

Predicting electricity demands

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Research published in the *International Journal of Energy Technology and Policy* shows how a neural network can be trained with a genetic algorithm to forecasting short-term demands on electricity load. Chawalit Jeenanunta and Darshana Abeyrathna of Thammasat University, in Thani, Thailand, explain that it is critical for electricity producers to be able to estimate how much demand there will be on their systems in the next 48 hours. Without such predictions, there will inevitably be shortfalls in power generation when demand is higher than estimated or energy and resources wasted if demand is lower than expected.

The team has used data from the electricity generating authority of Thailand (EGAT) to train a neural network via a [genetic algorithm](#). The results are compared with the more conventional back-propagation approach to prediction and show that the system is much better and predict the rise and falls in electricity demand. The genetic algorithm neural network (GANN) approach takes about 30 minutes to train for prediction compared with 1 minute for back-propagation training of a [neural network](#). However, the added value of much more accurate predictions far outweighs this additional time and effort.

More information: Chawalit Jeenanunta et al. Neural network with genetic algorithm for forecasting short-term electricity load demand, *International Journal of Energy Technology and Policy* (2019). [DOI: 10.1504/IJETP.2019.098957](https://doi.org/10.1504/IJETP.2019.098957)

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