

DOE: planning for new transmission is imperative

A significant expansion of transmission infrastructure could enable high penetrations of wind generation for 20 to 30 per cent of the eastern two-thirds of the US by 2024, according to a study released by the US Department of Energy. However, planning for the new transmission is imperative because it takes longer to build new transmission capacity than it does to build new wind plants. If there are no enhancements to the transmission system, the region faces substantial curtailment of wind generation. Interconnection-wide costs for integrating large amounts of wind generation are manageable with large regional operating pools and significant market, tariff, and operation changes, DOE reports. The study has found that transmission helps reduce the impacts of the variability of the wind, which reduces wind integration costs, increases reliability of the grid, and helps make more efficient use of the available generation resources. Although costs for aggressive expansions of the existing grid are significant, they make up a relatively small portion of the total annualised costs for any of the scenarios examined in the report. According to DOE projections, the integration cost for all scenarios is less than US\$10 per megawatt-hour of wind with large balancing areas and fully developed regional markets.

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