

SECTION 8 – FINANCIAL TRANSMISSION AND AUCTION REVENUE RIGHTS

Financial Transmission Rights (FTRs) and Auction Revenue Rights (ARRs) give transmission service customers and PJM members an offset against congestion costs in the Day-Ahead Energy Market. An FTR provides the holder with revenues, or charges, equal to the difference in congestion prices in the Day-Ahead Energy Market across the specific FTR transmission path. An ARR is a related product that provides the holder with revenues, or charges, based on the price differences across the specific ARR transmission path that result from the Annual FTR Auction. FTRs and ARRs provide a hedge against congestion costs, but neither FTRs nor ARRs provide a guarantee that transmission service customers will not pay congestion charges. ARR and FTR holders do not need to physically deliver energy to receive ARR or FTR credits and neither instrument represents a right to the physical delivery of energy.

In PJM, FTRs have been available to network service and long-term, firm, point-to-point transmission service customers as a hedge against congestion costs since the inception of locational marginal pricing (LMP) on April 1, 1998. Effective June 1, 2003, PJM replaced the allocation of FTRs with an allocation of ARRs and an associated Annual FTR Auction.¹ Since the introduction of this auction, FTRs have been available to all transmission service customers and PJM members. Network service and firm point-to-point transmission service customers can take allocated ARRs or the underlying FTRs through a self scheduling process. On June 1, 2007, PJM implemented marginal losses in the calculation of LMP. Since then, FTRs have been valued based on the difference in congestion prices rather than the difference in LMPs.

Firm transmission service customers have access to ARRs/FTRs because they pay the costs of the transmission system that enables firm energy delivery. Firm transmission service customers receive requested ARRs/FTRs to the extent that they are consistent both with the physical capability of the transmission system and with ARR/FTR requests of other eligible customers.

The *2010 Quarterly State of the Market Report for PJM: January through March* focuses on the Monthly Balance of Planning Period FTR Auctions during the 2009 to 2010 FTR/ARR planning period. The 2009 to 2010 planning period covers June 1, 2009, through May 31, 2010.

¹ 87 FERC ¶ 61,054 (1999).

Overview

Financial Transmission Rights

Market Structure

- Supply.** PJM operates an Annual FTR Auction for all control zones in the PJM footprint. PJM conducts Monthly Balance of Planning Period FTR Auctions for the remaining months of the planning period, to allow participants to buy and sell any residual transmission capability. PJM also runs a Long Term FTR Auction for the three consecutive planning years immediately following the planning year during which the Long Term FTR Auction is conducted. The first Long Term FTR Auction was conducted during the 2008 to 2009 planning period and covers three consecutive planning periods between 2009 and 2012. The second Long Term FTR Auction was conducted during the 2009 to 2010 planning period and covers three consecutive planning periods between 2010 and 2013. In addition, PJM administers a secondary bilateral market to allow participants to buy and sell existing FTRs. FTR products include FTR obligations and FTR options. FTR options are not available in the Long Term FTR Auction. For each time period, there are three FTR products: 24-hour, on peak and off peak. FTRs have terms varying from one month to three years. FTR supply is limited by the capability of the transmission system to accommodate simultaneously the set of requested FTRs and the numerous combinations of FTRs. Market participants can also sell FTRs. In the Monthly Balance of Planning Period FTR Auctions for the first ten months (June 2009 through March 2010) of the 2009 to 2010 planning period, there were 2,567,353 MW of FTR sell offers.
- Demand.** There is no limit on FTR demand in any FTR auction. In the Monthly Balance of Planning Period FTR Auctions for the first ten months (June 2009 through March 2010) of the 2009 to 2010 planning period, total FTR buy bids were 7,354,546 MW.
- FTR Credit Issues.** There were no participants that defaulted during the first three months of 2010.

- **Patterns of Ownership.** The ownership concentration of cleared FTR buy bids resulting from the 2009 to 2010 Annual FTR Auction was low to moderate for FTR obligations and high for FTR options. The level of concentration is only descriptive and is not a measure of the competitiveness of FTR market structure as the ownership positions resulted from a competitive auction. In order to provide additional information about the ownership of prevailing flow and counter flow FTRs, the Market Monitoring Unit (MMU) categorized all participants owning FTRs in PJM as either physical or financial. Physical entities include utilities and customers which primarily take physical positions in PJM markets. Financial entities include banks and hedge funds which primarily take financial positions in PJM markets. Financial entities own 69 percent of prevailing flow and 84 percent of counter flow Monthly Balance of Planning Period FTRs for the first three months of 2010. Overall, financial entities own 76 percent of all Monthly Balance of Planning Period FTRs during the same time period.

Market Performance

- **Volume.** For the first ten months of the 2009 to 2010 planning period, the Monthly Balance of Planning Period FTR Auctions cleared 820,498 MW (11.2 percent) of FTR buy bids and 229,394 MW (9.0 percent) of FTR sell offers.
- **Price.** The weighted-average price paid for buy-bid FTRs in the Monthly Balance of Planning Period FTR Auctions for the first three months of 2010 was \$0.15 per MWh.
- **Revenue.** The Monthly Balance of Planning Period FTR Auctions generated \$17.9 million in net revenue for all FTRs during the first ten months of the 2009 to 2010 planning period.
- **Revenue Adequacy.** FTRs were 100 percent revenue adequate for the 2008 to 2009 planning period. FTRs were paid at 98.7 percent of the target allocation level for the first ten months of the 2009 to 2010 planning period. Congestion revenues are allocated to FTR holders based on FTR target allocations. PJM collected \$748 million of FTR revenues during the first ten months of the 2009 to 2010 planning period and \$1,743.8 million during the 2008 to 2009 planning period. For the first ten months of the 2009 to 2010 planning period, the top sink and top source with the highest positive FTR target allocations were the AP Control Zone and the Mount Storm aggregate. For the first ten months

of the 2009 to 2010 planning period, the top sink and top source with the largest negative FTR target allocations was the Western Hub.

Auction Revenue Rights

Market Structure

- **ARR Reassignment for Retail Load Switching.** When retail load switches among load-serving entities (LSEs), a proportional share of the ARRs and their associated revenue are reassigned from the LSE losing load to the LSE gaining load. ARR reassignment occurs only if the LSE losing load has ARRs with a net positive economic value. An LSE gaining load in the same control zone is allocated a proportional share of positively valued ARRs within the control zone based on the shifted load. There were 16,933 MW of ARRs associated with approximately \$329,600 per MW-day of revenue that were reassigned in the first ten months of the 2009 to 2010 planning period. There were 15,326 MW of ARRs associated with approximately \$533,900 per MW-day of revenue that were reassigned for the full 2008 to 2009 planning period.

