



# 7HA Power Plants

Whether your plant operates at baseload or peaking profiles, you can count on GE's 7HA gas turbine to deliver impressive performance. Its industry-leading operational flexibility enables increased dispatch and ancillary revenue while fuel flexibility accommodates a wide range of gas and liquid fuels, including high ethane (shale) gas and LNG. The 7HA ramps up to full load in less than 30 minutes and features a novel configuration that supports simplified installation and maintenance.

**290-384 MW** SIMPLE CYCLE OUTPUT  
**>63%** COMBINED CYCLE EFFICIENCY



#### Capability

55 MW/minute ramping capability within emissions compliance



#### Versatility

Turndown 2x1 plant load to about 15% of baseload while maintaining emissions compliance



#### Sustainability

Simplified dual fuel system uses less water and eliminates recirculation



# 290-384 MW

SIMPLE CYCLE  
OUTPUT

>63% COMBINED CYCLE EFFICIENCY

*The 7HA gas turbine's modular packaging configuration shortens the critical path installation cycle by eight weeks.*

		7HA.01	7HA.02
SC Plant Performance	SC Net Output (MW)	290	384
	SC Net Heat Rate (Btu/kWh, LHV)	8,120	8,030
	SC Net Heat Rate (kJ/kWh, LHV)	8,567	8,472
	SC Net Efficiency (% , LHV)	42.0%	42.5%
Gas Turbine Parameters	Compression Pressure Ratio (X:1)	21.6	23.1
	GT Generator Type (Cooling)	Hydrogen	Hydrogen
	Number of Combustor Cans	12	12
	Number of Compressor Stages	14	14
	Number of Turbine Stages	4	4
	Exhaust Temperature (°F)	1,158	1,202
	Exhaust Temperature (°C)	626	650
	Exhaust Energy (MM Btu/hr)	1,365	1,775
	Exhaust Energy (MM kJ/hr)	1,440	1,873
	GT Turndown Minimum Load (%)	25%	25%
	GT Ramp Rate (MW/min) <sup>1</sup>	55	60
	NO <sub>x</sub> (ppmvd) at Baseload (@15% O <sub>2</sub> )	25	25
	CO (ppm) at Min. Turndown w/o Abatement	9	9
	Wobbe Variation (%)	+/-10%	+/-10%
Startup Time, Conventional/Peaking (Min.) <sup>2</sup>	21/10	21/10	
1x1 CC Plant Performance	CC Net Output (MW)	438	573
	CC Net Heat Rate (Btu/kWh, LHV)	5,481	5,390
	CC Net Heat Rate (kJ/kWh, LHV)	5,783	5,687
	CC Net Efficiency (% , LHV)	62.3%	63.3%
	Plant Turndown – Minimum Load (%)	33%	33%
	Ramp Rate (MW/Minute) <sup>1</sup>	55	60
	Startup Time (RR Hot, Minutes) <sup>3</sup>	<30	<30
1x1 CC Power Plant Features	Bottoming Cycle Type	3PRH	3PRH
	HP Throttle Press. (psia/bar)	2,610/180	2,610/180
	HP Throttle Temp. (°F/°C)	1,085/585	1,112/600
	Reheat Temp. (°F/°C)	1,085/585	1,085/585
	ST Configuration (Type)	STF-D650	STF-D650
	GT Generator Type (Cooling)	Hydrogen	Hydrogen
2x1 CC Plant Performance	CC Net Output (MW)	880	1,148
	CC Net Heat Rate (Btu/kWh, LHV)	5,453	5,377
	CC Net Heat Rate (kJ/kWh, LHV)	5,753	5,674
	CC Net Efficiency (% , LHV)	62.6%	63.5%
	Plant Turndown – Minimum Load (%)	15%	15%
	Ramp Rate (MW/Minute) <sup>1</sup>	110	120
	Startup Time (RR Hot, Minutes) <sup>3</sup>	<30	<30
2x1 CC Power Plant Features	Bottoming Cycle Type	3PRH	3PRH
	HP Throttle Press. (psia/bar)	2,610/180	2,610/180
	HP Throttle Temp. (°F/°C)	1,085/585	1,112/600
	Reheat Temp. (°F/°C)	1,085/585	1,085/585
	ST Configuration (Type)	STF-D650	STF-D650
	GT Generator Type (Cooling)	Hydrogen	Hydrogen
2x1 CC Power Plant Features	ST Generator Type (Cooling)	Hydrogen	Hydrogen

1.) Ramp rates are Fast Ramp via AGC.

2.) Start times recognize purge credit. Turning gear to full speed, full load and synchronized to grid. Peaking maintenance factors may apply depending on the operating profile.

3.) Start times are based on rapid response technologies in hot start conditions with purge credit recognized. Simultaneous start sequence of gas turbine may apply depending on exact project configurations.

NOTE: All ratings are net plant, based on ISO conditions and natural gas fuel. Actual performance will vary with project-specific conditions and fuel. All performance figures based on Once-Through condenser with 1.2" Hga condenser pressure. 2PNRH = Two pressure, non-reheat; 3PRH = Three pressure, reheat.



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GEA32928 (11/2017)