



TRANTECH
RADIATOR PRODUCTS, INC.

Custom Radiator Solution Saves Southeastern Utility

PROBLEM

A large Southeastern utility company needed to replace the water coolers at an aging electric generating plant. Built in 1948, the plant's six identical Westinghouse Generator Step-Up power transformers were fully operational, with all active parts still in very good condition. The twin water coolers attached to each unit, however, did not hold up as well. Over time, parts on the coolers had oxidized and began leaking.

Because of the obvious environmental concerns, the company needed to replace the coolers quickly, with minimal impact on the plant and within a tight budget. There were concerns that a larger area was needed to mount radiators for the required cooling loads, and the space between the transformers was limited. The utility determined that replacing the old water coolers with new ones would cost more than what had been allocated for their budget.

SOLUTION

Trantech engineers worked with the utility's engineering group to develop a complete custom cooling solution. The system, consisting of two manifolds and seven Trantech radiators, replaced the entire water-cooled system without the pumps and other machinery typically needed with coolers. This was expected to considerably reduce the utility's maintenance costs on their transformers.

The Trantech radiators system eliminated the water maintenance concerns, addressed the environmental footprint issue with custom engineering, and provided the utility a cooling solution that was within their budget.

RESULTS

The utility company found that the Trantech cooling package was over 50 percent less expensive than traditional water coolers would have been. In addition, the improved thermal performance of the Trantech radiators resulted in lower transformer operating temperatures. On average, Trantech radiators reduced the transformer oil temperatures by 6°C, which further extended the life of the transformers. In addition, lower operating temperatures provided substantial savings by preventing power loss and reducing cooling costs.

REPLACEMENT RADIATORS FOR EVERY TRANSFORMER

For over fifty years, Trantech has been the leading supplier of panel radiators to OEMs and electric utilities for distribution and power transformers. Trantech's Flexoplate ripple design has distinct advantages over other brands of transformer coolers. The extended convective surface area of their exclusive design means Trantech Flexoplate radiators deliver outstanding heat transfer efficiency. In addition, the Flexoplate surface provides excellent strength, flexibility, and rigidity, giving measurable reductions in vibrations and noise levels.

Trantech is committed to serving the utility market by providing replacement radiators to retrofit any size panel-type radiators, tube assemblies, electric coolers, and water coolers. Additionally, Trantech provides technical recommendations on other cooling needs. Trantech radiators are available in the widest selection of transformer radiator sizes in the industry, allowing maximum flexibility when replacement radiators are needed. The multiple plate widths available from Trantech provide easy replacements for radiators, as well as tube assemblies of other sizes on transformers made by manufacturers worldwide.

Before: Two rusty, leaking water coolers on each transformer



After: Trantech cooling system with seven fans per radiator bank