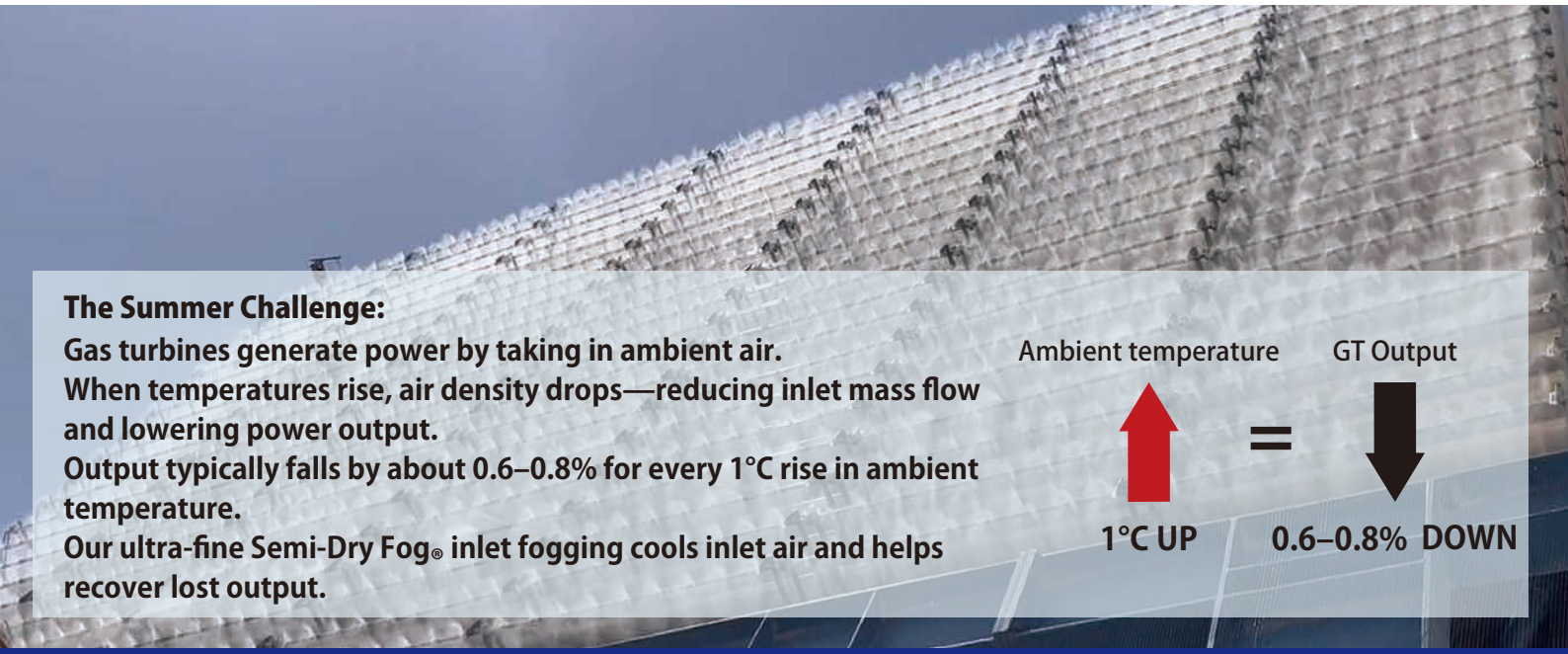
Gas Turbine Inlet Air Cooling (GTIAC) System

Recover Lost Gas Turbine Output in High Heat

Inlet Fogging to Boost Power Output—Without Major CAPEX



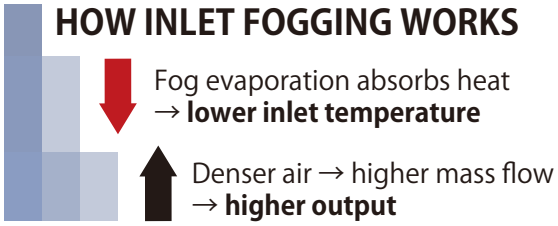
The Summer Challenge:
Gas turbines generate power by taking in ambient air.
When temperatures rise, air density drops—reducing inlet mass flow and lowering power output.
Output typically falls by about 0.6–0.8% for every 1°C rise in ambient temperature.
Our ultra-fine Semi-Dry Fog® inlet fogging cools inlet air and helps recover lost output.

