Energy Imbalance Market Implementation- Bid Cost Recovery, Sequential Netting

Fall Release 2014

EIM BCR sequential netting

Each interval the ISO will:

1. Determine if there is a shortfall
2. Calculate the 5-minute BCR pre-transfer amount
3. Calculate to the amount attributed to transfer out
4. Calculate the % of transfer allocated to transfer in and transfer out
5. Calculate the amount of transfer in or transfer out $
6. Calculate the 5-minute BCR total

Example BCR netting – Step 1

- Compare costs and revenues for each generator in BAA and determine if there is a shortfall

	Daily Cost	Daily Revenue	BCR
Generator A	$ 2,200	$ 2,200	$ -
Generator B	$ 1,800	$ 1,300	$ 500
Generator C	$ 2,000	$ 3,100	$ -
Generator D	$ 1,500	$ 1,300	$ 200
Generator E	$ 1,800	$ 1,650	$ 150
Total			$ 850

Example BCR netting – Step 2

- Determine the 5-minute BCR pre-transfer amount for each BAA

	Cost	Daily Revenue	BCR
Generator A	$ 2,200	$ 2,200	$ -
Generator B	$ 1,800	$ 1,300	$ 500
Generator C	$ 2,000	$ 3,100	$ -
Generator D	$ 1,500	$ 1,300	$ 200
Generator E	$ 1,800	$ 1,650	$ 150
Total			$ 850

	BAA 1	BAA 2	BAA 3	BAA 4	Total
Daily BCR	$ 850	$ 400	$ 100	$ 150	$ 1,500
5-Minute BCR Pre-Transfer	$ 2.95	$ 1.39	$ 0.35	$ 0.52	$ 5.21

5-Minute BCR Pre-Transfer = Daily BCR/24/12

Example BCR netting – Step 3

- Determine the total transfer out which is the sum of the absolute value of UIE, UFE and the EIM transfer quantity

MWh	BAA 1	BAA 2	BAA 3	BAA 4
IIE	90	105	40	90
UIE	-60	-75	-40	-145
UFE	10	-5	-10	0
EIM Transfer Quantity	-30	-30	5	55
Transfer out	100	110	N/A	N/A

Example BCR netting – Step 4

- Determine the BCR % transfer out by dividing the EIM transfer quantity by the transfer out amount
- Determine the BCR % transfer in by adding EIM transfer quantity for each BAA and dividing by the sum of the total positive EIM transfer quantity

MWh	BAA 1	BAA 2	BAA 3	BAA 4
IIE	90	105	40	90
UIE	-60	-75	-40	-145
UFE	10	-5	-10	0
EIM Transfer Quantity	-30	-30	5	55
Transfer out	100	110	N/A	N/A
BCR Transfer Out %	-30%	-27%	N/A	N/A
BCR Transfer In %	N/A	N/A	8%	92%

Example BCR netting – Step 5

- Apply the BCR % transfer in or out to the 5-minute BCR pre-transfer amount to determine the credit or debit amount

	BAA 1	BAA 2	BAA 3	BAA 4
BCR Transfer Out %	-30%	-27%	N/A	N/A
BCR Transfer In %	N/A	N/A	8%	92%

	BAA 1	BAA 2	BAA 3	BAA 4	Total
Daily BCR	$ 850	$ 400	$ 100	$ 150	$ 1,500
5-Minute BCR Pre-Transfer	$ 2.95	$ 1.39	$ 0.35	$ 0.52	$ 5.21
Transfer Out	$ (0.89)	$ (0.38)	$ -	$ -	$ (1.26)
Transfer In	$ -	$ -	$ 0.11	$ 1.16	$ 1.26

Example BCR netting – Step 6

- Sum the 5-minute BCR pre-transfer amount and the transfer in or transfer out $ to determine the 5-minute BCR total

	BAA 1	BAA 2	BAA 3	BAA 4	Total
Daily BCR	$ 850	$ 400	$ 100	$ 150	$ 1,500
5-Minute BCR Pre-Transfer	$ 2.95	$ 1.39	$ 0.35	$ 0.52	$ 5.21
Transfer Out	$ (0.89)	$ (0.38)	$ -	$ -	$ (1.26)
Transfer In	$ -	$ -	$ 0.11	$ 1.16	$ 1.26
5-Minute BCR Total	$ 2.07	$ 1.01	$ 0.45	$ 1.68	$ 5.21

Questions?