Heavy use of the electricity grid produces congestion, a situation in which the lowest-priced electricity can’t flow freely to a specific area.

PJM Interconnection’s locational marginal pricing system takes account of congestion in determining wholesale electricity prices. It reflects the value of the energy at the specific location and time it is delivered.

- When the lowest-priced electricity can reach all locations, prices are the same across the entire PJM grid.
- When there is heavy use of the transmission system, the lowest-priced energy cannot flow freely to some locations.
- In that case, congestion costs are incurred as more-expensive but advantageously located electricity is ordered to meet the demand.
- As a result, electricity prices are higher on the receiving end of the congestion and lower on the sending end.

Congestion – heavy use of the transmission system in an area – generally raises the electricity price in the receiving area of the congestion and lowers the price in the sending area. Operating conditions such as generation patterns, load levels and transmission outages can cause congestion and result in electricity price changes.

The locational marginal prices send price signals that identify congestion and encourage the development of new transmission facilities, new generation or demand-response initiatives in areas where congestion is common.

March 23, 2017