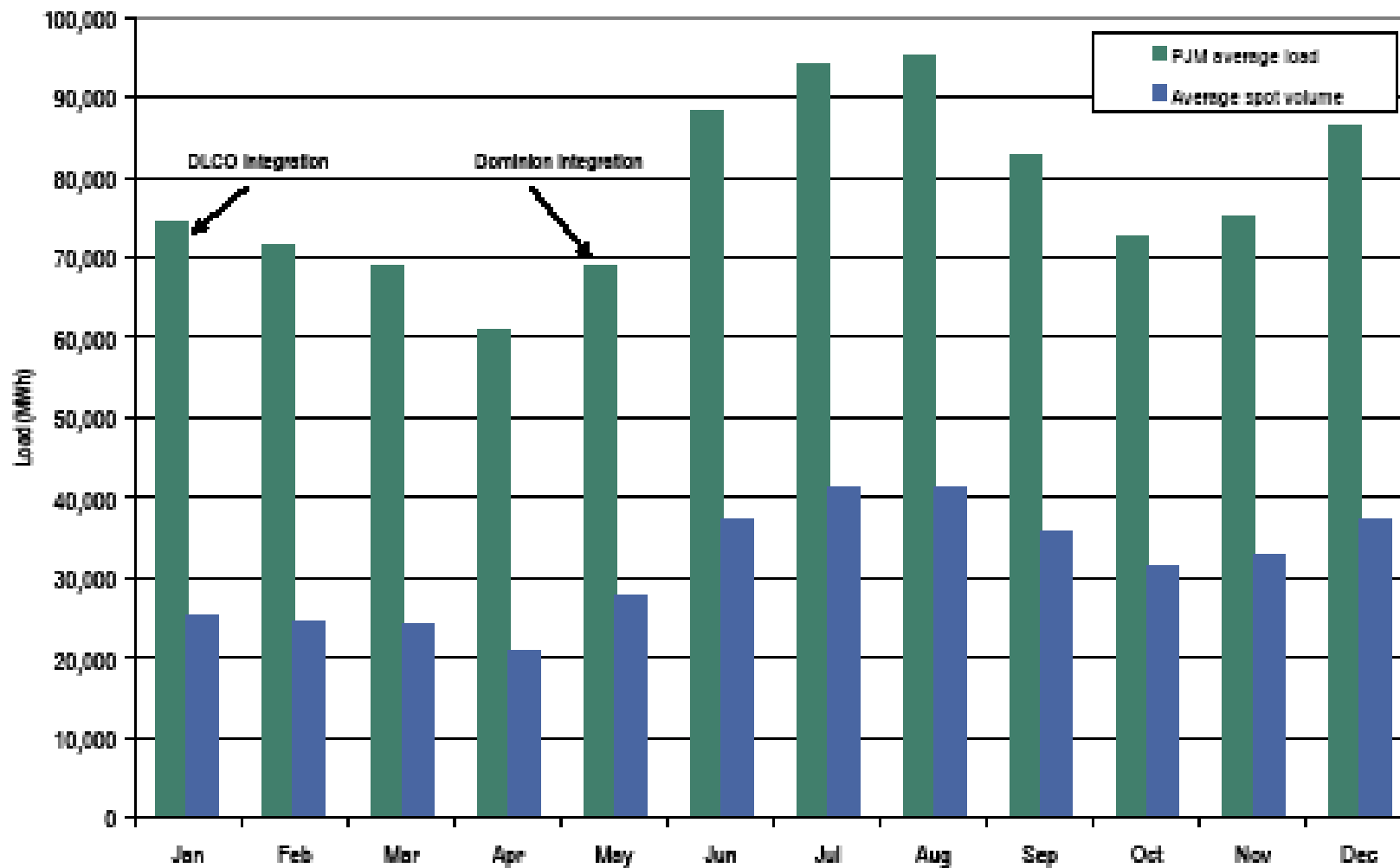
