PJM FTR/ARR Allocation Technical Conference

(Docket Nos. EL16-6-001 and ER16-121-000)

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Examples

Example Illustrating Lack of Subsidy with Netting

Settlements Before Incremental FTR Purchases, With Netting				Payout = 70.00%
	Participant X	Participant Y	Other Participants	Available Revenue
Congestion Collected	-	-	-	$700.00
Positive Target Allocations	$10.00	$10.00	$980.00	
Negative Target Allocations	$0.00	$0.00	$0.00	
Net	$10.00	$10.00	$980.00	
Payout	$7.00	$7.00	$686.00	

- Participant X purchases incremental FTR from node A to node B
- Participant Y is paid for incremental FTR from node B to node A

Settlements After Incremental FTR Purchases, With Netting				Payout = 70.00%
	Participant X	Participant Y	Other Participants	Available Revenue
Congestion Collected	-	-	-	$700.00
Positive Target Allocations				
Original	$10.00	$10.00	$980.00	
Incremental A to B FTR	$5.00			
Total	$15.00	$10.00	$980.00	
Negative Target Allocations				
Original	$0.00	$0.00	$0.00	
Incremental B to A FTR		-$5.00		
Total	$0.00	-$5.00	$0.00	
Net	$15.00	$5.00	$980.00	
Payout	$10.50	$3.50	$686.00	
Change in Payout	**$3.50**	**-$3.50**	**$0.00**	

Response to Monitoring Analytics' Examples, Adding Other Participants

IMM Example 2 (p. 3)

With Portfolio Netting, Payout = 70.00%				
	Participant X	Participant Y	Other Participants	Available Revenue
Congestion Collected	-	-	-	$700.00
Positive Target Allocations	$10.00	$10.00	$980.00	$0.00
Negative Target Allocations	$0.00	$0.00	$0.00	$0.00
Net	$10.00	$10.00	$980.00	$700.00
Total Payout with Netting	$7.00	$7.00	$686.00	-
Without Portfolio Netting, Payout = 70.00%				
	Participant X	Participant Y	Other Participants	Available Revenue
Congestion Collected	-	-	-	$700.00
Positive Target Allocations	$10.00	$10.00	$980.00	$0.00
Negative Target Allocations	$0.00	$0.00	$0.00	$0.00
Net	$10.00	$10.00	$980.00	$700.00
Total Payout without Netting	$7.00	$7.00	$686.00	-
With/Without Netting Difference	$0.00	$0.00	$0.00	-

IMM Example 3 (p. 4), adds incremental FTRs to Example 2

With Portfolio Netting, Payout = 70.00%				
	Participant X	Participant Y	Other Participants	Available Revenue
Congestion Collected	-	-	-	$700.00
Positive Target Allocations	$15.00	$10.00	$980.00	$0.00
Negative Target Allocations	$0.00	-$5.00	$0.00	$0.00
Net	$15.00	$5.00	$980.00	$700.00
Total Payout with Netting	$10.50	$3.50	$686.00	-
Without Portfolio Netting, Payout = 70.15%				
	Participant X	Participant Y	Other Participants	Available Revenue
Congestion Collected	-	-	-	$700.00
Positive Target Allocations	$15.00	$10.00	$980.00	$0.00
Negative Target Allocations	$0.00	-$5.00	$0.00	-$5.00
Net	$15.00	$5.00	$980.00	$705.00
Total Payout without Netting	$10.52	$2.01	$687.46	-
With/Without Netting Difference	$0.02	-$1.49	$1.46	-

Payout Change With Netting	**$3.50**	**-$3.50**	**$0.00**
Payout Change Without Netting	**$3.52**	**-$4.99**	**$1.46**

IMM Example (p. 5), Effective Payout Ratio for Positive Target Allocations

	1	2	3	4	5	6	7	8	9	10
	Congestion = $4,750 Net TA = $9,500				With Netting			Without Netting		
Participant	Positive Target Allocations	Negative Target Allocations	Net Target Allocations	Reported Payout Ratio	Congestion Revenue Received	Revenue To Positive TA	Calculated Positive TA Payout Ratio	Congestion Revenue Received	Revenue to Positive TA	Calculated Positive TA Payout Ratio
1	$1,000.00	($750.00)	$250.00	50%	$125.00	$875.00	87.5%	($204.55)	$545.45	54.5%
2	$750.00	($200.00)	$550.00	50%	$275.00	$475.00	63.3%	$209.09	$409.09	54.5%
3	$8,700.00	$0.00	$8,700.00	50%	$4,350.00	$4,350.00	50.0%	$4,745.45	$4,745.45	54.5%
Total	$10,450.00	($950.00)	$9,500.00	-	$4,750.00	$5,700.00	-	$4,750.00	$5,700.00	-

IMM Example (p. 5), with Addition of Incremental FTR Purchases

Participants 2 and 3 each purchase a 1MW FTR from node A to node B with a target allocation of $100.
Participant 1 is paid for a 2 MW FTR from node B to node A which makes the purchases of Participants 2 and 3 possible.

	1	2	3	4	5	6	7	8	9	10
	Congestion = $4,750 Net TA = $9,500				With Netting			Without Netting		
Participant	Positive Target Allocations	Negative Target Allocations	Net Target Allocations	Reported Payout Ratio	Congestion Revenue Received	Revenue To Positive TA	Calculated Positive TA Payout Ratio	Congestion Revenue Received	Revenue to Positive TA	Calculated Positive TA Payout Ratio
1	$1,000.00	($950.00)	$50.00	50%	$25.00	$975.00	97.5%	($396.01)	$553.99	55.4%
2	$850.00	($200.00)	$650.00	50%	$325.00	$525.00	61.8%	$270.89	$470.89	55.4%
3	$8,800.00	$0.00	$8,800.00	50%	$4,400.00	$4,400.00	50.0%	$4,875.12	$4,875.12	55.4%
Total	$10,650.00	($1,150.00)	$9,500.00	-	$4,750.00	$5,900.00	-	$4,750.00	$5,900.00	-

Change Due to Incremental FTR Purchases

	1	2	3	4	5	6	7	8	9	10
	Congestion = $4,750 Net TA = $9,500				With Netting			Without Netting		
Participant	Positive Target Allocations	Negative Target Allocations	Net Target Allocations	Reported Payout Ratio	Congestion Revenue Received	Revenue To Positive TA	Calculated Positive TA Payout Ratio	Congestion Revenue Received	Revenue to Positive TA	Calculated Positive TA Payout Ratio
1	$0.00	($200.00)	($200.00)	0%	($100.00)	$100.00	10.0%	($191.46)	$8.54	0.9%
2	$100.00	$0.00	$100.00	0%	$50.00	$50.00	(1.6%)	$61.80	$61.80	0.9%
3	$100.00	$0.00	$100.00	0%	$50.00	$50.00	0.0%	$129.66	$129.66	0.9%
Total	$200.00	($200.00)	$0.00	-	$0.00	$200.00	-	$0.00	$200.00	-