



With a weatherized, standardized PowerFLX LM6000 plant design, the HO Clarke Generating Station remained steadfast while outages in ERCOT increased as high as 50,000 MW.

OPERATIONS & MAINTENANCE SERVICES

LM6000PC

Houston, Texas, U.S.



WEATHERIZATION ENABLES RESILIENT POWER FOR 6 DAYS DURING WINTER STORM URI

The first plant in a fleet developed and owned by the independent power producer (IPP) WattBridge, HO Clarke Generating Station responds to peak periods during routine or extreme weather. The plant incorporates six LM6000PC engines to generate 288 MW in the Electric Reliability Council of Texas (ERCOT) Houston Zone.

CHALLENGE

Meteorologists had forecast record-low temperatures for Texas, and the extreme cold jeopardized the reliable operation of power plants in the State's grid. WattBridge anticipated commissioning HO Clarke 2 months ahead of schedule and needed to ensure effective weatherization of the newly constructed power plant.

SOLUTION

PROENERGY delivered HO Clarke as a turnkey PowerFLX LM6000 plant, all of which include anti-icing technology as a standard feature to combat freezing at the gas-turbine inlet.

In response to the forecast, the PROENERGY O&M team implemented further protective measures a week and a half before the event, which included the following steps:

- Erected scaffolding around the nitrous oxide (NO_x) skid, water spray skid, and water pumps.
- Ordered and installed electric heaters, with two per structure for 36 in total.
- Built wind breaks for air compressors.
- Staffed the plants 24/7 for periodic checks on the equipment.

After the arctic front entered the Southwestern U.S., unavailability in the ERCOT grid increased to the point of losing half the power capacity; however, HO Clarke began operating to address the extreme need for generation.

HO Clarke continued operating without interruption for nearly 6 days until generation needs subsided and ERCOT revoked its emergency order.

EFFICIENT

1-1/2 WEEKS
to winterize
the power plant

RELIABLE

100% AVAILABLE
during the
unprecedented storm

CRITICAL

200,000 HOMES
received urgently
needed power

VALUE

Innovative temporary measures that were conceived and executed in less than 2 weeks, as well as permanent anti-icing technology, enabled HO Clarke to provide resilient power throughout Winter Storm Uri.

Although the historic ice event reduced nameplate capacity in ERCOT by as much as 40%, the newly constructed plant stayed 100% available for a total of 141 uninterrupted hours while the emergency order remained in effect.

The plant delivered enough power for 200,000 homes as the freezing temperatures increased the need to heat electricity-based residences and other buildings.