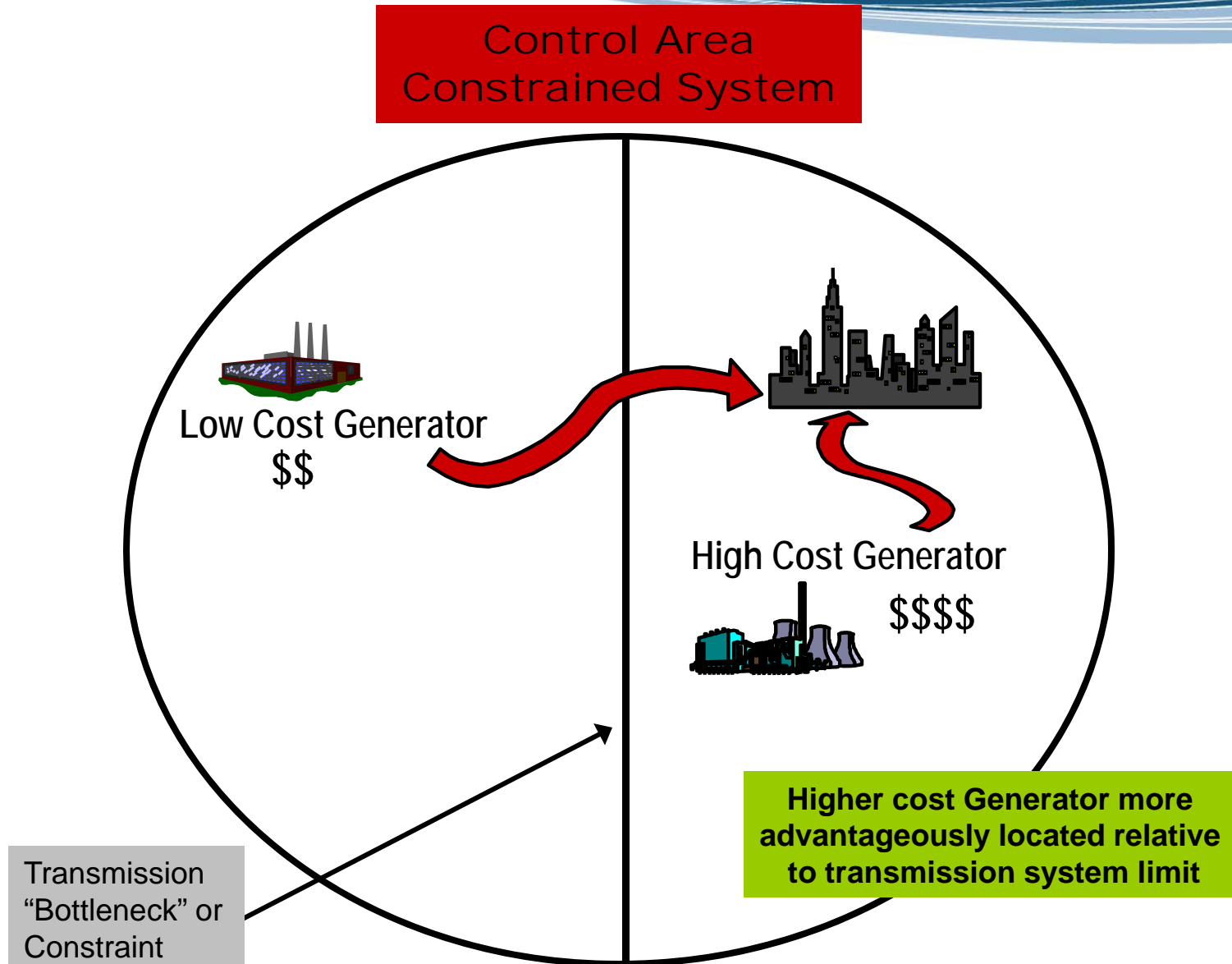