Market Performance

- **Revenue Adequacy.** During the 2009 to 2010 planning period, ARR holders will receive \$1,273.5 million in ARR credits, with an average hourly ARR credit of \$1.33 per MWh. During the 2009 to 2010 planning period, the ARR target allocations were \$1,273.5 million while PJM collected \$1,347.7 million from the combined Annual and Monthly Balance of Planning Period FTR Auctions through March 2010, making ARRs revenue adequate. During the 2008 to 2009 planning period, ARR holders received \$2,361.3 million in ARR credits, with an average hourly ARR credit of \$2.41 per MWh. For the 2008 to 2009 planning period, the ARR target allocations were \$2,361.3 million while PJM collected \$2,489.6 million from the combined Annual and Monthly Balance of Planning Period FTR Auctions, making ARRs revenue adequate.
- **ARRs and FTRs as a Hedge against Congestion.** The effectiveness of ARRs and FTRs as a hedge against actual congestion can be measured several ways. The first is to compare the revenue received by ARR holders to the congestion costs experienced by these ARR holders. The second is to compare the congestion revenue received by FTR holders to the costs of those FTRs. The final and comprehensive

method is to compare the revenue received by all ARR and FTR holders to total actual congestion costs in the Day-Ahead Energy Market and the balancing energy market within PJM. For the 2008 to 2009 planning period, all ARRs and FTRs hedged more than 100 percent of the congestion costs within PJM. During the first ten months of the 2009 to 2010 planning period, total ARR and FTR revenues hedged 95.4 percent of the congestion costs within PJM.

- ARRs and FTRs as a Hedge against Total Energy Costs.** The hedge provided by ARRs can also be measured by comparing the value of the ARR and self-scheduled FTRs that sink in a zone to the cost of real time energy in the zone. This is a measure of the value of the hedge against real time energy costs provided by ARRs received by loads during this period. The total value of ARRs was 4.3 percent of the total real time energy charges for January through March of 2010. The hedge provided by FTRs can also be measured by comparing the value of the FTRs that sink in a zone to the cost of real time energy in the zone. The total net value of FTRs was -0.1 percent of the total real time energy charges for January through March 2010 because the purchase cost exceeded the value of the credits. When combined, the sum is a measure of the total value of ARRs plus FTRs. The total value of ARRs plus FTRs was 4.2 percent of the total real time energy charges for January through March 2010.

Conclusion

The annual ARR allocation and the FTR auctions provide market participants with hedging instruments. These instruments can be used for hedging positions or for speculation. The Long Term FTR Auction, the Annual FTR Auction and the Monthly Balance of Planning Period FTR Auctions provide a market valuation of FTRs. The FTR auction results for the 2009 to 2010 planning period were competitive and succeeded in providing all qualified market participants with equal access to FTRs.

FTRs were paid at 98.7 percent of the target allocation level for the first ten months of the 2009 to 2010 planning period. Revenue adequacy for a planning period is not final until the end of the period.

Revenue adequacy must be distinguished from the adequacy of FTRs as a hedge against congestion. Revenue adequacy is a narrower concept that compares the revenues available to cover congestion across specific paths

for which FTRs were available and purchased. The adequacy of FTRs as a hedge against congestion compares FTR revenues to the costs of purchasing the FTRs.

The total of ARR and FTR revenues hedged 95.4 percent of the congestion costs in the Day-Ahead Energy Market and the balancing energy market within PJM for the first ten months of the 2009 to 2010 planning period. The ARR and FTR revenue adequacy results are aggregate results and all those paying congestion charges were not necessarily hedged at that level. Aggregate numbers do not reveal the underlying distribution of ARR and FTR holders, their revenues or those paying congestion.

Financial Transmission Rights

Patterns of Ownership

Table 8-1 Monthly Balance of Planning Period FTR Auction patterns of ownership by FTR direction: January through March 2010 (See 2009 SOM, Table 8-5)

Organization Type	FTR Direction		All
	Prevailing Flow	Counter Flow	
Physical	31.5%	16.2%	24.5%
Financial	68.5%	83.8%	75.5%
Total	100.0%	100.0%	100.0%

Market Performance

Volume

Table 8-2 Monthly Balance of Planning Period FTR Auction market volume: January through March 2010 (See 2009 SOM, Table 8-9)

Monthly Auction	Hedge Type	Trade Type	Bid and Requested Count	Bid and Requested Volume (MW)	Cleared Volume (MW)	Cleared Volume	Uncleared Volume (MW)	Uncleared Volume
Jan-10	Obligations	Buy bids	156,274	716,812	79,724	11.1%	637,088	88.9%
		Sell offers	46,206	165,858	11,224	6.8%	154,635	93.2%
	Options	Buy bids	391	11,953	1,621	13.6%	10,332	86.4%
		Sell offers	1,579	33,020	5,686	17.2%	27,334	82.8%
Feb-10	Obligations	Buy bids	129,946	656,279	78,354	11.9%	577,925	88.1%
		Sell offers	40,605	146,757	10,364	7.1%	136,393	92.9%
	Options	Buy bids	622	13,993	1,119	8.0%	12,874	92.0%
		Sell offers	1,702	33,125	6,955	21.0%	26,170	79.0%
Mar-10	Obligations	Buy bids	120,727	607,270	90,189	14.9%	517,081	85.1%
		Sell offers	56,858	201,797	12,542	6.2%	189,255	93.8%
	Options	Buy bids	331	8,420	749	8.9%	7,672	91.1%
		Sell offers	1,224	23,960	5,326	22.2%	18,634	77.8%
2008/2009*	Obligations	Buy bids	2,143,034	9,449,644	782,007	8.3%	8,667,637	91.7%
		Sell offers	504,152	1,991,496	226,544	11.4%	1,764,952	88.6%
	Options	Buy bids	11,754	773,793	22,209	2.9%	751,584	97.1%
		Sell offers	6,550	180,904	32,203	17.8%	148,701	82.2%
2009/2010**	Obligations	Buy bids	1,721,619	7,146,995	803,994	11.2%	6,343,001	88.8%
		Sell offers	602,251	2,135,525	163,581	7.7%	1,971,944	92.3%
	Options	Buy bids	4,323	207,551	16,504	8.0%	191,047	92.0%
		Sell offers	27,725	431,828	65,813	15.2%	366,015	84.8%

* Shows Twelve Months for 2008/2009; ** Shows ten months ended 31-Mar-2010 for 2009/2010

Table 8-3 Monthly Balance of Planning Period FTR Auction buy-bid bid and cleared volume (MW per period): January through March 2010 (See 2009 SOM, Table 8-10)

Monthly Auction	MW Type	Current Month	Second Month	Third Month	Q1	Q2	Q3	Q4	Total
Jan-10	Bid	393,426	127,235	90,338				117,766	728,765
	Cleared	55,052	10,039	5,963				10,290	81,345
Feb-10	Bid	363,548	100,591	91,281				114,853	670,272
	Cleared	53,791	9,948	6,304				9,430	79,473
Mar-10	Bid	374,155	108,329	106,100				27,107	615,690
	Cleared	66,677	10,555	9,864				3,842	90,938

