

Enhanced Loss Modeling in the TCC Auction (TB-214)

Ferdinand Rillo

*Senior Engineer, TCC Market Operations
New York Independent System Operator*

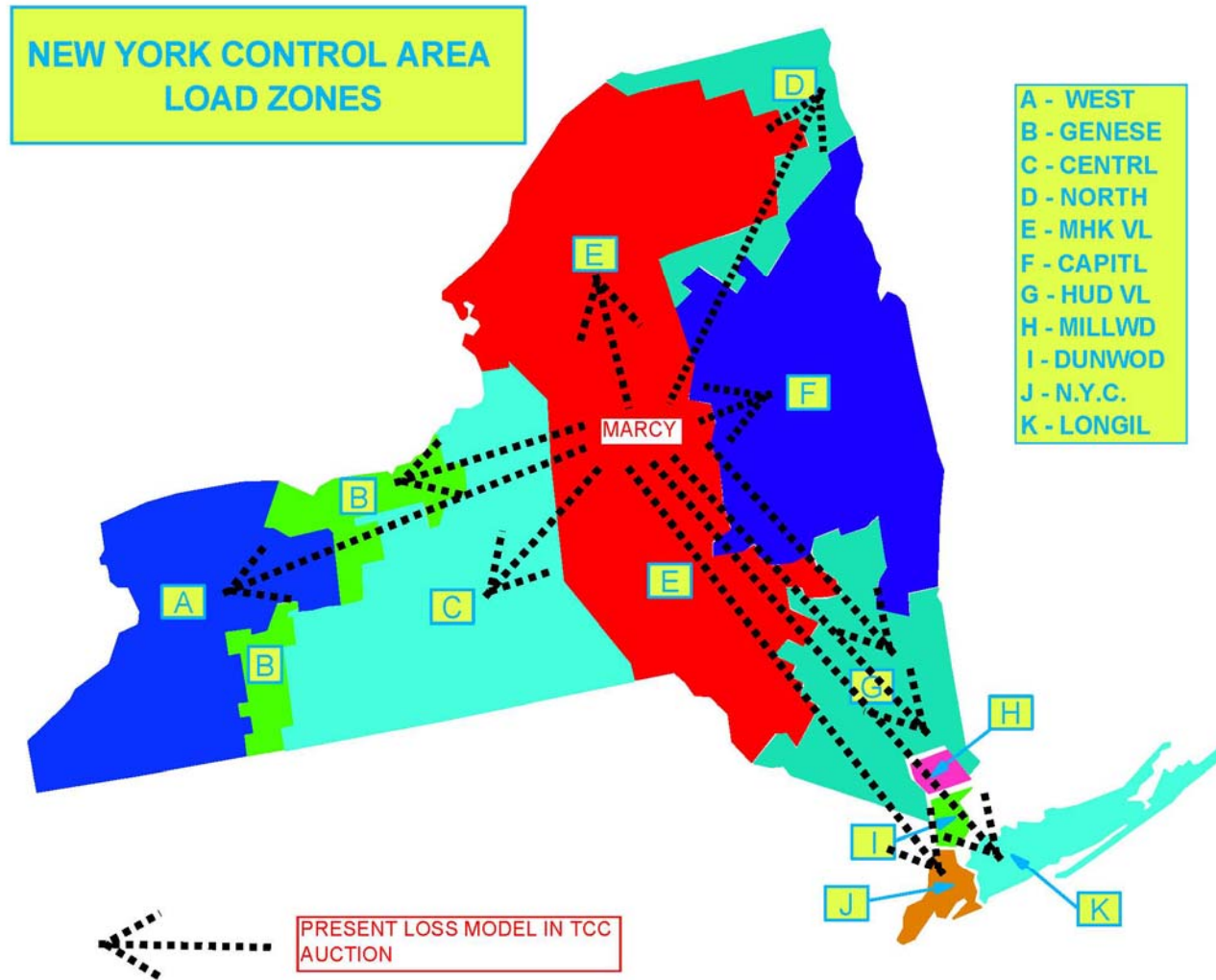
Market Issues Working Group

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Present Loss Model in TCC Auctions