Cost-Effective Retrofit Solution: Inlet Fogging

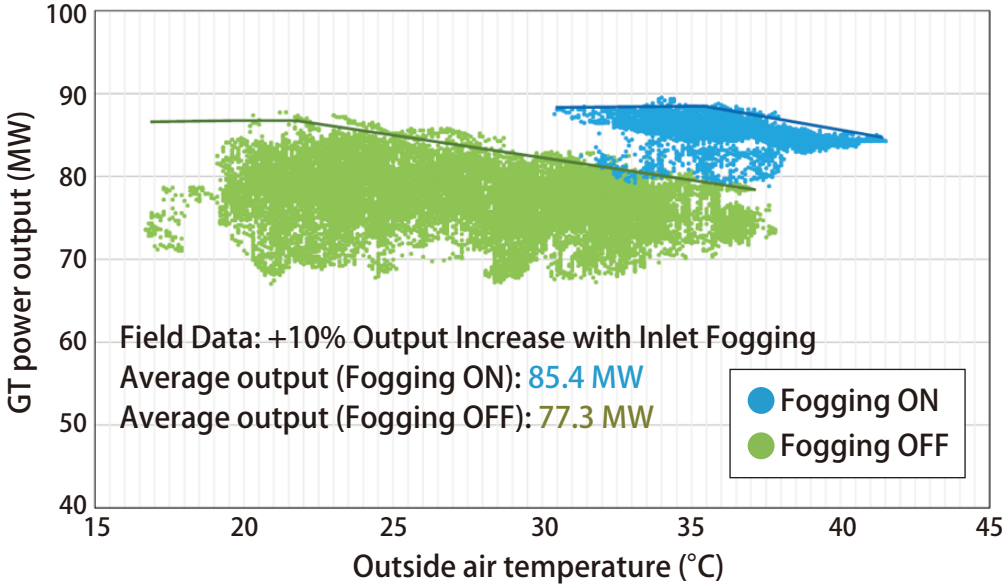
Field-Proven Performance

In hot, dry operation, our GTIAC has demonstrated:

- **15°C inlet air temperature reduction**
- **10% turbine output increase**
- **17,200 t-CO_2/year reduction**
  (2 GT units, based on actual operating data)



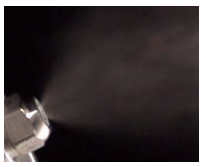
Power Output vs. Outside Air Temperature (Fogging ON/OFF)



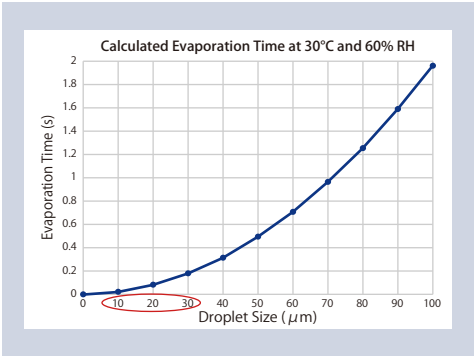
Rapid Return on Investment

Typical payback is around 1–2 years. Site-specific payback simulations based on local climate conditions are available.
Interested in how much output you could recover? Share your GT model, inlet layout, and ambient profile—we'll provide a brief, practical assessment of expected cooling effect and recoverable MW.