Figure 2-12 - PJM average hourly load and Spot Market volume: Calendar year 2005





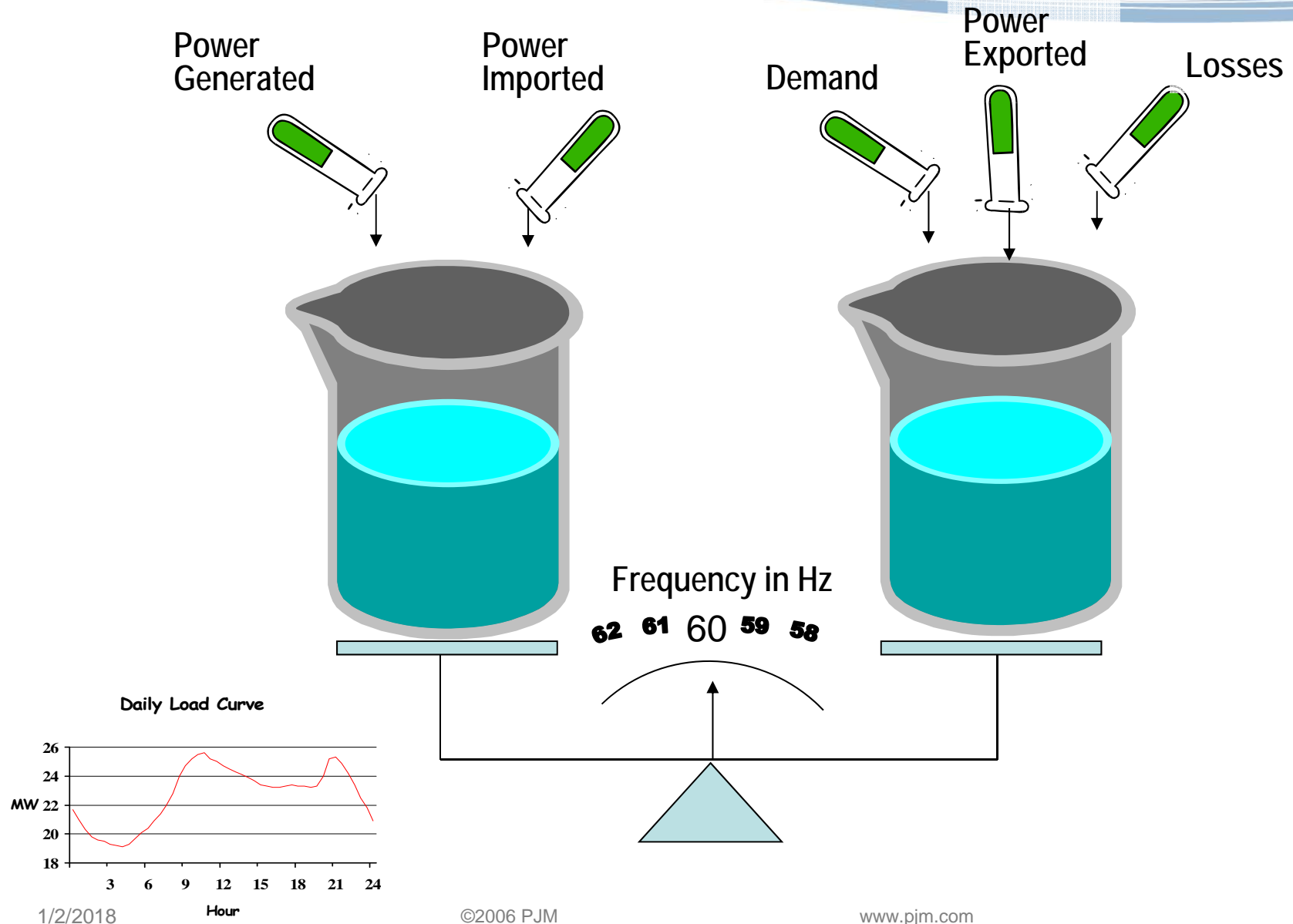


Figure 4-3 - PJM import and export transaction volume history: Calendar years 1999 to 2005

