Chapter 16: Undelivered Quantities

EIRGRID semo Single Electricity Market Operator SONI

Undelivered Quantities

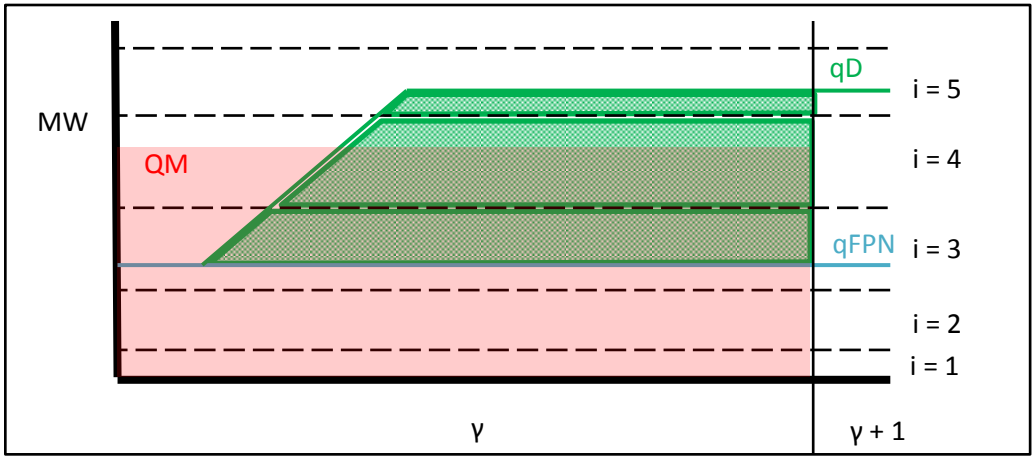
- Undelivered quantities are ones which have been calculated as a BOA due to the difference between the unit's FPN Quantity profile and their Dispatch Quantity profile, but which in reality was not delivered when considering the actual output of the unit;
- This refers to a deviation between the actual output of a Generator Unit, as represented through their Metered Quantity (QM), from the level to which they were expected to output in order to comply with their dispatch instructions, represented through their Dispatch Quantity (QD);
- Depending on the direction of the undelivery (i.e. if the Metered Quantity is at a value below QD or above QD), either offers to increase generation or bids to decrease generation could be the ones not delivered and therefore should not be settled as a delivered balancing market action:
  - If QM is below QD, then some Accepted Offer Quantities could be undelivered because the actual output of the unit is not as high as it needed to be to deliver the instructed increase in generation;
  - If QM is above QD, then some Accepted Bid Quantities could be undelivered because the actual output of the unit is higher than it needed to be to deliver the instructed decrease in generation.
- In order to compare like-with-like, a half-hour integrated MWh quantity for the Dispatch Quantity (QD) needs to be created to compare with QM to determine the undelivery.

Undelivered Quantities

- The volume due to this difference between the Metered Quantity and the Dispatch Quantity is implicitly not included in the Imbalance Component, as it only considers the Ex-Ante Quantity versus the Metered Quantity. Therefore a process of determining which of the BOAs calculated have not been delivered needs to be carried out so that this volume can be removed from the Premium and Discount Components to ensure that a BOA does not receive a payment for which it is not eligible;
- When carrying out this process, those BOAs “closest to the Metered Quantity” are considered first, as the Metered Quantity is the quantity causing the undelivery and from which the undelivery starts;
- Considering that the SOs would accept offers to increase generation from FPN level up to a Dispatch Quantity level in merit order from lowest to highest price, and the undelivery is a difference from the Dispatch Quantity, the order in which Accepted Offers are considered undelivered is from highest price to lowest price until the total volume of BOAs considered undelivered is equal to the total Undelivered Quantity;
- Similarly, considering that the SOs would accept bids to decrease generation from FPN level down to a Dispatch Quantity level in merit order from highest to lowest price, and the undelivery is a difference from the Dispatch Quantity, the order in which Accepted Bids are considered undelivered is from lowest price to highest price until the total volume of BOAs considered undelivered is equal to the total Undelivered Quantity.

Undelivered Quantities

Did you deliver it all?



$$CPREMIUM_{u\gamma} = \sum_{o}\sum_{i}\left(Max\left(PBO_{uoi\gamma} - PIMB_{\gamma}, 0\right) \times \left(QAOLF_{uoi\gamma} - Max\left(QAOOPOLF_{uoi\gamma}, QAOBIAS_{uoi\gamma}, QAOUNDEL_{uoi\gamma}, QAOTOTSOLF_{uoi\gamma}\right)\right)\right)$$

$$CDISCOUNT_{u\gamma} = \sum_{o}\sum_{i}\left(Min\left(PBO_{uoi\gamma} - PIMB_{\gamma}, 0\right) \times \left(QABLF_{uoi\gamma} - Min\left(QABBPOLF_{uoi\gamma}, QABBIAS_{uoi\gamma}, QABUNDEL_{uoi\gamma}, QABNFLF_{uoi\gamma}, QABCURLLF_{uoi\gamma}, QABTOTSOLF_{uoi\gamma}\right)\right)\right)$$

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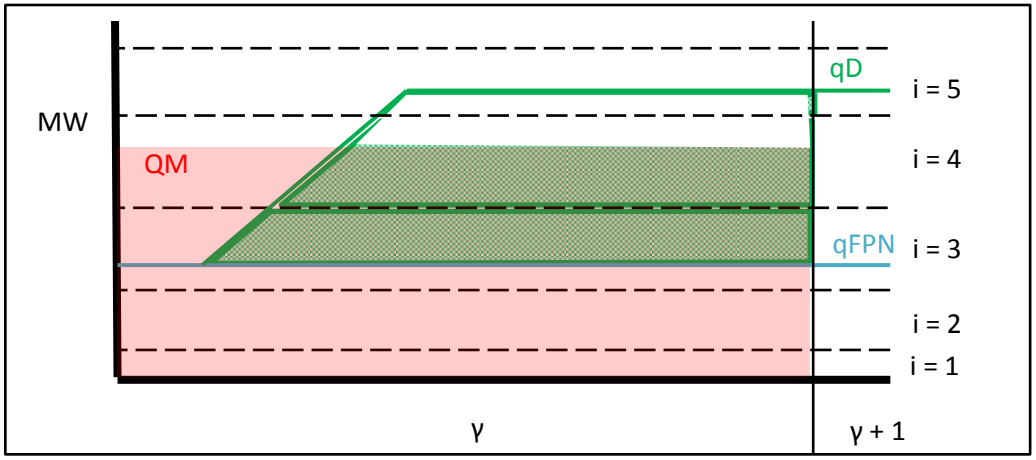

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