Witness: Andrew J. Bazinet

Question Pietrorazio-1:

Provide cut sheets (sales brochures) on the GE #7HA.01 turbines.

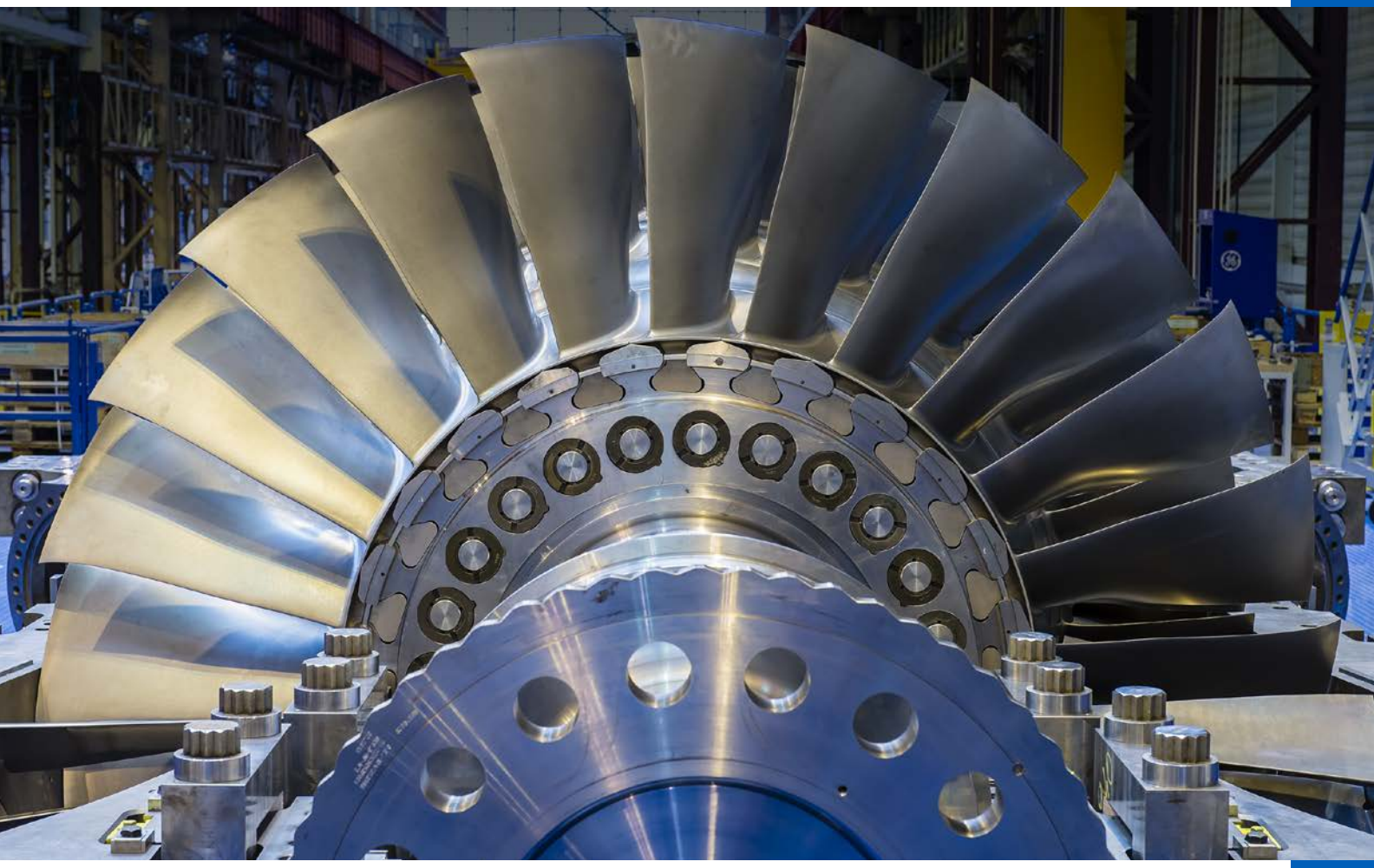
Response:

Please see attached materials provided by GE Power & Water.

