



New Zealand Waste Disposal Company Chooses S&C's System VI™ Switchgear

S&C Featured Solution: System VI Switchgear

Location: New Zealand

Customer Challenge

As part of the consent requirement to operate their landfill, a waste disposal firm in New Zealand was required to extract and destroy the methane created during anaerobic decomposition of the organic waste material. This landfill, located north of Auckland, is the largest in New Zealand and processes approximately 2000 tons of waste a day. Covering 175 acres, the site has a capacity of 20 million cubic meters.

Two 415-volt, 1080-kVA methane-powered generators would meet the requirement. But the waste disposal firm realized that they could sell, to the local utility, excess electricity generated at the site, thus creating additional revenue. The problem was making the interconnection.

S&C Solution

415-volt/33-kV step-up transformers, along with appropriate switchgear, would be needed at the landfill generator site. And additional switchgear would be needed at the utility's interconnection point, 3 km away.

S&C System VI Switchgear was specified for the application. The 38-kV gear features a modular arrangement of SF₆-insulated S&C Vista® Underground Distribution Switchgear in combination with air-insulated S&C Metal-Enclosed Switchgear. The former contains load-interrupter switches and fault interrupters, which protect the transformers. The latter contains circuit breakers, protective relays, voltage and current transformers, metering, a remote terminal unit, and communication equipment. This arrangement

provides maximum flexibility and gives the waste disposal firm the ability to add additional generators in the future.

Results

The S&C System VI Switchgear was delivered on time. Using the two new generators plus two existing generators, the waste disposal firm now generates more than 4 megawatts of "green" electricity from the methane derived at the site.

The waste disposal firm plans to install 11 more generators, for a total capacity of over 16 MVA. Additional S&C System VI Switchgear will likely be procured to protect these generators.