Table 8-4 Secondary bilateral FTR market volume and weighted-average cleared prices (Dollars per MWh): Planning periods 2008 to 2009 and 2009 to 2010² (See 2009 SOM, Table 8-11)

Planning Period	Hedge Type	Class Type	Volume (MW)	Price
2008/2009	Obligation	24-Hour	800	\$0.46
		On Peak	1,133	\$1.14
		Off Peak	9	\$0.84
		Total	1,942	\$0.59
	Option	24-Hour	0	NA
	Obligation	On Peak	6	\$6.25
		Off Peak	0	NA
		Total	6	\$6.25
		Option	24-Hour	0
	2009/2010*	Obligation	24-Hour	1,468
On Peak			317	(\$0.02)
Off Peak			432	(\$0.22)
Total			2,217	\$0.35
Option		24-Hour	30	\$5.93
	Obligation	On Peak	0	NA
		Off Peak	0	NA
		Total	30	\$5.93

* Shows ten months ended 31-Mar-2010

² The 2009 to 2010 planning period covers the 2009 to 2010 Annual FTR Auction and the Monthly Balance of Planning Period FTR Auctions through the March 2010 FTR Auction.

Price

Table 8-5 Monthly Balance of Planning Period FTR Auction cleared, weighted-average, buy-bid price per period (Dollars per MWh): January through March 2010 (See 2009 SOM, Table 8-14)

Monthly Auction	Current Month	Second Month	Third Month	Q1	Q2	Q3	Q4	Total
Jan-10	\$0.08	\$0.18	\$0.24				\$0.16	\$0.13
Feb-10	\$0.10	\$0.28	\$0.21				\$0.31	\$0.19
Mar-10	\$0.11	\$0.25	\$0.17				(\$0.07)	\$0.15

Revenue

Monthly Balance of Planning Period FTR Auction Revenue

Table 8-6 Monthly Balance of Planning Period FTR Auction revenue: January through March 2010 (See 2009 SOM, Table 8-17)

Monthly Auction	Hedge Type	Trade Type	Class Type			
			24-Hour	On Peak	Off Peak	All
Jan-10	Obligations	Buy bids	(\$358,507)	\$3,027,607	\$1,763,504	\$4,432,604
		Sell offers	\$383,960	\$1,556,699	\$561,863	\$2,502,522
	Options	Buy bids	\$0	\$341,524	\$118,211	\$459,735
		Sell offers	\$83,413	\$542,599	\$261,153	\$887,164
Feb-10	Obligations	Buy bids	\$530,509	\$2,872,273	\$2,657,432	\$6,060,214
		Sell offers	(\$116,080)	\$1,524,315	\$1,983,143	\$3,391,378
	Options	Buy bids	\$0	\$241,692	\$234,325	\$476,018
		Sell offers	\$8,606	\$825,079	\$709,563	\$1,543,248
Mar-10	Obligations	Buy bids	(\$549,382)	\$4,005,065	\$2,109,386	\$5,565,069
		Sell offers	\$565,634	\$1,299,894	\$578,118	\$2,443,646
	Options	Buy bids	\$972	\$27,948	\$25,433	\$54,353
		Sell offers	\$80,862	\$900,428	\$434,215	\$1,415,505
2008/2009*	Obligations	Buy bids	\$18,536,366	\$62,983,127	\$39,113,790	\$120,633,283
		Sell offers	\$10,238,514	\$20,746,786	\$12,003,977	\$42,989,277
	Options	Buy bids	\$164,213	\$5,175,296	\$2,995,811	\$8,335,320
		Sell offers	\$26,515	\$13,614,983	\$5,286,634	\$18,928,133
2009/2010**	Obligations	Buy bids	\$508,680	\$43,029,578	\$30,936,289	\$74,474,547
		Sell offers	\$3,453,287	\$21,358,299	\$16,742,654	\$41,554,240
	Options	Buy bids	\$98,620	\$1,870,502	\$825,142	\$2,794,264
		Sell offers	\$262,626	\$10,611,834	\$6,908,592	\$17,783,052

* Shows Twelve Months for 2008/2009; ** Shows ten months ended 31-Mar-2010 for 2009/2010

Figure 8-1 Ten largest positive and negative revenue producing FTR sinks purchased in the Monthly Balance of Planning Period FTR Auctions: Planning period 2009 to 2010 through March 31, 2010 (See 2009 SOM, Figure 8-7)

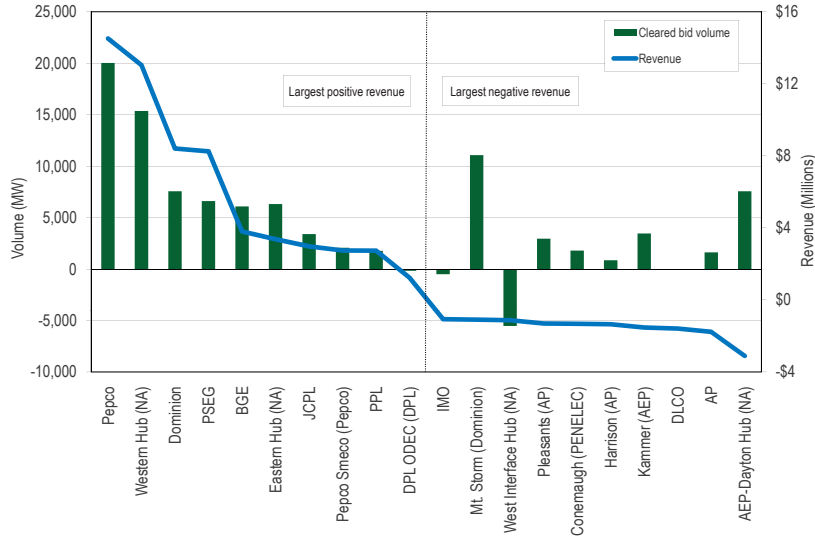
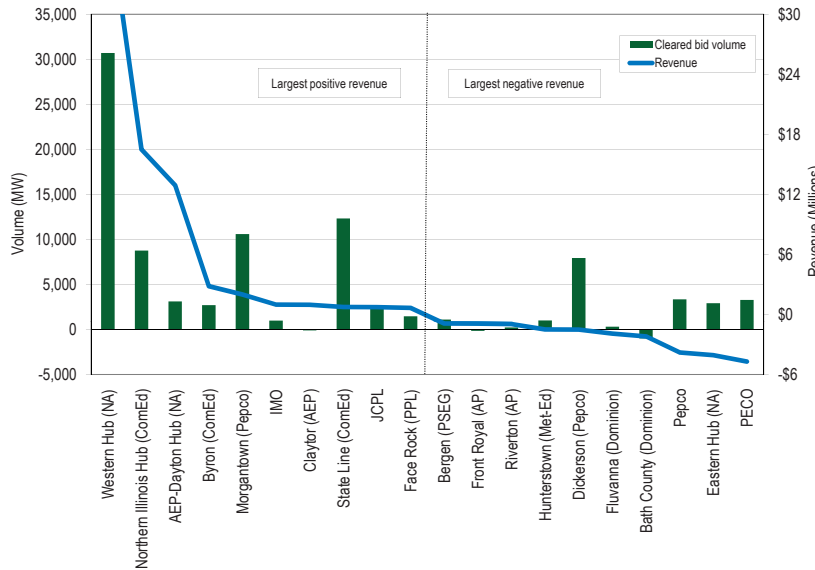


