

Options to Consider if Ramp is Not Included in the Energy Price



If the decision is made to remove ramp effects from the energy price then a number of questions would need to be answered:

- Who will receive the payment for ramp?
- How much to pay for ramp?
- When will these ramp payments be made?

There are two possible options presented thus far, with the possibility for more.

- **Current CMSC**

In the current real time market congestion management settlement credits (CMSC) compensate participants whenever there is a difference between their market schedule and the dispatch quantity and a difference between the market price and their offer.

If a unit is constrained on due to ramp or transmission limitations and its offer is above the market clearing price (MCP), the compensation is limited to a recovery of operating costs (as indicated by the offer price) for the dispatch quantity.

If a unit is infra marginal, and is ramping up to meet demand there will be a difference between the market and dispatch schedule of the unit as a result of the different ramp rates in the sequences. This will trigger a CMSC payment which will continue until the units dispatch quantity is equal to its market quantity or the unit becomes marginal (offer = mcp).

- **AMPCO Proposal**

The AMPCO proposal states that only facilities which actually provided ramp in the appropriate direction should be compensated for their ramping services. Payment will be made only when there is a price difference between the 12X RR calculation (base price) and a ramp limited calculation (ramping price). The payment per MWh of provided ramp is the difference between the ramp price and the base price.

Looking at the two available options, we can address the questions of Who, How much, and When.

	Current CMSC	AMPCO
Who?	Facilities providing energy when their Offer is different than MCP and when the dispatch quantity does not equal the market quantity.	Facilities that provide ramp during a 'ramp limited event'
How much?	Compensated up to Offer price for difference between market and dispatch quantities	A payment per MWh of ramp calculated as the difference between a base price and ramp price
When?	When a facilities providing energy when their Offer is different than MCP and when the dispatch quantity does not equal the market quantity	When ramp price > base price

A number of options can be developed by answering each of the Who, When and How much questions differently. A list of the items to consider when answering each of the questions is provided below.

Who?	How much?	When?
<p>Facilities that would receive payment:</p> <ul style="list-style-type: none"> • Those that actually provided ramp in the direction of ramp requirement. • Those that have available ramping capability in the direction of ramp requirement. (This could be limited to some subset of available ramping capability based on criteria such as offer price.) • Those that have ramping capability. 	<p>The amount of money paid for ramp could be specified as:</p> <ul style="list-style-type: none"> • A fixed hourly amount (could be different for different hours). • A fixed percentage of the hourly Ontario energy cost. • A function of; hourly Ontario energy cost and/or the amount of ramp required in the hour. 	<p>Time periods when payment to eligible facilities would be made:</p> <ul style="list-style-type: none"> • All intervals • Intervals (or hours) where ramp is required. • Intervals (or hours) where the ramp required is above a pre-specified value