GE Power & Water

7HA Gas Turbine

World's Largest, Most Efficient Gas Turbine in its Class



7HA Gas Turbine

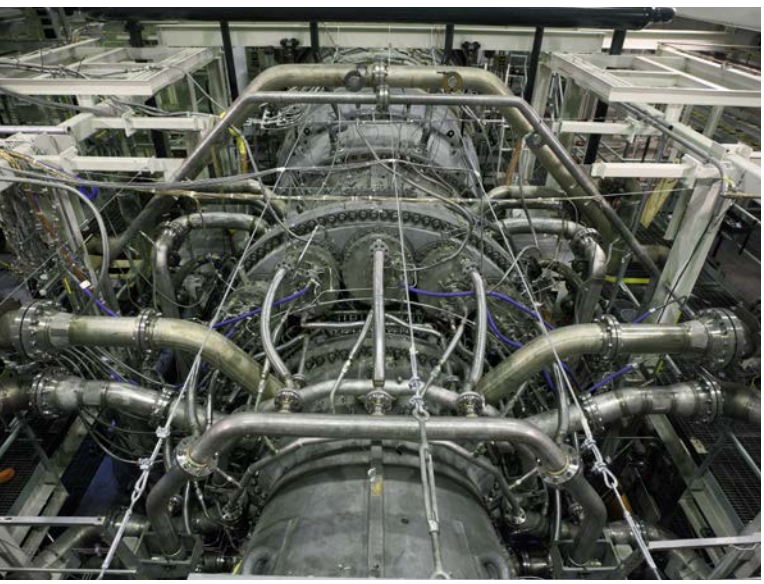
Smart Innovation

Natural gas is becoming the fuel of choice globally and for customers who operate larger blocks of power, the desire for increased operating efficiency and flexibility has never been greater. This dynamic, combined with increasingly stringent environmental regulations, is increasing the demand for highly efficient, H-class gas turbines in order to recognize a more cost effective conversion of natural gas to electricity.

GE introduced its high efficiency H-class technology to the power generation industry ten years ago; today, with 200,000 hours of operation and counting, the technology continues to evolve with the 7HA air-cooled gas turbine.

The 7HA Gas Turbine provides GE's most cost effective conversion of fuel to power in the 60 Hz H-class industry. It offers the reliability, flexibility, and availability of the F-class fleet and utilizes advanced materials (thermal barrier coatings (TBCs) and single-crystal super alloys) from GE's H-class gas turbines and aviation business. And, with more than 100 million hours of single-crystal experience and 15 years developing and testing TBCs, GE continues to use these materials to enhance its turbines' high efficiency architecture.

Combined cycle plants with 7HA Gas Turbines achieve more than 61% net/62% gross combined cycle efficiency based on *Gas Turbine World* basis.



Two Sizes to Serve Wide Output Needs

The 7HA.01 Gas Turbine model has a simple cycle output of 275 MW, the 7HA.02 Gas Turbine model offers 330 MW for larger block size needs. All HA gas turbines share:

- 14-stage compressor validated in 2011
- 12-chamber DLN 2.6+ combustion with more than 1 million hours and 18,000 starts
- 4-stage, air-cooled hot gas path using proven alloys

The 7HA.02 Gas Turbine model is flow-scaled (similar to speed scaling) from the 7HA.01 Gas Turbine model preserving system architecture, including blade counts, with updates to accommodate higher mass flow at the same efficiency. The 7HA.02 Gas Turbine model represents the largest 60 Hz gas turbine currently available in the industry.

Life Cycle Benefits with the Customer in Mind

Gas turbine and accessory systems employ several features to deliver lower operation and maintenance costs over its life cycle. These include proven single crystal alloys and super blade finishing, along with controls and maintenance schemes for reduced heat rate and output degradation over the life of the turbine. All compressor and turbine blades in the turbine are removable in the field as well.

Outage durations are reduced by over 20% with the use of quick disconnect pipes and quick release roof panels. Maintenance procedures and tools are also developed to reduce combustion inspection, hot gas path and major inspection durations.

Extended warranty and a full suite of service offerings are available, including long term service agreements with availability and reliability guarantee. Fleet spares are also maintained prior to first fire in the field.

Improving Operational Flexibility

- Fast start in as low as 10 minutes from the start command
- Over 40 MW/minute ramping capability in emissions compliance
- Low turndown … as low as 30% of the baseload output
- Fuel flexibility … gas and liquid fuels, with wide gas variability including high ethane (shale) gas and LNG

World's Largest, Most Efficient Gas Turbine in its Class

Simple Cycle Performance	
Output (net)	275 MW 7HA.01 330 MW 7HA.02
Heat Rate (net)	<8,240 Btu/kWh <8,694 kj/kWh
Efficiency (net)	>41%
Pressure Ratio	21.5
Turbine Speed	3,600 rpm
Exhaust Temperature	1,150°F

Combined Cycle Performance				
	7HA.01		**7HA.02**	
	1x1	2x1	1x1	2x1
Plant Output (net)	405 MW	813 MW	486 MW	976 MW
Heat Rate (net)	<5,580 Btu/kWh <5,892 kJ/kWh	<5,570 Btu/kWh <5,877 kJ/kWh	<5,580 Btu/kWh <5,892 kJ/kWh	<5,570 Btu/kWh <5,877 kJ/kWh
Plant Efficiency	>61%	>61%	>61%	>61%

Up to 10,000 Labor-Hours Less to Install

The 7HA Gas Turbine can be installed 25% faster than previous 7F gas turbines through the use of modularized and pre-assembled accessories. Field welds are reduced by 40% and field installed valves are reduced by 98%. Benefits include faster installation schedule, lower installed costs and reduced site labor requirements.