Figure 8-2 Ten largest positive and negative revenue producing FTR sources purchased in the Monthly Balance of Planning Period FTR Auctions: Planning period 2009 to 2010 through March 31, 2010 (See 2009 SOM, Figure 8-8)



Revenue Adequacy

Table 8-7 Total annual PJM FTR revenue detail (Dollars (Millions)): Planning periods 2008 to 2009 and 2009 to 2010 through March 31, 2010 (See 2009 SOM, Table 8-18)

Accounting Element	2008/2009	2009/2010*
ARR information		
ARR target allocations	\$2,361.3	\$1,063.5
FTR auction revenue	\$2,489.6	\$1,138.8
ARR excess	\$128.3	\$75.3
FTR targets		
FTR target allocations	\$1,747.9	\$758.3
Adjustments:		
Adjustments to FTR target allocations	(\$4.1)	(\$0.7)
Total FTR targets	\$1,743.8	\$757.6
FTR revenues		
ARR excess	\$128.3	\$75.3
Competing uses	\$0.7	\$0.0
Congestions		
Net Negative Congestion (enter as negative)	(\$59.0)	(\$33.3)
Hourly congestion revenue	\$1,735.7	\$739.3
Midwest ISO M2M (credit to PJM minus credit to Midwest ISO)	(\$52.3)	(\$31.5)
Consolidated Edison Company of New York and Public Service Electric and Gas Company Wheel (CEPSW) congestion credit to Con Edison (enter as negative)	(\$3.1)	(\$1.8)
Adjustments:		
Excess revenues carried forward into future months	\$36.8	\$23.5
Excess revenues distributed back to previous months	\$16.1	\$9.4
Other adjustments to FTR revenues	(\$2.0)	\$0.2
Total FTR revenues	\$1,801.2	\$780.2
Excess revenues distributed to other months	(\$30.0)	(\$41.3)
Excess revenues distributed to CEPSW for end-of-year distribution	\$0.5	\$0.0
Excess revenues distributed to FTR holders	\$4.0	\$0.0
Total FTR congestion credits	\$1,743.8	\$748.0
Total congestion credits on bill (includes CEPSW and end-of-year distribution)	\$1,751.4	\$740.7
Remaining deficiency	\$0.0	\$9.6

* Shows ten months ended 31-Mar-10

Table 8-8 Monthly FTR accounting summary (Dollars (Millions)): Planning period 2009 to 2010 through March 31, 2010 (See 2009 SOM, Table 8-19)

Period	FTR Revenues (with adjustments)	FTR Target Allocations	FTR Payout Ratio (original)	FTR Credits (with adjustments)	FTR Payout Ratio (with adjustments)	Credits Deficiency (with adjustments)	Credits Excess (with adjustments)
Jun-09	\$54.6	\$43.9	100%	\$43.9	100%	\$0.0	\$10.6
Jul-09	\$53.2	\$40.4	100%	\$40.4	100%	\$0.0	\$12.8
Aug-09	\$92.4	\$92.4	81.3%	\$92.4	100.0%	\$0.0	\$0.0
Sep-09	\$31.3	\$31.4	87.4%	\$31.3	99.9%	\$0.0	\$0.0
Oct-09	\$57.7	\$57.8	83.4%	\$57.7	99.9%	\$0.1	\$0.0
Nov-09	\$38.2	\$37.9	100%	\$37.9	100%	\$0.0	\$0.3
Dec-09	\$101.9	\$93.7	100%	\$93.7	100%	\$0.0	\$8.2
Jan-10	\$221.5	\$213.0	100%	\$213.0	100%	\$0.0	\$8.5
Feb-10	\$111.8	\$110.9	100%	\$110.9	100%	\$0.0	\$0.9
Mar-10	\$26.7	\$36.1	73.9%	\$26.7	73.9%	\$9.4	\$0.0
Summary for Planning Period 2009 to 2010 through Mar 31, 2010							
Total	\$789.4	\$757.6	96.0%	\$748.0	98.7%	\$9.6	\$41.4

Figure 8-3 Ten largest positive and negative FTR target allocations summed by sink: Planning period 2009 to 2010 through March 31, 2010 (See 2009 SOM, Figure 8-9)

