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DOE/Western Initiatives Can Reduce Costs, Improve Reliability, Short-Term and Begin Long-Term Modernization

Incremental Steps Can Reduce Costs for Retail Customers.

- Emphasis on energy efficiency and demand resources saves money and reduces risk. Energy efficiency savings can meet need for electricity at half the cost of new generation. Energy efficiency and demand resources can defer or avoid the need for new generation, saving customers money. Western customer IRPs can prioritize these non-generation resources; Western transmission rates can incentivize them.
- Peak/Off-Peak Rates can shift consumption to off-peak times, avoid construction of expensive peaking generators. Western transmission rates can incentivize shifts in customer demand that reduce overall cost of electric service.

Energy Imbalance Market Can Reduce Costs, Improve Reliability.

- NREL modeling shows EIM production cost savings of \$1.47 billion each year, by moving from hourly dispatch to 10-minute dispatch and sharing flexibility reserves. Most efficient generators run more; least efficient run less or not at all.
- EIM uses existing transmission more efficiently, defers need for—and cost of—new transmission.
- EIM gives system operators real-time information needed to improve reliable operation.

Transmission Infrastructure Program Can Be Adjusted To Help Pay EIM

Investment Costs. TIP may be able to be adjusted to help finance EIM start-up costs for Western customers. Many utilities will have to invest in new hardware, software and training to be able to participate in an Energy Imbalance Market. Estimated benefits to individual Balancing Areas, and experience from Southwest Power Pool's Energy Imbalance Service, indicate such investment can be paid back quickly. TIP financing could provide low-cost capital to enable Western customers and perhaps other utilities to make those investments which they might otherwise find difficult to make.

Proposed Reforms Can Reduce Costs of Integrating Renewables.

- Renewable resources provide a hedge against rising fuel costs. Adding them to generating portfolios creates better risk-adjusted returns and protects customers against fuel-driven cost increases.
- Western Governor’s Association report (June 2012) explains nine approaches utilities can use to reduce costs of adding renewables.¹ Western can implement and take advantage of all nine. Helping create a western Energy Imbalance Market would capture benefits of four of these approaches, including subhourly dispatch, taking advantage of geographic diversity of resources and improving reserves management.

Reforms Being Investigated Can Make the Western Grid More Flexible, Resilient and Reliable.

In the short term, consolidating its Balancing Areas in the Western Interconnection would enable WAPA to utilize generation across its entire footprint to meet system needs. WECC’s Energy Curtailment Calculator and EIM markets provide real-time information system operators need to operate the system reliably. Longer-term, closely coordinating or virtually consolidating Balancing Area operations with neighboring BAAs would provide additional operational flexibility to system operators. Subhourly dispatch allows existing generators to be utilized to meet operational flexibility needs.

Imprudent to Defer Long-Term Planning for Grid Modernization.

- Modernizing the grid is essential to US energy security and competitiveness. The interconnected grid is vulnerable to outages and physical and cyber attack. It’s difficult or impossible to take advantage of demand resources, variable generation and efficient new technologies with manual dispatch and manual transmission system operation.
- Information Technologies now available offer new dimensions of communication and energy management. Current operations limit their use in the electric system. How much reliability and efficiency improvement, and how much potential cost savings, does this forego?
- Fuel accounts for about 75% of the cost of electricity. In 20 years, will fuel be less expensive or more expensive than today? Will environmental and public health costs, risks and liabilities of electricity production be greater or less than today? Changing the electric system takes a long time; planning long-term improvements should begin now.

Follow U. S. Military Leadership. The U. S. Military is setting examples PMAs can follow in order to improve reliability, reduce costs and increase energy security. Army Initiatives Task Force: “Energy security is operationally necessary, financially prudent, and mission critical.” Army Energy Security Implementation Strategy Goals:

1. Reduced energy consumption
2. Increased energy efficiency
3. Increased use of renewable energy
4. Assured access to sufficient supplies
5. Reduced adverse impacts on environment.

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¹ “Meeting Renewable Energy Targets in the West At Least Cost: The Integration Challenge.”
www.westgov.org.