

Multi-Dam Seismic Monitoring Project in Thailand for EGAT



CASE STUDY

The Electricity Generating Authority of Thailand (EGAT) is Thailand's leading state-owned power utility under the Ministry of Energy and responsible for electric power generation and transmission for the whole country, as well as bulk electric energy sales.

It is the largest power producer in Thailand, owning and operating power plants of different types and sizes which are in 45 sites across the country, with a total installed capacity of 15,757.13 MW (as of March 2018). Power generation facilities consists of 3 thermal power plants, 6 combined cycle power plants, 24 hydropower plants, 9 renewable energy plants, 4 diesel power plants, and the Lamtakong Jolabha Vadhana Power Plant. EGAT also owns and operates a high voltage transmission network which covers all parts of the country.



Kinometrics through its operator representative AES has designed a seismic monitoring system across seven EGAT Dams; each dam has instrumentation of four short-period stations (SS-1) for induced seismicity; and three or four accelerographs (Basalt) at the crest, toe, abutment, and about 2km downstream.

The Local data acquisition is with Rockhound with the Central Data acquisition: Antelope (5.5) installed on 2 Dell servers with RHEL. Communication: LAN and Intranet.

Additional data is available for import from the national seismic network in Thailand and regional GSN stations.

The Aspen System at the headquarters of EGAT in Bang Kruai District, north of Bangkok, acquires all data in real-time. The system is tuned to carry out automatic location of small local events near each dam and regional events. The system automatically calculates the peak ground acceleration (PGA).

In addition, a new event triggers a custom process that creates event files for each station including PGA calculation (if not done already during the automatic real-time process). That data is written to a directory that is accessible via sftp by the need-to-know departments. Antelope distributes an e-mail that contains all event information including PGA, PGV, PGD plus the links to the event files.

[More information](#)