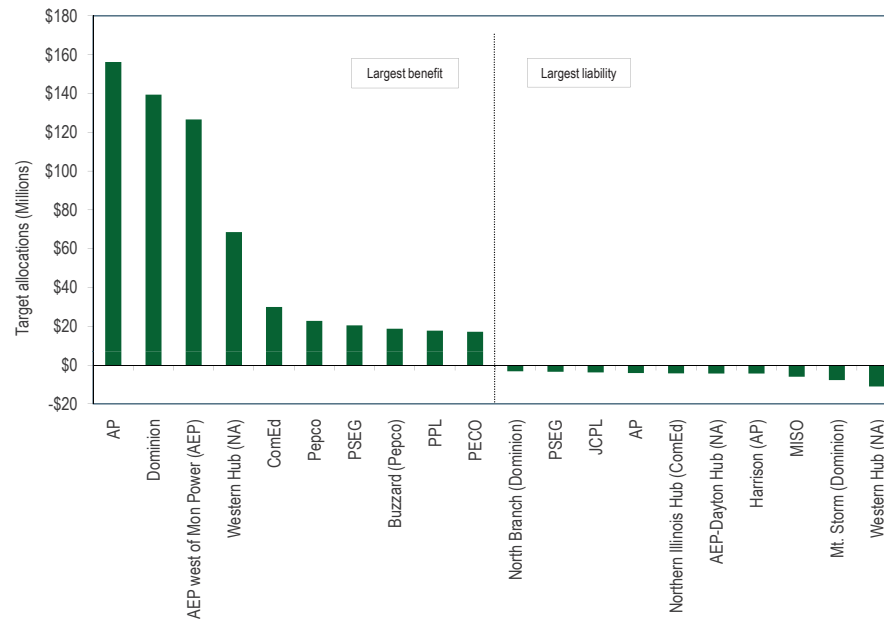
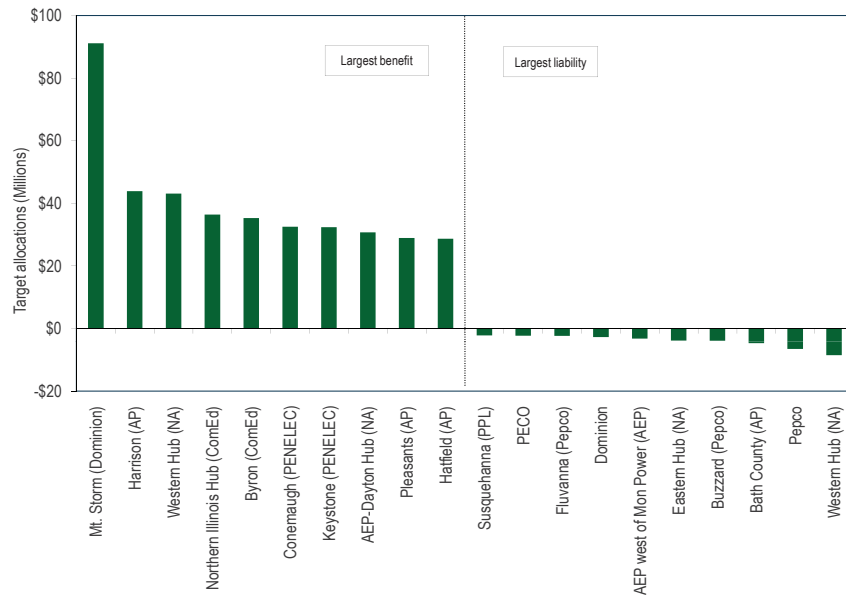


Figure 8-4 Ten largest positive and negative FTR target allocations summed by source: Planning period 2009 to 2010 through March 31, 2010 (See 2009 SOM, Figure 8-10)



Auction Revenue Rights

Market Structure

ARR Reassignment for Retail Load Switching

Table 8-9 ARRs and ARR revenue automatically reassigned for network load changes by control zone: June 1, 2008, through March 31, 2010 (See 2009 SOM, Table 8-22)

Control Zone	ARRs Reassigned (MW-day)		ARR Revenue Reassigned [Dollars (Thousands) per MW-day]	
	2008/2009 (12 months)	2009/2010 (10 months)*	2008/2009 (12 months)	2009/2010 (10 months)*
AECO	501	363	\$16.1	\$6.6
AEP	11	251	\$0.2	\$5.9
AP	707	578	\$164.7	\$70.6
BGE	3,361	2,886	\$124.3	\$60.7
ComEd	3,074	2,354	\$10.0	\$7.7
DAY	1	3	\$0.0	\$0.0
DLCO	471	313	\$2.1	\$0.8
Dominion	5	0	\$0.4	\$0.0
DPL	1,404	859	\$24.8	\$9.9
JCPL	1,094	1,050	\$45.0	\$16.1
Met-Ed	0	10	\$0.0	\$0.2
PECO	47	25	\$1.4	\$0.4
PENELEC	0	1	\$0.0	\$0.0
Pepco	3,040	2,404	\$79.9	\$24.5
PPL	35	4,001	\$2.2	\$81.6
PSEG	1,537	1,780	\$62.7	\$44.6
RECO	40	56	\$0.0	\$0.0
Total	15,326	16,933	\$533.9	\$329.6

* Through 31-Mar-10

Market Performance

Revenue Adequacy

Table 8-10 ARR revenue adequacy (Dollars (Millions)): Planning periods 2008 to 2009 and 2009 to 2010 through March 31, 2010 (See 2009 SOM, Table 8-24)

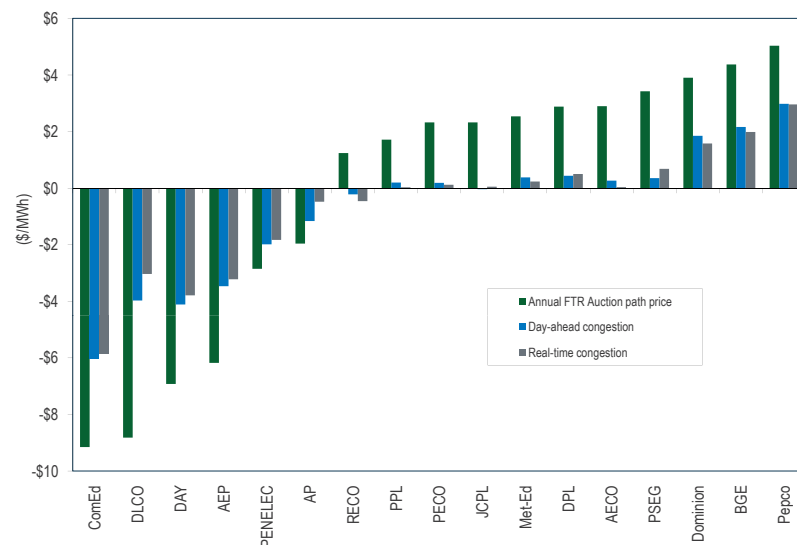
	2008/2009	2009/2010
Total FTR auction net revenue	\$2,489.6	\$1,347.7
Annual FTR Auction net revenue	\$2,422.6	\$1,329.8
Monthly Balance of Planning Period FTR Auction net revenue*	\$67.1	\$17.9
ARR target allocations	\$2,361.3	\$1,273.5
ARR credits	\$2,361.3	\$1,273.5
Surplus auction revenue	\$128.3	\$74.2
ARR payout ratio	100%	100%
FTR payout ratio*	100%	98.7%

* Shows twelve months for 2008/2009 and ten months ended 31-Mar-10 for 2009/2010

ARR and FTR Revenue and Congestion

FTR Prices and Zonal Price Differences

Figure 8-5 Annual FTR Auction prices vs. average day-ahead and real-time congestion for all control zones relative to the Western Hub: Planning period 2009 to 2010 through March 31, 2010 (See 2009 SOM, Figure 8-11)



Effectiveness of ARRs as a Hedge against Congestion

Table 8-11 ARR and self scheduled FTR congestion hedging by control zone: Planning period 2009 to 2010 through March 31, 2010 (See 2009 SOM, Table 8-25)