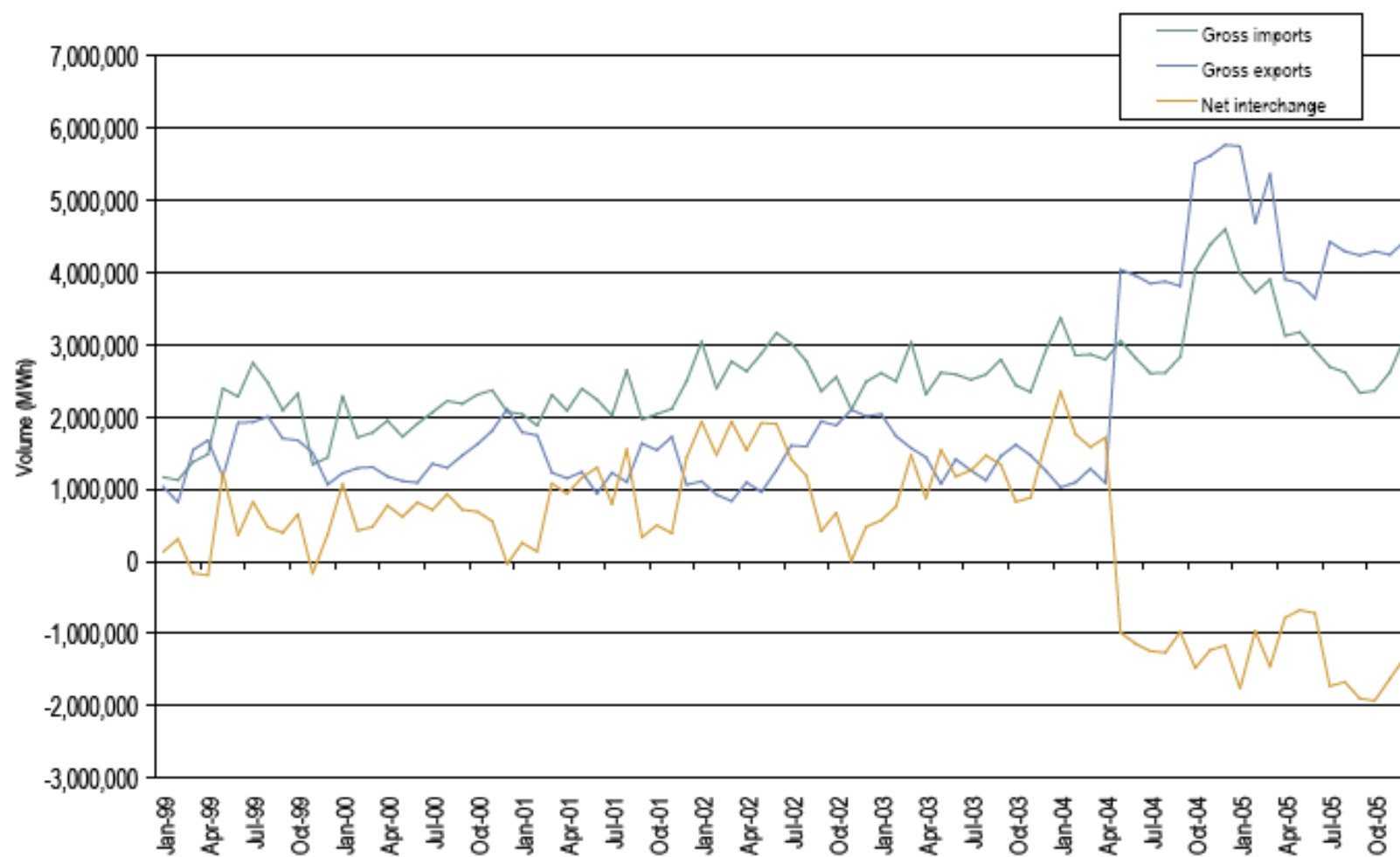