- ◆ TCC Manual-section 3.9.2
 - TCCs are loss-less quantities that require the injection MW amount to equal the withdrawal MW amount. However, on a transmission system, to deliver power from one location to another location, a MW injection different from the MW withdrawal must occur. The difference is losses.
 - In the TCC Auction OPF (optimal power flow) analysis, the NYISO cannot identify where generation will be produced to serve losses, since the injection location of a TCC may not be a physical generator. As a result, all power to serve losses is modeled as being supplied at the Reference Bus.
 - The assumption that all generation to serve losses will be produced at the Reference Bus results in power flows in the OPF from the Reference Bus to all locations where losses are served, in addition to the power flows produced by the TCCs awarded in the auction. No TCCs are defined or awarded based on these power flows, but they are a necessary part of the simultaneous feasibility test.

Present Loss Model In TCC Auctions



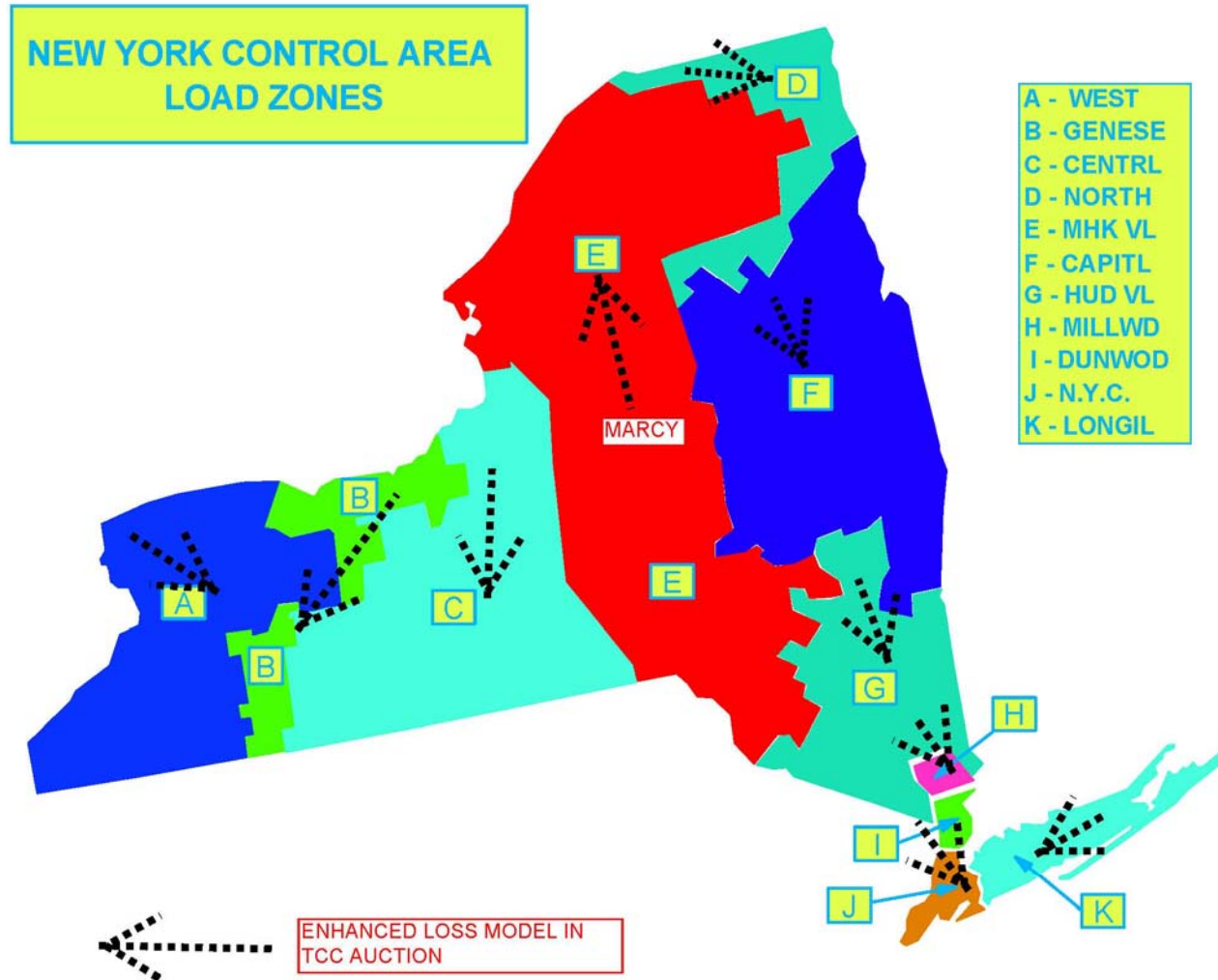
Enhancement In TCC Auction Loss Model

- ◆ An enhancement in the TCC OPF software has made it possible to represent energy to serve losses from multiple generation sources.