Control Zone	ARR Credits	Self-Scheduled FTR Credits	Total Revenue	Congestion	Total Revenue - Congestion Difference	Percent Hedged
AECO	\$16,334,067	\$478,087	\$16,812,154	\$14,254,944	\$2,557,211	>100%
AEP	\$4,284,698	\$136,272,591	\$140,557,289	\$111,039,840	\$29,517,448	>100%
AP	\$45,451,856	\$153,439,180	\$198,891,036	\$34,308,559	\$164,582,478	>100%
BGE	\$46,459,694	\$2,412,695	\$48,872,389	\$8,075,028	\$40,797,361	>100%
ComEd	\$14,549,758	\$27,411,278	\$41,961,036	\$57,389,036	(\$15,428,000)	73.1%
DAY	\$6,207,117	\$694,003	\$6,901,120	\$8,811,925	(\$1,910,805)	78.3%
DLCO	\$2,450,918	\$2,590	\$2,453,508	\$15,543,877	(\$13,090,369)	15.8%
Dominion	\$16,378,603	\$582,120	\$16,960,723	\$59,003,126	(\$42,042,404)	28.7%
DPL	\$6,134,065	\$128,646,834	\$134,780,899	\$23,750,400	\$111,030,499	>100%
JCPL	\$28,119,166	\$618,029	\$28,737,195	\$17,883,647	\$10,853,548	>100%
Met-Ed	\$108,900	\$10,117,104	\$10,226,004	\$16,715,798	(\$6,489,794)	61.2%
PECO	\$1,932,121	\$15,433,133	\$17,365,254	\$17,681,467	\$35,046,721	>100%
PENELEC	\$22,966,832	\$10,024,230	\$32,991,062	\$6,877,739	\$26,113,322	>100%
Pepco	\$21,798,040	\$1,519,724	\$23,317,764	\$119,042,072	(\$95,724,307)	19.6%
PJM	\$7,727,385	(\$221,030)	\$7,506,355	\$2,052,914	\$5,453,440	>100%
PPL	\$1,102,352	\$12,626,294	\$13,728,646	(\$20,897,808)	\$34,626,454	>100%
PSEG	\$83,906,675	\$2,838,461	\$86,745,136	\$7,213,580	\$79,531,556	>100%
RECO	(\$41,455)	\$0	(\$41,455)	\$1,062,447	(\$1,103,902)	0%
Total	\$325,870,792	\$502,895,322	\$828,766,114	\$464,445,658	\$364,320,456	>100%

Effectiveness of FTRs as a Hedge against Congestion**Table 8-12 FTR congestion hedging by control zone: Planning period 2009 to 2010 through March 31, 2010 (See 2009 SOM, Table 8-26)**

Control Zone	FTR Direction	FTR Credits	FTR Auction Revenue	FTR Hedge	Congestion	FTR Hedge - Congestion Difference	Percent Hedged
AECO	Counter Flow	(\$466,207)	(\$2,048,023)	\$1,581,815			
	Prevailing Flow	\$3,298,247	\$26,456,746	(\$23,158,499)			
	Total	\$2,832,040	\$24,408,723	(\$21,576,684)	\$10,318,701	(\$31,895,385)	<0%
AEP	Counter Flow	(\$13,733,225)	(\$34,371,200)	\$20,637,976			
	Prevailing Flow	\$163,886,461	\$252,699,178	(\$88,812,717)			
	Total	\$150,153,236	\$218,327,978	(\$68,174,741)	\$99,504,023	(\$167,678,764)	<0%
AP	Counter Flow	(\$15,300,411)	(\$25,489,099)	\$10,188,688			
	Prevailing Flow	\$171,237,624	\$353,932,439	(\$182,694,815)			
	Total	\$155,937,213	\$328,443,340	(\$172,506,127)	\$109,671,005	(\$282,177,132)	<0%
BGE	Counter Flow	\$439,502	(\$3,658,364)	\$4,097,866			
	Prevailing Flow	\$25,886,653	\$39,404,285	(\$13,517,632)			
	Total	\$26,326,155	\$35,745,921	(\$9,419,766)	\$34,437,644	(\$43,857,410)	<0%
ComEd	Counter Flow	(\$6,419,364)	(\$24,863,904)	\$18,444,540			
	Prevailing Flow	\$61,344,346	\$39,367,123	\$21,977,223			
	Total	\$54,924,981	\$14,503,219	\$40,421,762	\$168,552,549	(\$128,130,787)	24.0%
DAY	Counter Flow	(\$1,391,971)	(\$3,215,677)	\$1,823,706			
	Prevailing Flow	\$2,372,577	\$3,280,851	(\$908,274)			
	Total	\$980,606	\$65,174	\$915,432	\$6,886,013	(\$5,970,581)	13.3%
DLCO	Counter Flow	\$981,678	(\$6,387,470)	\$7,369,148			
	Prevailing Flow	\$6,471,734	\$3,436,568	\$3,035,166			
	Total	\$7,453,412	(\$2,950,902)	\$10,404,314	\$19,574,696	(\$9,170,382)	53.2%
Dominion	Counter Flow	(\$11,913,130)	(\$22,259,968)	\$10,346,838			
	Prevailing Flow	\$150,326,174	\$256,143,876	(\$105,817,702)			
	Total	\$138,413,044	\$233,883,908	(\$95,470,863)	\$130,960,141	(\$226,431,005)	<0%
DPL	Counter Flow	(\$1,112,356)	(\$3,392,889)	\$2,280,533			
	Prevailing Flow	\$11,459,884	\$38,328,850	(\$26,868,966)			
	Total	\$10,347,528	\$34,935,961	(\$24,588,434)	\$24,322,116	(\$48,910,550)	<0%
JCPL	Counter Flow	(\$1,751,686)	(\$4,548,043)	\$2,796,357			
	Prevailing Flow	\$2,833,192	\$47,925,758	(\$45,092,566)			
	Total	\$1,081,506	\$43,377,715	(\$42,296,209)	\$16,499,984	(\$58,796,193)	<0%
Met-Ed	Counter Flow	(\$1,228,120)	(\$2,364,750)	\$1,136,630			
	Prevailing Flow	\$14,761,443	\$35,530,562	(\$20,769,118)			
	Total	\$13,533,323	\$33,165,811	(\$19,632,488)	\$4,591,610	(\$24,224,098)	<0%
PECO	Counter Flow	(\$295,703)	(\$2,586,346)	\$2,290,643			
	Prevailing Flow	\$18,681,961	\$58,228,070	(\$39,546,109)			
	Total	\$18,386,258	\$55,641,724	(\$37,255,466)	(\$19,416,128)	(\$17,839,338)	<0%
PENELEC	Counter Flow	(\$12,165,566)	(\$33,063,348)	\$20,897,782			
	Prevailing Flow	\$56,207,665	\$102,842,955	(\$46,635,290)			
	Total	\$44,042,099	\$69,779,608	(\$25,737,508)	\$50,436,928	(\$76,174,436)	<0%

Table 8-12 FTR congestion hedging by control zone: Planning period 2009 to 2010 through March 31, 2010 (continued)