Features and Benefits

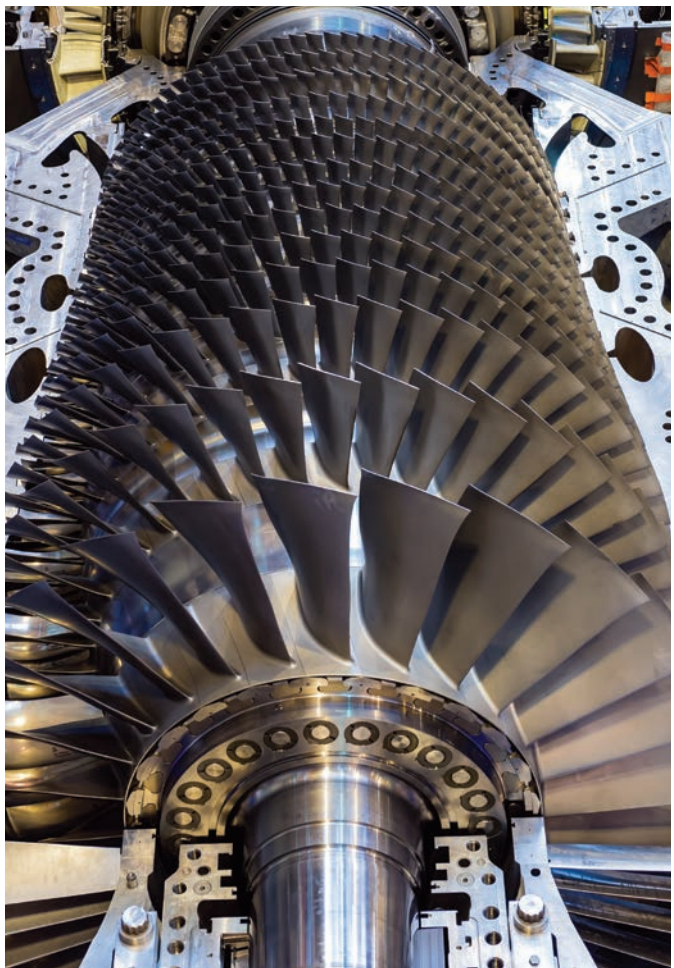
- Modern 4-stage air-cooled hot gas path with advanced cooling and sealing technologies improves efficiency and allows more starts per inspection interval. Advanced materials and coatings, including single-crystal super alloys in the turbine section promote durability and extended parts life.
- Proven Dry Low NOx (DLN) 2.6+ dual fuel combustion system maintains low emissions, provides wide fuel capability, and superior turndown as low as 30% of baseload. The system has more than 1 million hours and 18,000 starts.
- Advanced 14-stage compressor leverages GE's proven aviation and power generation technology, increases reliability and maintenance. All blades are field replaceable and multiple variable vanes provide for high part load efficiency and operability.
- GE's patented Mark VIe* Distributed Control System (DCS) connects plant components with a single, high-performance, control architecture, enabling comprehensive plant automation schemes.
- Ease of installation and modularity combined with a shorter commissioning cycle provides improved life cycle value and 1 percent more reliability than previous technologies.
- Part of GE's FlexEfficiency* Portfolio, a collection of modular, efficient, and flexible products that can be configured as needed for specific applications, situations, and priorities.

Technology Validation and Insurability

Technology validation is performed in GE's unique full speed, full load facility with extensive instrumentation. This approach is recognized as providing product validation, superior to 8,000 hours of operation, and is a key aspect of the commitments of insurability GE has secured from major insurers.

Applicability

The 7HA Gas Turbine serves 60 Hz baseload and cyclic operation in combined cycle and simple cycle applications.