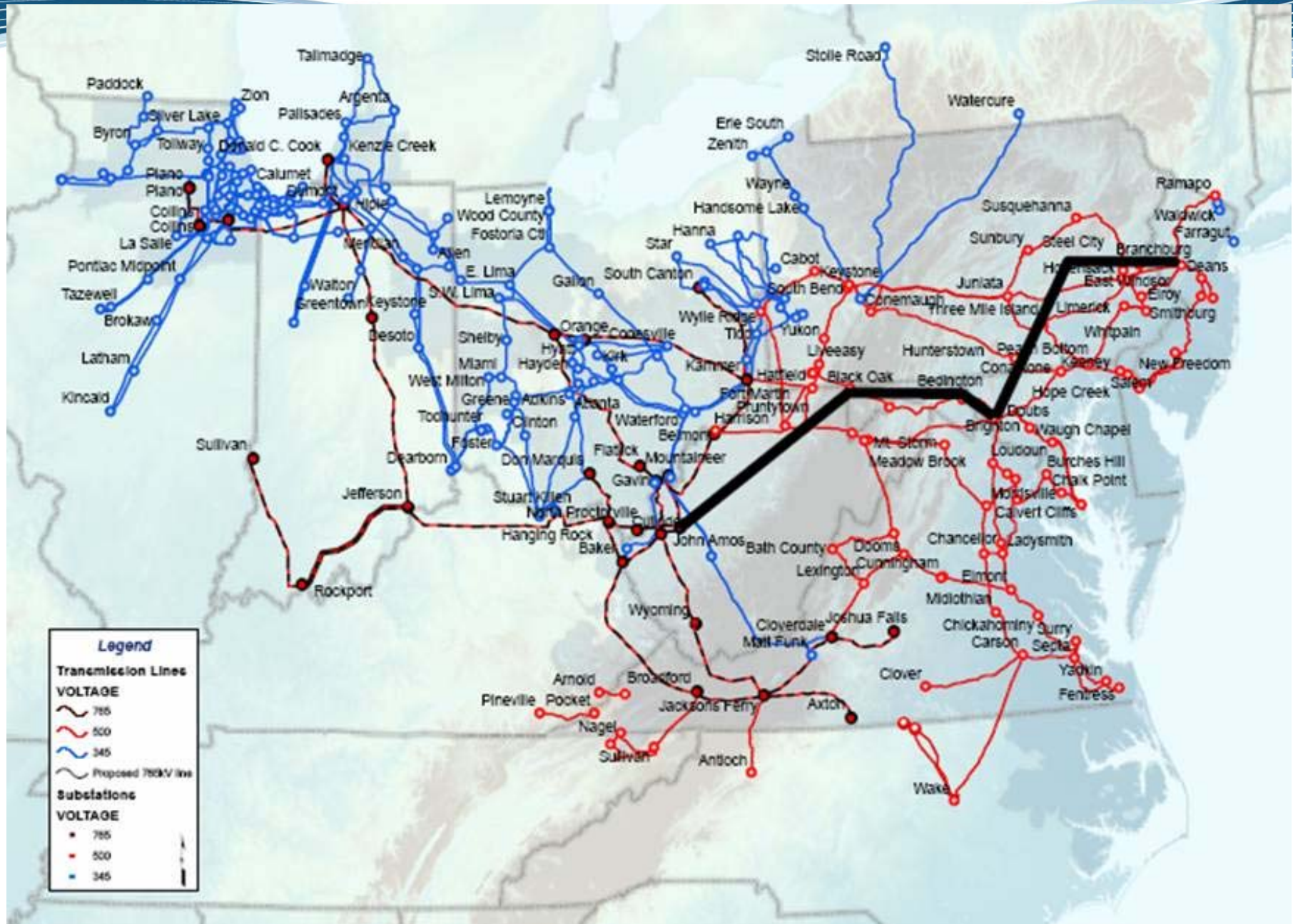