Enhanced Loss Model in TCC Auctions

- ◆ Utilizing the enhancement in the OPF software, power to serve losses can be modeled as being supplied from generator(s) in each of the zones, with the exception of Zone I.
 - Zone I losses will be supplied from the generator in Zone H since there are no suitable generators in Zone I to serve its zone losses.
 - Zone J losses will be supplied from two generators, one is connected in the 345kV system and the other generator is connected in the 138kV system.
- ◆ No TCCs are defined or awarded based on these power flows, but remain a necessary part of the simultaneous feasibility test.

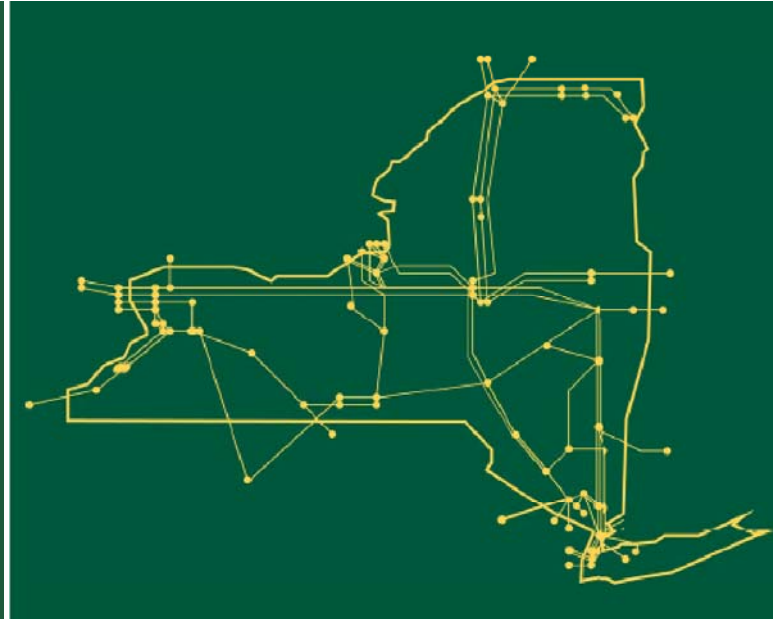
Enhanced Loss Model In TCC Auctions



Implementation

- ◆ The enhanced loss modeling in the OPF analysis will be implemented commencing with the Spring 2012 TCC Centralized TCC Auctions and all subsequent Monthly Reconfiguration TCC auctions.
- ◆ This loss modeling will be represented in the TCC Auction Data provided to those requesting and complying with TCC model disclosure procedures.
- ◆ This Technical Bulletin will be incorporated into the Transmission Congestion Contracts Manual during its next available recertification period.

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