

# **Advanced Steam Path (ASP)**

## a full steam path upgrade for combined-cycle steam turbines



Availability/Reliability - addresses multiple TILs relating to diaphragm dishing and N2 packing head cracking. Up to 20-day reduction in outage duration.



Output - up to 2.2% ST output increase



Efficiency – up to 0.7% CC heat rate improvement

#### **Key Features**

- Phase 1:
  - New monoblock rotor with impulse blading in the HP & IP sections
- Phase 2:
  - New 3-piece welded rotor with 10-Cr material in the center section with reaction blading in the HP section and impulse blading in the IP section
- Singlet\* diaphragms in the HP & IP sections
- Modern N2 packing head configuration made of 9-Cr material with reduced axial loading and improved clearances
- Enhanced sealing features including HP tip & root J-seals, N2 packing head brush seals, IP tip brush seals
- The new steam path is designed to fit within the existing shell

GE has a suite of customizable solutions to improve the reliability of the HP/IP module of your steam turbine. The Advanced Steam Path may be an attractive option that addresses multiple reliability concerns while providing improved performance.





### **Key Benefits**

- Reduced risk of unplanned outages and major emergent repairs during planned outages that are both costly and extend outage duration
- Increased steam turbine output based on recovery of aging losses and improved technology
- Enables combined cycle plant upgrades that increase steam flow
- Improves combined cycle heat rate

#### **Proven Technologies**

Pre-engineered solutions available for D11 steam turbines operating at 50 Hz and 60 Hz.

Six services applications installed since 2015 with 3 more planned installations.

To learn more about this offering, contact your GE sales representative or visit powergen.gepower.com.

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GEA32787A (05/2021)

