Seven states participating in the Energy Imbalance Market

The ISO and PacifiCorp launched into the first western real-time energy balancing market into operation on November 1, 2014. NV Energy has obtained approval from both the Federal Energy Regulatory Commission (FERC) and the Public Utilities Commission of Nevada (PUCN) and will go live with the Energy Imbalance Market (EIM) in fall of 2015. Studies conducted by both companies of their participation in EIM show significant economic and reliability benefits that accrue to customers in the NV Energy, PacifiCorp, and ISO areas. Participants in the EIM can leverage generation resources across the entire EIM region, with the added benefit of more frequent dispatching in real time to optimize available energy supplies. The EIM is an important tool for operators across the region to facilitate increased integration of renewable resources.

Background

The ISO announced a partnership with Portland-based PacifiCorp in February 2013 to develop an EIM that would operate across participating balancing areas. Following a robust public stakeholder process, the ISO developed a market design that was approved by the ISO Board in November 2013. PacifiCorp began participating in the EIM in November 2014. With NV Energy, the expanded EIM would cover seven states and over 44 million people.

Reliability benefits

The EIM strengthens grid reliability by balancing supply and demand closer to when electricity is consumed and by allowing system operators real-time visibility across neighboring grids. The ISO is leveraging its existing market systems to identify fluctuations in supply and demand, and then automatically find the best resource to meet current needs across a larger region. This, in turn, optimizes the interconnected high-voltage system as market systems automatically manage congestion on transmission lines.

Renewable integration benefits

While the nation’s energy supply becomes more diverse, regional coordination and finely tuned dispatches become more important as changing weather conditions produce variability in wind and solar power generation. An EIM improves the ability to manage resource output deviations, smoothing out power flows in real time so that renewable energy is effectively...
integrated onto the grid. By combining the NV Energy, PacifiCorp, and ISO’s diverse portfolio, the seven-state EIM will make it possible to share more variable renewable resources such as wind or solar during times of under- or overgeneration.

**Easy and economical entry and exit**

Studies indicate that the benefits to all customers in the seven-state EIM footprint outweigh the costs of participating in the EIM. In addition, an EIM participant can choose to leave the market at any time with no exit fees.

**Preserving autonomy**

EIM entities such as PacifiCorp, NV Energy and other participating balancing authorities maintain operational control over their generating resources, retain all their obligations as a balancing area, and must still comply with all regional and national reliability standards. For example, obligations to provide reliability compliance, ancillary services, physical scheduling rights and bilateral trades do not change with EIM.

**A market-based solution**

The ISO already operates a successful real-time fifteen minute market with five-minute dispatch capability. This is a tried and true service that exists in a similar form in two-thirds of the United States, particularly in the Northeast and Midwest as well as much of Canada. This partnership signals continuing interest from other balancing areas in joining what is already working effectively to lower costs and at the same time expanding the pool of resources available to meet supply and demand needs in real time. It is a voluntary and natural step toward the more efficient management of energy systems for the benefit of customers.

**Governance**

The ISO EIM expansion requires that all entities, whether inside or outside California, are given a voice in the decision-making process going forward. In May 2014 the ISO Board of Governors appointed the EIM Transitional Committee that is working towards the development of a long term independent governance proposal that will go through a stakeholder process in 2015. The Board advisory committee is composed of 9 members who were nominated by industry stakeholders and two representatives from PacifiCorp and NV Energy. They have committed to work in an open and transparent manner and be inclusive of a wide range of stakeholders making the EIM a truly western market and encourage broad participation.

**Next steps**

Work is underway to integrate NV Energy into the EIM in October, 2015. The ISO began publishing in February 2015 quarterly reports of the actual EIM benefits based on actual operating data.

Beginning in 2014 and continuing in 2015, NV Energy will conduct a stakeholder process for transmission customers and other stakeholders to make changes to its open access tariff in order to implement the EIM. They will then seek FERC acceptance in mid-2015.

During 2015, the ISO will complete the stakeholder process for Year 1 Enhancements to EIM, to address FERC compliance, commitments made during the original stakeholder process, and others identified during implementation. Continued stakeholder involvement will be critical to the success of the EIM by offering valuable input and support to expand a market that can be leveraged to more effectively use resources in the West.