Up To Transaction

04/10/2014

- UTCs are submitted in the Day Ahead Market and take a position on the price separation between two points

- For UTCs in the direction of congestion, they are profitable when RT congestion > DA Congestion

- In the counter-flow direction, they are profitable when RT congestion < DA congestion

Example DA Settlement – Forward Flow

100 MWh UTC cleared between points A and B

Node A:
DA LMP = $50

Node B
DA LMP = $75

UTC (A to B) = (Sink LMP – Source LMP) * Cleared MWh

UTC (A to B) = ($75 - $50) * 100 MWh = $2500 (charge)

Equivalent to moving 100 MWh of power from A to B and paying the congestion costs

Example Balancing Settlement

100 MWh UTC cleared between points A and B

Node A:
RT LMP = $45

Node B
RT LMP = $80

UTC (A to B) = (Sink LMP – Source LMP) * Cleared MWh

UTC (A to B) = ($80 - $45) * 100 MWh = $3500 (credit)

Profit = RT Position – DA Position = $3500 - $2500 =$1000

Transaction does not exist in real-time and "relieves" flow on the facility

"Relief" provided in real-time was worth more than the congestion imposed in DA and therefore the UTC is profitable

Alternative Balancing Settlement

100 MWh UTC cleared between points A and B

Node A:
RT LMP = $45

Node B
RT LMP = $60

UTC (A to B) = (Sink LMP – Source LMP) * Cleared MWh

UTC (A to B) = ($60 - $45) * 100 MWh = $1500 (credit)

Transaction does not exist in real-time and "relieves" flow on the facility

Loss = RT Position – DA Position = $1500 - $2500 =-$1000

"Relief" provided in real-time was worth less than the congestion imposed in DA and therefore the UTC is NOT profitable

Observations

- UTCs profit when they contribute to convergence of Day-Ahead and Real-Time congestion
  - When they increase congestion in DA drawing it closer to real-time, they make money
  - When they create congestion in DA that does exist in RT, they lose money

- This principles applies for both prevailing and counter-flow congestion

Up To Transaction History

- ## June 1, 2000

  - UTCs first became available in PJM coincident with the implementation of the DA Market

- ## June 1, 2007

  - Due to the transmission service reservation required for UTCs, they receive a share of the loss over collection

- ## March 1, 2008

  - Max Spread for UTC transactions increased to +/- $50 UTCs but limited valid source/sinks

Up To Transaction History (Cont..)

- ## August 28, 2010
  - PJM submitted a filing to propose several market rule changes including the elimination of OASIS reservation for UTC Transactions. The commission accepted these revisions effective September 17, 2010

- ## September 17, 2010
  - Transmission Service reservation requirement for UTCs is removed.

- ## May 17, 2011
  - Removed DUKIMP, DUKEXP, CPLEIMP, CPLEEXP, NCMPAIMP, and NCMPAEXP from eligible nodes for UTCs

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Up To Transaction History (Cont..)

- ## May 1, 2012

  - Moved bidding of UTCs from EES to eMKT

- ## November 01, 2012

  - Removed the requirement of either source or sink node for UTCs be an Interface node

- ## June 10, 2013

  - PJM filed revisions to the Tariff and Operating agreement to incorporate bid/offer volume limit for UTC Transactions.

Up To Transaction History (Cont..)

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Up To Transaction History (Cont..)

- ● Determination of available nodes
  - – Start with historical set of eligible nodes available for interchange transaction on the PJM OASIS
  - – Remove all load buses below 69 KV from above list
  - – Remove from this resulting set all generator buses at which no generators of 100 MW or more are connected
  - – Remove all electrically equivalent nodes

Questions?