



# Trans-Rupter II® Transformer Protector—Model EX... Is Integral to New Generation Project

**S&C Featured Solution:** Trans-Rupter II Transformer Protector

**Location:** Utah, United States

## Customer Challenge

After a wave of nearby brownouts and nearly 20 years without any significant expansion in generation capacity, a large utility in northern Utah decided to install five new 40-MW gas-turbine “peakers” in a newly developed industrial park. A pipeline running past the park would provide a steady supply of clean-burning, economical natural gas.

The turbines would be individually brought on-line to increase capacity during peak periods. Each turbine would include a generation substation comprised of a 45/60/75-MVA, 13.8-kV to 138-kV step-up transformer, protective device, bus-work, and switchgear.

Since limited space was available in each substation, the transformer protective device needed to be very compact.

## S&C Solution

The utility decided to purchase five 138-kV S&C Trans-Rupter II Transformer Protectors, Model EX. With its lightweight, space-saving design, the Trans-Rupter II Transformer Protector was ideal for the application. And its simple installation procedure was appreciated,

given the utility's tight construction schedule. The S&C-supplied mounting pedestals come with pre-wired conduit, so wiring was quick and easy.

A vertical-break disconnect was installed on the transmission side of the Trans-Rupter II Transformer Protector to provide a visible break and pick up transformer magnetizing current. The “take-off tower” was installed directly over the disconnect to save even more space. Using differential relays housed in the turbine control house, a separate protection scheme was set up for each substation.

## Results

The Trans-Rupter II Transformer Protector was ideal for this application, and the utility is very satisfied to have five new, efficient gas-turbine plants...providing enough power for nearly 120,000 homes!

*40-MW gas-turbine generation  
“peaker” plant.*



*138-kV Trans-Rupter II, Model EX  
protects step-up transformer.*

