
Neutrality Adjustment

Charge # 1010 Neutrality Adjustment Charge/Refund

Description

Established as a public benefit, non-profit corporation, the ISO is responsible to ensure that the Settlements process achieves an accounting trial balance of zero (revenue neutrality). Charge type # 1010 is the charge identification that is used by the ISO to levy additional charges or payments to achieve neutrality for each ten-minute interval.

Purpose

Settlement charges # 0401 (Ancillary Service & Supplemental Energy due SC), # 0407 (Uninstructed Energy) and # 0406 (SC Unaccounted for Energy, or UFE) are expected to balance out for each settlement interval, resulting in revenue neutrality for the ISO. The ISO is said to be “revenue neutral” when the “Accounts Receivable” are equivalent to the “Accounts Payable” for market participants. However, revenue neutrality may not always occur because of the following operational realities:

- **Interchange Inadvertent Energy:**
Scheduled import and export energy is deemed delivered by the ISO and Adjacent Control Areas. However, operating realities often lead to inadvertent (i.e., unscheduled) energy flows during each interval.
- **Periods of Inter-Zonal Congestion:**
--During periods of inter-zonal congestion, the uninstructed imbalance energy price in a region with a concurrent generation deviation may be different from the uninstructed imbalance energy price in a region where a load that is deviating is being served. For example, the uninstructed imbalance energy price in Region 1 where the Generator is located may be \$10.00/MWh. Assume that the Generator is deviating from schedule by 10MWh. The uninstructed imbalance energy price in Region 2 where the Load is located is \$5.00/MWh. This price differential results in a \$5.00/MWh difference for an equal deviation quantity. This imbalance in price results in a cash neutrality of \$50.00.

--UFE or Unaccounted For Energy is calculated for each Utility Distribution Company (UDC) service area and is allocated to all SCs with scheduled export and measured load within a zone. During periods of inter-zonal congestion, the regional imbalance energy prices may be different. This can cause a price difference for UFE charges that result because Pacific Gas & Electric’s (PG&E) service area extends from NP15 into ZP26. A regional imbalance energy price difference may result in a cash neutrality balance because the pro-rata allocation of UFE charges for the PG&E service area will not offset the deviations that may have occurred in only one of the zones within PG&E’s service area.
- **Calculation of Import Deviation Vs Import Transmission Losses:** For Settlements purposes, Import schedules are “deemed delivered”. The Import Deviation is calculated by multiplying each SCs import schedule by the Transmission Meter Multiplier (TMM or losses). However, import losses that contribute to UFE are determined by multiplying actual deliveries (after submission of tie meter data) at the tie point by the TMM. The difference in these methods contributes to a cash neutrality mismatch.

- **Imbalance Schedules:** SCs are required to submit balanced schedules within a 2 MW tolerance band to the ISO. Because of the 2 MW tolerance band, deviations within the tolerance band cannot be allocated to the specific SC who submitted an unbalanced schedule within the tolerance band.
- **Incremental-Decremental Price Differential:** During certain intervals, the price differential between instructed and uninstructed energy can lead to a neutrality mismatch to the extent that Load and Generators deviate from schedule. To the extent that a Generator over generates when responding to a real-time Instructed Energy dispatch, the Energy produced is credited at the uninstructed price. However, to the extent that a Load is under scheduled the Energy consumed by the Load above the schedule is charged at the instructed energy price. This difference will create a Neutrality mismatch.

Additionally, in order to ensure revenue neutrality, the ISO Tariff provides for the collection or disbursement of all amounts required to reach an accounting trial balance of zero.

Charge Calculation and Calculation Components

This charge is settled on either a ten minute interval basis or hourly basis depending on the source of the neutrality mismatch. The adjustment is pro-rata allocated based on the SCs measured load (MWh) plus adjusted exports within the ISO's Control Area multiplied by the price (\$/MWh).

Equation

ISO Settlement Amount (\$) Neutrality Adjustment (Charge or Refund)	=	Price(\$/MWh) Total \$ amount to be collected or refunded / Total ISO Load and adjusted export in the Control Area	*	Quantity (MWh) Individual SC Load and Export in the Control Area
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Components of the Equation

Price: This is determined by dividing the total amount to be paid out or the total cost to be allocated among SCs for the given trading interval by the total measured MW and adjusted exports in the ISO's Control Area.

Quantity: This is the total measured load and adjusted exports for each individual SC in the ISO's Control Area.

Verifying the Charge

Charge component	How to verify
Amount due the ISO or amount due SC	<ul style="list-style-type: none"> • Sum up the individual SC metered loads plus adjusted export quantities. This should equal the quantity found in column 6 of the Settlement Detail Records. • Multiply the SC total load plus exports by the total neutrality imbalance quantity found in column 21 of the Detail Records (Charge or Refund). • Divide this resulting value by the ISO total

	metered Control Area load and adjusted exports for the trading interval found in column 22 of the Detail Record.
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Example

Upon completion of running the Settlements process for a particular trading interval, the ISO's Neutrality Report indicates a shortage of \$857.29 for the interval. The Neutrality amount of \$857.29 will result in the following charge allocation to SCj.

Total amount to be collected from all market participants: **\$857.29.**

Total ISO measured load and scheduled export for 10 minute interval: **4652.67 MWh**

Total SCj measured load and scheduled export: **16.43 MWh**

Resulting Neutrality Adjustment due ISO =

$$(\$857.29 / 4,652.67 \text{ MWh}) * 16.43 \text{ MWh} = \$3.03$$

References

ISO Tariff, Section 11.2.9(b), (c), (e)

SABP 3.1.1(b), (c)