To find out more about this offering, contact your GE Power & Water sales representative or visit www.ge-energy.com

ecomagination

This is a product in the FlexEfficiency* Portfolio

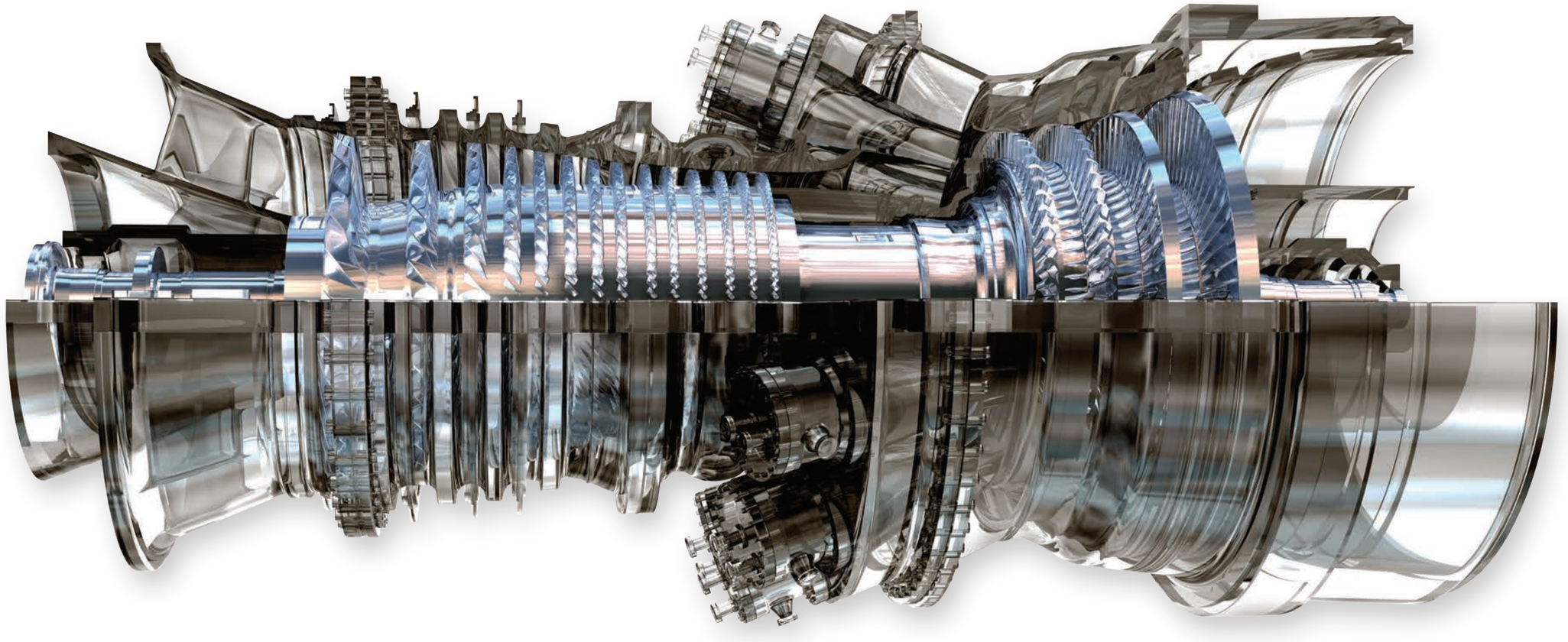
Note: photos of a 9HA Gas Turbine are shown for the purpose of illustration. Comparisons refer to prior GE technology unless stated differently.

* Trademark of General Electric Company

GEA31098 (03/2014)

7HA Heavy Duty Gas Turbine

World's Largest, Most Efficient 60 Hz Gas Turbine



imagination at work

ecomagination

This is a product in the FlexEfficiency* Portfolio

GED-7435C (03/2014)

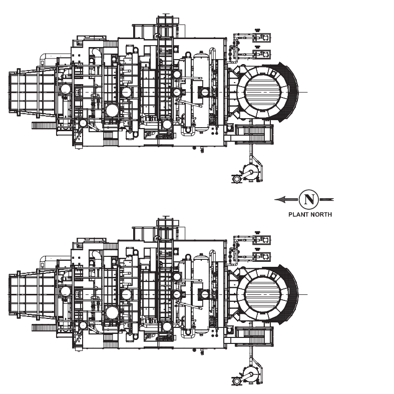
Witness: Andrew J. Bazinet

Question Pietrorazio-2:

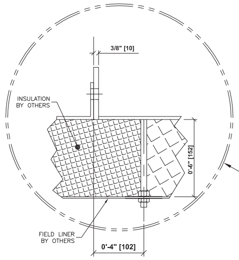
Provide detailed drawings of Stacks #1 and #2, preferably by the stack manufacturer, giving all dimensions and appurtenances.

