

Possible Pro Ration Methods for Mid-Hour Curtailments

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Assume the following reservations and schedules on a path:

<u>Customer</u>	<u>Contract Demand</u>	<u>Actual Schedule</u>
A	500MW	350MW
B	250MW	250MW
C	200MW	50MW
D	50MW	50MW
Total	1000MW	700MW

Assume that flows over the path must be cut by 500MW.

Method I. Pro rate the cut based on what is actually scheduled. This is BPA TBL's current procedure for handling cuts in mid-hour.

A 500MW cut in this case means schedules must be reduced from 700MW down to 200MW. Each customer's actual schedule is multiplied by 200/700 to derive their new schedule after the curtailment:

<u>Customer</u>	<u>Original Schedule</u>	<u>Curtailed Schedule</u>	<u>Amount Cut</u>
A	350MW	100MW	250MW
B	250MW	72MW	178MW
C	50MW	14MW	36MW
D	50MW	14MW	36MW
Total	700MW	200MW	500MW

Method II. Pro rate the cut based upon original contract demands.

The original total contract demand is 1000MW. A cut of 500MW implies that each customer receives a scheduling allocation equal to 50% (500/1000) of their original contract demand. Customers whose actual schedules exceed their allocation are curtailed down to their allocation amount. Customers whose schedules are lower than their allocation are not cut.

<u>Customer</u>	<u>Contract Demand</u>	<u>Original Sched</u>	<u>Allocation</u>	<u>Curtailed Sched</u>	<u>Cut</u>
A	500MW	350MW	250MW	250MW	100MW
B	250MW	250MW	125MW	125MW	125MW
C	200MW	50MW	100MW	50MW	0MW
D	50MW	50MW	25MW	25MW	25MW
Total	1000MW	700MW	500MW	450MW	250MW

In this case, the actual amount of schedules cut is 250MW *less* than what is required. This will then have to be pro rated among the customers somehow.

Method III. Pro rate the cut using contract demands, but modify the process to start at the level of the actual schedules.

In this method, the pro rations are still done using contract demands. However, to determine the point which the demands need to be pro rated to, the process starts with the total amount of *actual schedules* over the path. The amount of curtailment needed is subtracted from this amount and the result is treated as a “pseudo OTC” which the demand levels are pro rated to. In this case, the total actual schedules are 700MW, the required cut is 500MW, so the resulting “pseudo OTC” is $700 - 500 = 200$ MW. With total contract demands of 1000MW, each customer receives an allocation equal to $(200/1000)$ times their contract demand. Then, as in Method II, each customer’s actual schedule is compared to their allocation to determine how much their schedule must be reduced.

<u>Customer</u>	<u>Contract Demand</u>	<u>Original Sched</u>	<u>Allocation</u>	<u>Curtailed Sched</u>	<u>Cut</u>
A	500MW	350MW	100MW	100MW	250MW
B	250MW	250MW	50MW	50MW	200MW
C	200MW	50MW	40MW	40MW	10MW
D	50MW	50MW	10MW	10MW	40MW
Total	1000MW	700MW	200MW	200MW	500MW