Control Zone	FTR Direction	FTR Credits	FTR Auction Revenue	FTR Hedge	Congestion	FTR Hedge - Congestion Difference	Percent Hedged
Pepco	Counter Flow	\$2,666,503	(\$17,633,696)	\$20,300,200			
	Prevailing Flow	\$89,751,780	\$109,276,645	(\$19,524,866)			
	Total	\$92,418,283	\$91,642,949	\$775,334	\$55,472,078	(\$54,696,745)	1.4%
PJM	Counter Flow	(\$6,800,989)	(\$10,386,715)	\$3,585,725			
	Prevailing Flow	\$1,948,326	\$6,277,186	(\$4,328,860)			
	Total	(\$4,852,663)	(\$4,109,529)	(\$743,135)	\$5,268,874	(\$6,012,009)	<0%
PPL	Counter Flow	(\$410,746)	(\$8,497,541)	\$8,086,795			
	Prevailing Flow	\$20,017,607	\$69,545,831	(\$49,528,224)			
	Total	\$19,606,861	\$61,048,290	(\$41,441,429)	(\$8,224,646)	(\$33,216,783)	<0%
PSEG	Counter Flow	\$614,578	(\$9,801,506)	\$10,416,085			
	Prevailing Flow	\$27,011,465	\$122,447,111	(\$95,435,646)			
	Total	\$27,626,043	\$112,645,604	(\$85,019,561)	(\$4,131,448)	(\$80,888,113)	<0%
RECO	Counter Flow	(\$894,840)	(\$4,288,883)	\$3,394,043			
	Prevailing Flow	(\$9,397)	\$1,463,565	(\$1,472,961)			
	Total	(\$904,236)	(\$2,825,318)	\$1,921,082	\$1,181,661	\$739,421	162.6%
Total	Counter Flow	(\$69,182,052)	(\$218,857,424)	\$149,675,372			
	Prevailing Flow	\$827,487,742	\$1,566,587,601	(\$739,099,859)			
	Total	\$758,305,690	\$1,347,730,177	(\$589,424,487)	\$705,905,799	(\$2,163,536,265)	<0%

Effectiveness of ARRs and FTRs as a Hedge against Congestion**Table 8-13 ARR and FTR congestion hedging by control zone: Planning period 2009 to 2010 through March 31, 2010 (See 2009 SOM, Table 8-27)**

Control Zone	ARR Credits	FTR Credits	FTR Auction Revenue	Total ARR and FTR Hedge	Congestion	Total Hedge - Congestion Difference	Percent Hedged
AECO	\$19,253,322	\$2,796,356	\$24,408,723	(\$2,359,045)	\$10,759,638	(\$13,118,683)	<0%
AEP	\$223,262,229	\$148,261,305	\$218,327,978	\$153,195,556	\$112,625,849	\$40,569,707	>100%
AP	\$365,048,488	\$153,972,404	\$328,443,340	\$190,577,552	\$121,818,986	\$68,758,566	>100%
BGE	\$52,131,739	\$25,994,445	\$35,745,921	\$42,380,263	\$36,666,433	\$5,713,830	>100%
ComEd	\$27,261,279	\$54,232,926	\$14,503,219	\$66,990,986	\$182,854,782	(\$115,863,796)	36.6%
DAY	\$7,505,314	\$968,250	\$65,174	\$8,408,390	\$7,112,757	\$1,295,633	>100%
DLCO	\$2,454,337	\$7,359,499	(\$2,950,902)	\$12,764,738	\$21,637,065	(\$8,872,327)	59.0%
Dominion	\$213,840,239	\$136,669,040	\$233,883,908	\$116,625,371	\$140,301,742	(\$23,676,371)	83.1%
DPL	\$17,792,090	\$10,217,149	\$34,935,961	(\$6,926,722)	\$25,877,414	(\$32,804,136)	<0%
JCPL	\$34,924,192	\$1,067,879	\$43,377,715	(\$7,385,644)	\$17,160,629	(\$24,546,273)	<0%
Met-Ed	\$27,312,021	\$13,362,803	\$33,165,811	\$7,509,013	\$3,926,483	\$3,582,530	>100%
PECO	\$49,863,646	\$18,154,591	\$55,641,724	\$12,376,513	(\$21,255,273)	\$33,631,786	>100%
PENELEC	\$49,412,326	\$43,487,169	\$69,779,608	\$23,119,887	\$51,562,058	(\$28,442,171)	44.8%
Pepco	\$23,702,306	\$91,253,813	\$91,642,949	\$23,313,170	\$58,358,119	(\$35,044,949)	39.9%
PJM	\$9,979,482	(\$4,791,519)	(\$4,109,529)	\$9,297,492	\$206,128	\$9,091,364	>100%
PPL	\$55,143,860	\$19,359,815	\$61,048,290	\$13,455,385	(\$8,593,791)	\$22,049,176	>100%
PSEG	\$94,609,270	\$27,277,955	\$112,645,604	\$9,241,621	(\$2,087,082)	\$11,328,703	>100%
RECO	(\$41,455)	(\$892,843)	(\$2,825,318)	\$1,891,020	\$1,195,304	\$695,716	>100%
Total	\$1,273,454,685	\$748,751,037	\$1,347,730,176	\$674,475,546	\$760,127,241	(\$85,651,695)	88.7%

Table 8-14 ARR and FTR congestion hedging: Planning periods 2008 to 2009 and 2009 to 2010³ through March 31, 2010 (See 2009 SOM, Table 8-28)

Planning Period	ARR Credits	FTR Credits	FTR Auction Revenue	Total ARR and FTR Hedge	Congestion	Total Hedge - Congestion Difference	Percent Hedged
2008/2009	\$2,361,292,807	\$1,748,201,585	\$2,489,609,470	\$1,619,884,922	\$1,489,647,665	\$130,237,257	>100%
2009/2010*	\$1,063,546,925	\$748,768,270	\$1,138,842,282	\$673,472,913	\$705,905,799	(\$32,432,886)	95.4%

* Shows ten months ended 31-Mar-10

ARRs and FTRs as a Hedge against Total Real Time Energy Charges**Table 8-15 ARRs and self-scheduled FTR credits as a hedge against energy charges by control zone: January through March 2010 (See 2009 SOM, Table 8-29)**