Why Choose IKEUCHI

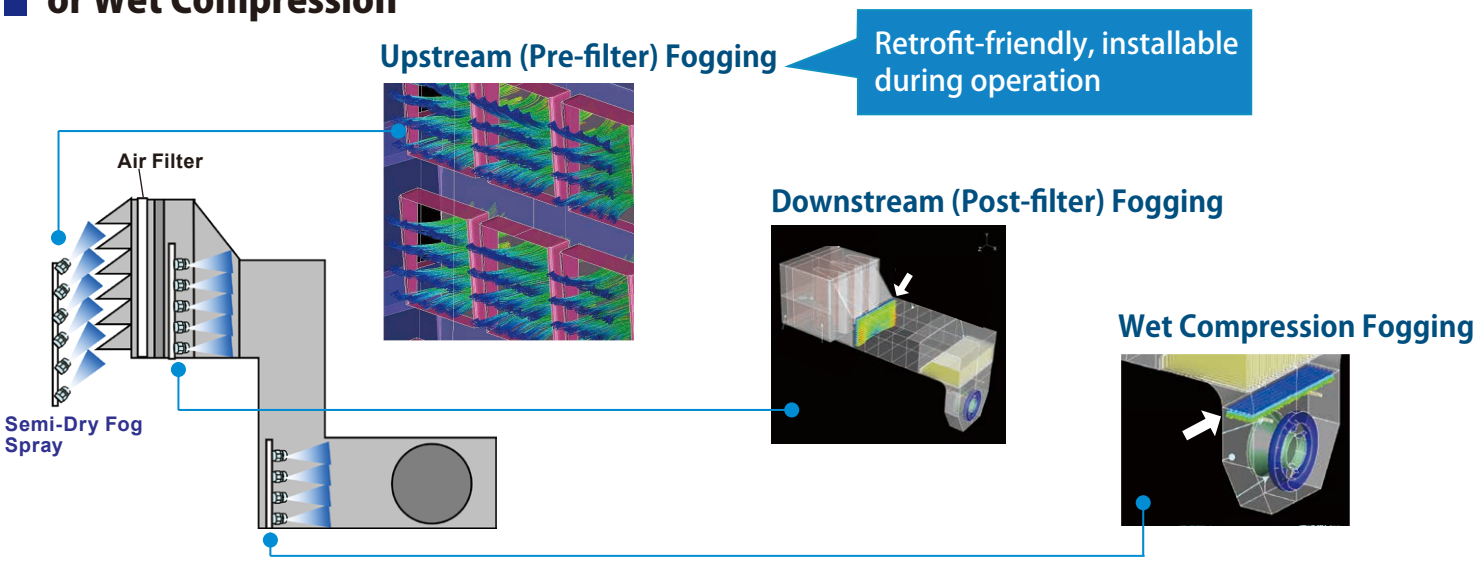


Ultra-Fine Spray: Complete Evaporation in Under 0.2 Seconds



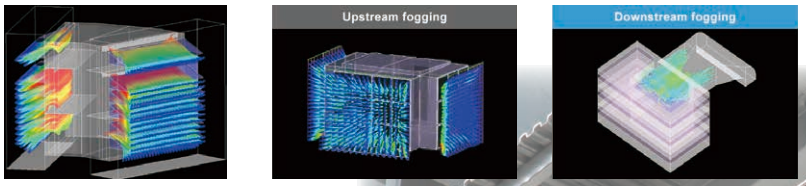
IKEUCHI's GTIAC sprays ultra-fine, uniform **Semi-Dry Fog®** (10–30 μm) that evaporates rapidly to cool inlet air and improve turbine efficiency.
With no coarse droplets that could burden inlet filters or equipment, we provide optimized nozzle design and precise spray control tailored to each installation condition and cooling concept.

Flexible Configurations Matched to Your Site: Upstream, Downstream, or Wet Compression



PID-based Automatic Control Optimizing Spray Volume for Uniform, Efficient Cooling and Reduced Water Consumption

Engineering Support: CFD-based 3D Modeling to Optimize Nozzle Design and System Performance



Examples of Proven Gas Turbine Models

GT Maker	GT Model	Power Class
MP, MHPS	M501-DA/-G/-F/-GAC, M701-G/-F, MF111, MF61, H-100, H-25	20–300 MW
GE	7F, 9E (Frame 9E), LM2500, LM6000	20–50 MW
Siemens	SGT700, SGT-A05, SGT5-2000E	4–32 MW
KHI	M1A-13/-17, M7A-02/-03	1.5–30 MW

Listed models are examples from our delivery records.

Contact us below or scan the code to learn more.

"The Fog Engineers"
H. IKEUCHI & CO., LTD.
Over 70 years of nozzle engineering expertise.
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https://www.dry-fog.com/en/

Video

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