

The System Marginal Energy Cost Component of LMP

The SMEC shall be the same for each location throughout the system. SMEC is the sensitivity of the power balance constraint at the optimal solution. The power balance constraint ensures that the physical law of conservation of Energy (the sum of Generation and imports equals the sum of Demand, including exports and Transmission Losses) is accounted for in the network solution. For the designated reference location the CAISO will utilize a distributed Reference Bus for which constituent PNodes are weighted **using the Reference Bus** distribution factors. The **Reference Bus** distribution factors are based on ~~Demand at each PNode that~~ the Load Distribution Factor for each PNode which represents Load at those each locations. For the Integrated Forward Market, if the market does not clear based on such a distributed load Reference Bus, a distributed generation Reference Bus will be used based on available generation and the generation bid at each PNode.; ~~except that in the Integrated Forward Market, in the event that the market does not clear based on such distributed load, the distributed Reference Bus will be based on generation at each PNode.~~ The System Marginal Energy Cost is the cost of economically providing the next increment of Energy at the distributed Reference Bus based on submitted Bids. ~~Once the Reference Bus is selected, and Demand, or generation as described above in certain cases of the Integrated Forward Market, has dictated the distribution factors, the cost of economically providing the next increment of Energy, based on submitted Bids, at that Reference Bus becomes the System Marginal Energy Cost.~~