Control Zone	ARR Credits	Self-Scheduled FTR Credits	Total Hedge	Total Energy Charges	Percent of Energy Charges Covered by ARR and Self-Scheduled FTR Credits
AECO	\$4,027,578	\$211,761	\$4,239,339	\$129,305,115	3.3%
AEP	\$1,056,501	\$76,963,007	\$78,019,508	\$1,445,329,099	5.4%
AP	\$11,207,307	\$82,303,141	\$93,510,448	\$564,957,579	16.6%
BGE	\$11,455,815	\$1,329,748	\$12,785,563	\$459,636,511	2.8%
ComEd	\$3,587,612	\$4,283,276	\$7,870,888	\$870,669,254	0.9%
DAY	\$1,530,522	\$652,105	\$2,182,627	\$174,298,615	1.3%
DLCO	\$604,336	\$1,251	\$605,587	\$145,944,219	0.4%
Dominion	\$1,512,509	\$67,616,236	\$69,128,745	\$1,299,971,572	5.3%
DPL	\$4,038,560	\$166,834	\$4,205,394	\$247,032,448	1.7%
JCPL	\$6,933,493	\$380,131	\$7,313,624	\$279,392,614	2.6%
Met-Ed	\$26,852	\$5,010,971	\$5,037,823	\$193,405,465	2.6%
PECO	\$476,413	\$9,168,540	\$9,644,954	\$508,025,259	1.9%
PENELEC	\$5,663,054	\$4,863,468	\$10,526,523	\$196,356,995	5.4%
Pepco	\$5,374,859	\$526,785	\$5,901,644	\$424,291,254	1.4%
PJM	\$1,905,382	\$1,119,212	\$3,024,595	NA	NA
PPL	\$271,813	\$5,522,925	\$5,794,738	\$523,991,268	1.1%
PSEG	\$20,689,317	\$1,890,187	\$22,579,504	\$548,497,065	4.1%
RECO	(\$10,222)	\$0	(\$10,222)	\$16,608,300	(0.1%)
Total	\$80,351,702	\$262,009,579	\$342,361,281	\$8,025,091,048	4.3%

³ The FTR credits do not include after-the-fact adjustments. For the 2009 to 2010 planning period, the ARR credits were the total credits allocated to all ARR holders for the first ten months (June 2009 through March 2010) of this planning period, and the FTR Auction Revenue includes the net revenue in the Monthly Balance of Planning Period FTR Auctions for the first ten months of this planning period and the portion of Annual FTR Auction revenue distributed in the first ten months.

Table 8-16 FTRs as a hedge against energy charges by control zone: January through March 2010 (See 2009 SOM, Table 8-30)

Control Zone	FTR Credits (Excluding Self-Scheduled FTRs)	FTR Auction Revenue (Excluding Self-Scheduled FTRs)	Total FTR Hedge (Excluding Self-Scheduled FTRs)	Total Energy Charges	Percent of Energy Charges Covered by FTR Credits (Excluding Self-Scheduled FTRs)
AECO	\$585,267	\$4,801,902	(\$4,216,635)	\$129,305,115	(3.3%)
AEP	\$3,586,279	(\$2,358,323)	\$5,944,602	\$1,445,329,099	0.4%
AP	(\$6,223,178)	(\$692,590)	(\$5,530,588)	\$564,957,579	(1.0%)
BGE	\$4,339,219	\$7,881,037	(\$3,541,818)	\$459,636,511	(0.8%)
ComEd	\$9,137,232	(\$279,073)	\$9,416,305	\$870,669,254	1.1%
DAY	(\$222,418)	(\$376,109)	\$153,691	\$174,298,615	0.1%
DLCO	\$5,647,424	(\$1,233,049)	\$6,880,473	\$145,944,219	4.7%
Dominion	\$3,503,946	\$7,053,967	(\$3,550,021)	\$1,299,971,572	(0.3%)
DPL	\$3,632,585	\$8,688,155	(\$5,055,570)	\$247,032,448	(2.0%)
JCPL	\$2,789,730	\$10,347,198	(\$7,557,469)	\$279,392,614	(2.7%)
Met-Ed	\$1,563,792	\$1,541,379	\$22,413	\$193,405,465	0.0%
PECO	\$802,196	\$2,056,165	(\$1,253,969)	\$508,025,259	(0.2%)
PENELEC	\$12,516,379	\$11,322,285	\$1,194,094	\$196,356,995	0.6%
Pepco	\$27,539,162	\$25,610,061	\$1,929,101	\$424,291,254	0.5%
PJM	(\$2,443,711)	(\$1,920,942)	(\$522,769)	NA	NA
PPL	\$4,389,630	\$2,617,969	\$1,771,661	\$523,991,268	0.3%
PSEG	\$22,812,695	\$27,024,534	(\$4,211,839)	\$548,497,065	(0.8%)
RECO	(\$386,137)	(\$811,086)	\$424,949	\$16,608,300	2.6%
Total	\$93,570,091	\$101,273,480	(\$7,703,389)	\$8,025,091,048	(0.1%)

Table 8-17 ARR and FTRs as a hedge against energy charges by control zone: January through March 2010 (See 2009 SOM, Table 8-31)

Control Zone	ARR Related Hedge (Including Self-Scheduled FTRs)	FTR Hedge (Excluding Self-Scheduled FTRs)	Total ARR and FTR Hedge	Total Energy Charges	Percent of Energy Charges Covered by ARR and FTR Credits
AECO	\$4,239,339	(\$4,216,635)	\$22,704	\$129,305,115	0.0%
AEP	\$78,019,508	\$5,944,602	\$83,964,110	\$1,445,329,099	5.8%
AP	\$93,510,448	(\$5,530,588)	\$87,979,860	\$564,957,579	15.6%
BGE	\$12,785,563	(\$3,541,818)	\$9,243,746	\$459,636,511	2.0%
ComEd	\$7,870,888	\$9,416,305	\$17,287,193	\$870,669,254	2.0%
DAY	\$2,182,627	\$153,691	\$2,336,317	\$174,298,615	1.3%
DLCO	\$605,587	\$6,880,473	\$7,486,060	\$145,944,219	5.1%
Dominion	\$69,128,745	(\$3,550,021)	\$65,578,724	\$1,299,971,572	5.0%
DPL	\$4,205,394	(\$5,055,570)	(\$850,176)	\$247,032,448	(0.3%)
JCPL	\$7,313,624	(\$7,557,469)	(\$243,845)	\$279,392,614	(0.1%)
Met-Ed	\$5,037,823	\$22,413	\$5,060,236	\$193,405,465	2.6%
PECO	\$9,644,954	(\$1,253,969)	\$8,390,985	\$508,025,259	1.7%
PENELEC	\$10,526,523	\$1,194,094	\$11,720,616	\$196,356,995	6.0%
Pepco	\$5,901,644	\$1,929,101	\$7,830,745	\$424,291,254	1.8%
PJM	\$3,024,595	(\$522,769)	\$2,501,826	NA	NA
PPL	\$5,794,738	\$1,771,661	\$7,566,399	\$523,991,268	1.4%
PSEG	\$22,579,504	(\$4,211,839)	\$18,367,665	\$548,497,065	3.3%
RECO	(\$10,222)	\$424,949	\$414,727	\$16,608,300	2.5%
Total	\$342,361,281	(\$7,703,389)	\$334,657,892	\$8,025,091,048	4.2%

