

## POWER PLANT FREEZE PROTECTION FOR OUTDOORS

*Heat protects gases and liquids from freezing in pipes*

### Application

DTE Energy Corporation in Michigan has a natural gas-fired power plant in Carson City that provides power for over 850,000 homes. It has a series of gas-pipe systems that need to be protected from the harsh Michigan winters. Natural gas contains water vapor in addition to gaseous hydrocarbons. These can condensate when the gas is exposed to cold temperatures. Without heat and insulation, gas in outdoor piping will easily condense resulting in liquid within the piping and flow control components. Cold condensed gas can lead to flow and measurement issues, corrosion, and leaks. The negative consequences can be significant.



### Solution

DTE Energy chose BriskHeat's Self-Regulating Heating Cable and Silver-Series 2 Removable Cloth Insulators to protect their gas from condensing in their pipe system.

BriskHeat self-regulating heating cable was the ideal solution for this application because it regulates itself to deliver more heat as the conditions get colder and it economically provides hundreds of feet of condensation and freeze protection on one circuit.

BriskHeat has power connection kits, end terminations, splice kits, and junction boxes required to complete a heat trace system. Monitor Light kits provide the benefit of seeing a heat trace system is energized from a distance. The JHE-LG-GET Monitor Light Kits features a bright green or red LED providing 360° visibility at a rating of 10 lumens. Increase the efficiency of any freeze protection system by adding Silver-Series 2 Insulators, or BriskHeat custom cloth insulators.



To enhance the energy-efficiency of the system, DTE requested Silver-Series 2 Cloth Insulators be installed over the heating cable. They are removable and reusable, suitable for use outdoors, and constructed of ultra-durable PTFE outer cloth material with energy-efficient 1 in (25 mm) thick fiberglass insulation. Access to the piping for maintenance is very simple. As an added bonus, the most common insulator sizes and shapes are in stock for quick delivery and BriskHeat is able to design customs for most shapes and sizes to fit nearly any application.

Individual flow control or measurement components may be mounted remotely from the pipe run and connected with tubing. Examples include gas manifolds, pressure switches, or transmitters. Some components, such as actuated valves, may need to be heated even if there are not gases or liquids flowing through the piping. BriskHeat's Wintershield can encompass these components to provide a heated environment to prevent freezing.

### Industries

Energy/Power Generation	Gas Handling
Gas & Oil	Manufacturing