Table 4-1 - Net interchange volume by interface (MWh x 1,000): Calendar year 2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
FE	(343.1)	71.5	5.7	178.2	344.8	122.6	138.2	179.0	174.7	210.5	221.7	205.8	1,509.6
NYIS	(628.4)	(441.5)	(569.2)	(502.1)	(715.4)	(441.4)	(443.2)	(348.0)	(452.3)	(625.9)	(389.7)	(342.9)	(5,900.0)
VAP	(237.5)	(160.4)	(188.2)	(282.7)	NA	NA	NA	NA	NA	NA	NA	NA	(868.8)
ALTE	(112.5)	(145.3)	(169.8)	(106.6)	(114.2)	(141.8)	(166.6)	(109.7)	(105.8)	(109.2)	(106.2)	(109.1)	(1,496.8)
ALTW	(132.2)	(112.8)	(242.3)	(223.2)	(140.8)	(175.5)	(154.7)	(118.0)	(116.6)	(117.4)	(138.3)	(130.8)	(1,802.6)
AMRN	(24.6)	64.0	(3.4)	(173.3)	(91.9)	(185.2)	(179.5)	(168.8)	(171.6)	(188.9)	(161.0)	(126.5)	(1,410.7)
CILC	1.9	7.1	7.4	0.0	0.5	0.9	(1.2)	0.0	0.7	(4.9)	(33.0)	(18.1)	(38.7)
IP	1,019.0	727.5	706.6	394.5	366.8	317.4	319.4	316.1	310.8	328.7	328.8	333.6	5,469.2
MEC	(539.5)	(445.6)	(306.2)	(517.6)	(642.9)	(456.4)	(571.8)	(632.4)	(700.4)	(768.0)	(559.3)	(774.1)	(6,914.2)
NIPS	22.0	41.2	132.7	(4.3)	(0.1)	(0.8)	(0.2)	(0.3)	(15.5)	(0.3)	(1.1)	(0.1)	173.2
WEC	(415.6)	(404.1)	(556.1)	(93.8)	(84.5)	(103.6)	(126.9)	(129.9)	(124.7)	(129.2)	(112.5)	(99.0)	(2,379.9)
MECS	(952.1)	(652.8)	(677.1)	(118.7)	(54.3)	(118.2)	(138.5)	(126.2)	(155.0)	(92.3)	(89.1)	(92.1)	(3,266.4)
CPLC	(161.7)	(165.0)	(123.3)	(174.2)	(91.4)	(150.9)	(216.6)	(209.7)	(203.1)	(71.2)	127.9	148.8	(1,290.4)
CPLW	(72.2)	(67.1)	(72.2)	(71.3)	(50.5)	(71.1)	(73.3)	(67.8)	(70.1)	(74.7)	(20.7)	(73.7)	(784.7)
CIN	(195.0)	(103.7)	(142.5)	219.3	332.7	8.1	(286.9)	(359.6)	(316.0)	(329.6)	(176.6)	(36.3)	(1,386.1)
DUK	250.8	229.3	374.2	335.4	5.5	290.7	207.4	146.9	(117.0)	10.4	(56.1)	143.2	1,820.7
EKPC	(7.3)	(3.3)	(15.3)	(28.6)	(27.6)	14.2	(6.1)	(16.9)	(7.9)	(37.5)	(72.3)	(121.9)	(330.5)
IPL	(14.2)	1.8	4.7	(0.3)	(0.3)	0.2	0.0	0.0	(0.2)	(0.2)	(0.7)	(1.3)	(10.5)
LGEE	71.4	67.1	84.0	36.3	46.3	44.9	48.6	33.9	50.5	(1.1)	33.7	(0.1)	515.5
OVEC	748.8	703.6	743.3	707.6	923.9	859.4	827.1	843.8	831.5	818.8	842.8	849.1	9,699.7
TVA	(38.6)	(176.3)	(447.9)	(356.2)	(681.7)	(531.2)	(904.9)	(904.4)	(711.4)	(730.0)	(1,266.0)	(1,089.2)	(7,837.8)
CWLP	0.0	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	(18.7)	0.0	0.0	(18.0)
Total	(1,760.6)	(964.5)	(1,454.5)	(781.6)	(675.1)	(717.7)	(1,729.7)	(1,672.0)	(1,899.4)	(1,930.7)	(1,627.7)	(1,334.7)	(16,548.2)

