

MANAGING THE COSTS AND RISKS OF INTEGRATING NEW GENERATION

Coordination of generation and transmission investment (COGATI) 14 October 2019

The type and location of generators is changing fast. The national electricity market will replace most of its current generation stock by 2040. We need to start future-proofing the transmission access regime now.

The COGATI blueprint is an entirely new way of managing the costs and risks of getting new generation into the market to benefit consumers.



It enables AEMO's integrated system plan (ISP) to continue rolling out without delay.



It ensures the costs of this rollout are shared by industry and consumers.



It de-risks investment by ensuring the right investment happens in the right place at the right time.

The need to future proof

A key challenge facing the energy market is how to connect new generation at the lowest cost possible to keep the lights on and bills down.

Lack of coordination between generation and transmission investment is slowing down the integration of new large-scale generation and storage in the face of this sweeping change. This limits AEMO's ability to dispatch the lowest cost generation to consumers.

An unprecedented number of generators are now wanting to connect to the power system. And more new generators are connecting in places where other power stations are already located so some transmission lines are becoming heavily congested. Other generators are locating at the edge of the grid where there are fewer transmission lines which leads to power losses over longer distances.

At the moment generators all get the same return on what they generate regardless of their location. Consumers pay all the cost of transporting power to where it is needed.

What we propose changing

Under the proposed generation and transmission coordination blueprint large-scale generators and storage would get paid locational marginal prices for the first time.

The blueprint also introduces a new risk management tool called financial transmission rights which can give all generators more investment certainty and make sure networks are used more efficiently. Money raised from the sale of these rights would be used to offset consumer bills.

Generators would purchase these rights to stake a claim to use the grid. It protects generators by paying them for some of the revenue lost at times when they can't access the network.

Static, annual marginal loss factors would be replaced by loss factors that are determined dynamically through dispatch to better reflect actual conditions on the power system. Generators would have the option of protecting themselves from changes by hedging their marginal loss factors to increase the financial certainty of their investment.

What this means

Lower costs for consumers by sharing the costs of new transmission with generators and ensuring the lowest cost combination of generation is dispatched at any given time.

Increased reliability through better coordination of generation and transmission investment decisions.

Improved access to the grid for new generation and reforms to make renewable energy zones happen faster across the market.

Better risk management for generators, reducing congestion and marginal loss factor risks, and ultimately the cost of capital.

Reduced transmission network costs in managing inter-regional settlement residues.

