

Platts Electric Power Daily

Thursday, August 30, 2007

Efficiency, DSM factors in debate over new Nev. coal plants

Energy efficiency and demand side management programs are taking off across the Southwest and have become key elements in the debate over the need for new coal-fired power plants in Nevada, where utilities and developers are proposing projects totaling 4,810 MW.

Environmental groups, Senate Majority Leader Harry Reid, a Democrat from Nevada, and others oppose the plants and contend that the rise in demand in the area — roughly 3% to 4% in southern Nevada, or 200 MW a year, and 1.5% in the north — can be met through a combination of renewable energy, natural gas-fired power plants, conservation and energy efficiency programs.

While developers and utilities have added gas-fired plants and continue to boost renewable capacity in Nevada, energy efficiency and demand-side management efforts across the Southwest are beginning to take off, perhaps nowhere more sharply than in Nevada, a move energy efficiency advocates say can reduce demand growth by around 1.5%.

Nevada Power and Sierra Pacific Power believe their DSM programs can take a significant bite out of demand growth, but that they still need to build a 1,500-MW coal-fired plant that could be expanded with a 1,000-MW integrated gasification combined-cycle unit when feasible to serve customers and diversify their fuel mix.

Reflecting the improved outlook for energy efficiency programs in the region, the annual DSM budgets for the two Sierra Pacific Resources utility subsidiaries is jumping from just under \$3 million in 2001 to \$45 million in 2008, if all pieces of the program are approved by state regulators, according to Greg Kern, Nevada Power's director of energy efficiency and customer strategy.

The dramatic increase in spending on DSM programs was driven by an alignment between the state Legislature, the Nevada Public Utilities Commission and the utilities, according to Kern. When the Legislature two years ago expanded the state's renewable portfolio standard to 20% by 2015, it voted to let the utilities meet 25% of the renewable requirement through DSM programs, making Nevada one of just a few states to take that approach, Kern said. The utility expects its DSM programs to fulfill the 25% portion of the RPS by the end of 2008, Kern said.

The Nevada PUC then decided to allow the utilities to put DSM-related costs into their ratebases and then earn an additional 5% return on equity on those investments, said Steve Wiel, a former Nevada PUC commissioner who now works with the Southwest Energy Efficiency Project (SWEET), a Boulder, Colorado-based group pushing efficiency programs in the region. It is "one of the most ... appropriate incentives for energy efficiency," Wiel said. "There's no downside for anybody," Kern said of Nevada's incentives for utility DSM programs.

In addition, because DSM is part of the state's RPS, it reduces potential ratepayer costs. "A kWh gained through DSM is so much cheaper than through renewable energy," Kern said. For example, residential ratepayers in southern Nevada pay about 7 cents/kWh for the generation portion of their bills, with renewable energy typically costing more than 7 cents/kWh, Kern said. In contrast, a kWh saved through Nevada Power's DSM programs costs less than half a cent per kWh, he said.

While regulators and others recently have been taking a sharp look at decoupling – the practice of paying utilities through a mechanism other than sales volumes – “decoupling alone is never enough,” Wiel said. SWEEP believes that performance-based incentives are a better approach than decoupling, said Howard Geller, the group’s executive director. Regulators should set minimum efficiency targets and then give utilities a bonus for meeting the targets, he said. Performance-based incentives seem more acceptable to electric utilities than decoupling, Geller said, noting that decoupling is not necessarily needed to spur demand reduction programs.

Throughout the Southwest, utility DSM programs are growing, Geller said. In 2001, spending on Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming utility efficiency and DSM programs totaled about \$20 million, Geller said. This year, spending is at about \$130 million, with Arizona, Colorado, Nevada and Utah making big increases, Geller said. “The programs are very much growing and should continue to grow,” he said.

Across the region, the utility programs should reduce load growth by about 1% a year, Geller estimated. Combined with other initiatives, demand can be reduced by roughly 1.5%, Geller said.

How effective are Nevada’s efficiency programs? In 2007, Nevada Power expects to save 364 GWh and reduce its peak load by 124 MW, according to the utility’s 2006 resource plan. In 2012, DSM programs should save 865 GWh and reduce load by 279 MW. Sierra Pacific Power expects to save 56 GWh in 2007 and cut peak demand by 9 MW. In 2012, the utility expects to save 305 GWh and reduce peak demand by 42 MW.

The Western Governors’ Association has set a goal of reducing demand growth by 20% by 2020 through efficiency programs, a target that is achievable, according to SWEEP. Utility programs in Nevada can reduce demand by 6,040 GWh a year in 2020, Geller estimates. The next-largest savings could potentially come from building energy codes, which could cut demand by about 2,440 GWh a year, he estimates. Combined with other efforts, Nevada can meet the WGA’s goal, which would obviate the need for roughly 1,700 MW of additional baseload generation while reducing peak demand by 3,000 MW, according to Geller.

Because Nevada is growing so quickly, DSM programs cannot meet all the state’s growth, Kern said. But for states that are growing in the 1% range, “you can DSM your way out of it,” he said.