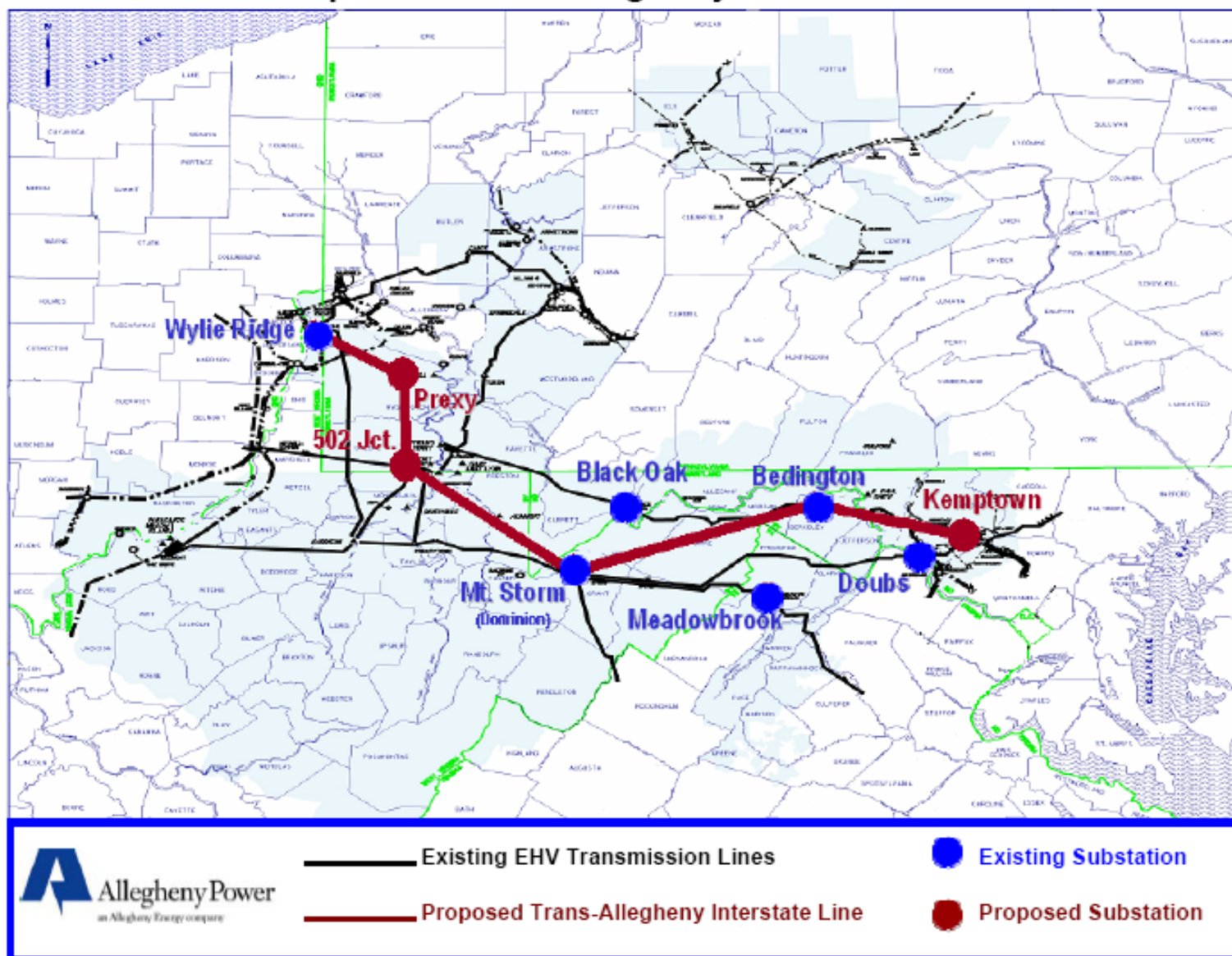


- Timeline: 8 years to complete (2014)
- AEP terminus of 3 765 kV connections and 8000 mw of generation
- Low impedance of 765 kV network makes geographically distant generation sources “close”

Benefits:

- 1) midwest to east transfer capability improvement of 5,000mw
- 2) reduction of transmission losses by 280 mw during peak loading
- 3) spawn transmission investment by incumbents that will integrate

Allegheny Power Proposed Trans-Allegheny Interstate Line

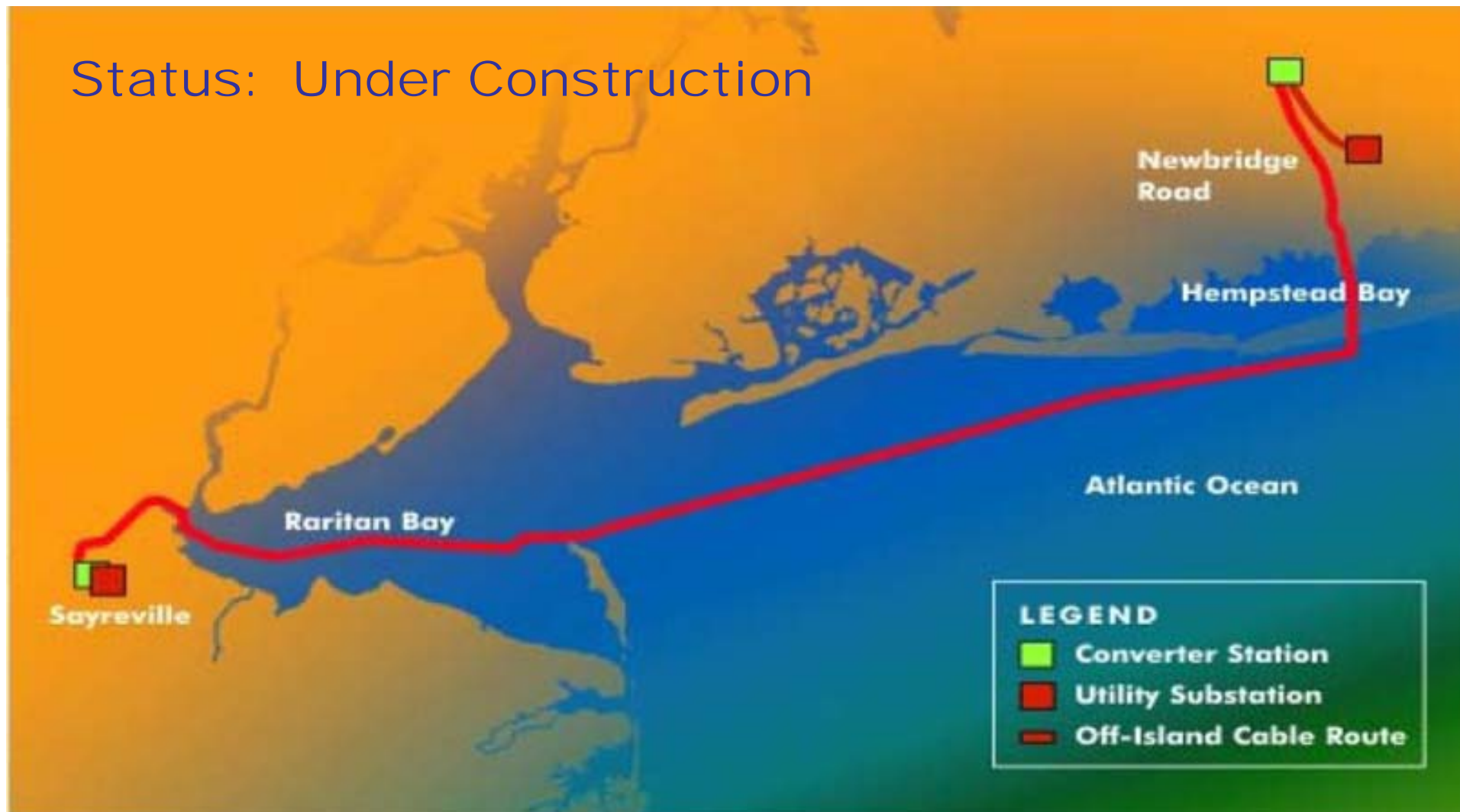


Trans-Allegheny Interstate Line -

500 kV Transmission Line across the Allegheny Power service territory

- **Proposed Length:** 330 miles
- **Total Cost:** \$1.4 Billion
- **Benefits:**
 - 1) Improve reliability of transmission infrastructure
 - 2) Allow cost-efficient generation to reach more consumers
 - 3) Increase west-to-east transfer by 3,800 mw
 - 4) Reduce congestion and address system stability

Status: Under Construction



Project #G07 Sayreville HVDC is a Neptune Regional Transmission System, LLC merchant transmission interconnection request consisting of one HVDC connection from PJM to New York. The connection originates near the Sayreville 230 kV substation in PJM and will terminate at either the West 49th Street 230 kV substation in New York City or the Newbridge Road 138 kV substation on Long Island. The developer has requested Firm Transmission Withdrawal Rights in the amount of 685 MW and Non-Firm Transmission Withdrawal Rights in the amount of 105 MW at the HVDC terminal in PJM. The HVDC terminal will be located in Sayreville, NJ in the vicinity of the Sayreville (a.k.a. Raritan River) 230 kV substation. Project #G32 Sayreville HVDC is scheduled for commercial operation in 2006.