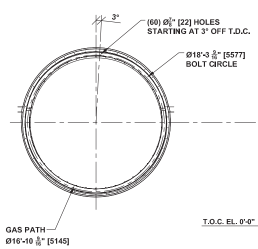
Response:

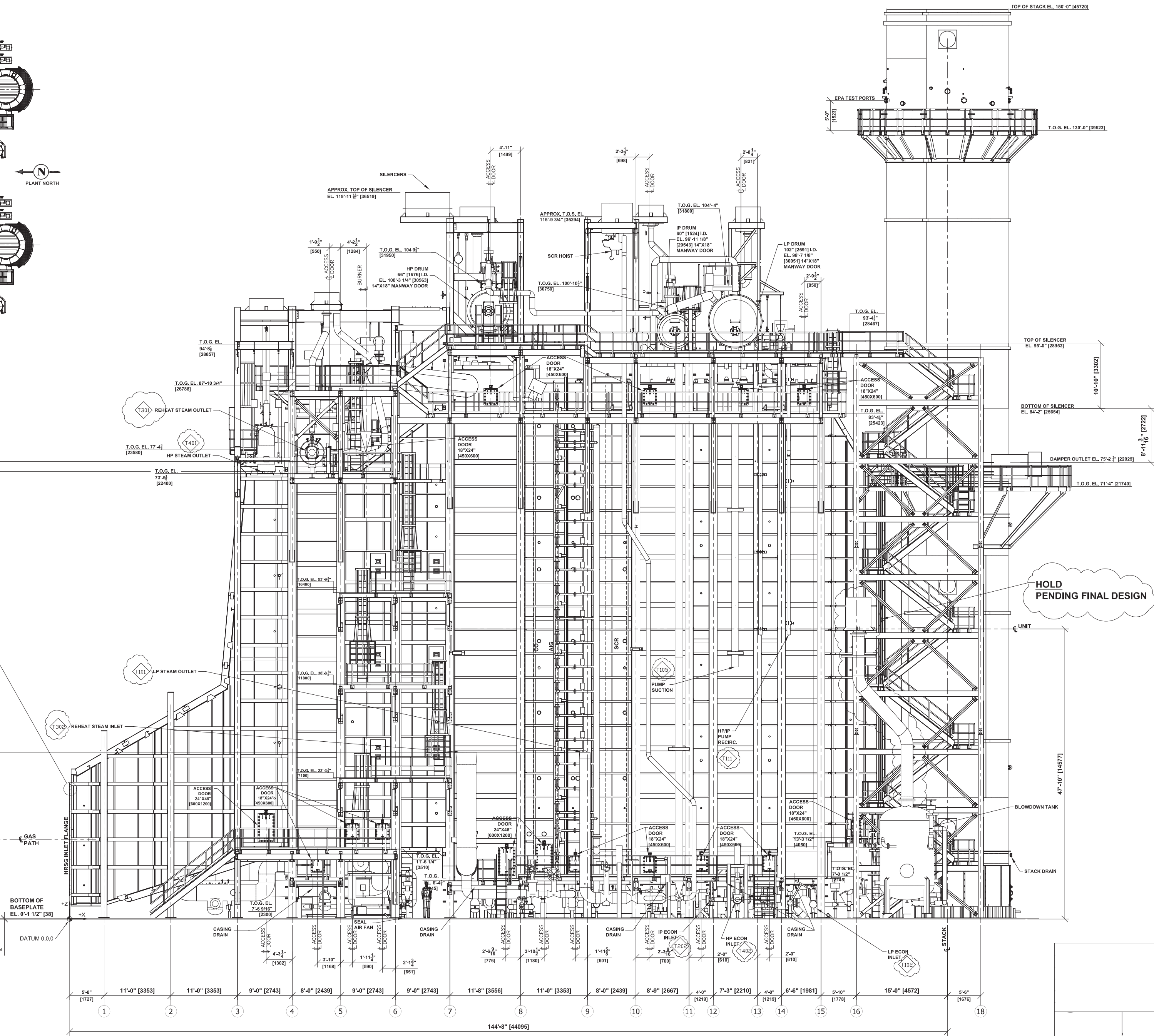
Please see the attached typical HRSG drawing based on a 2x1 GE combined cycle configuration. Given that CPV Towantic, LLC is a year away from selecting a vendor and providing a preliminary design, these are typical drawings that provide a good overview but do not capture Facility-specific dimensions.



HRSG ORIENTATION
SITE PLAN VIEW







R.H. SIDE ELEVATION VIEW

GAS FLOW

General Electric International, Inc.
Energy
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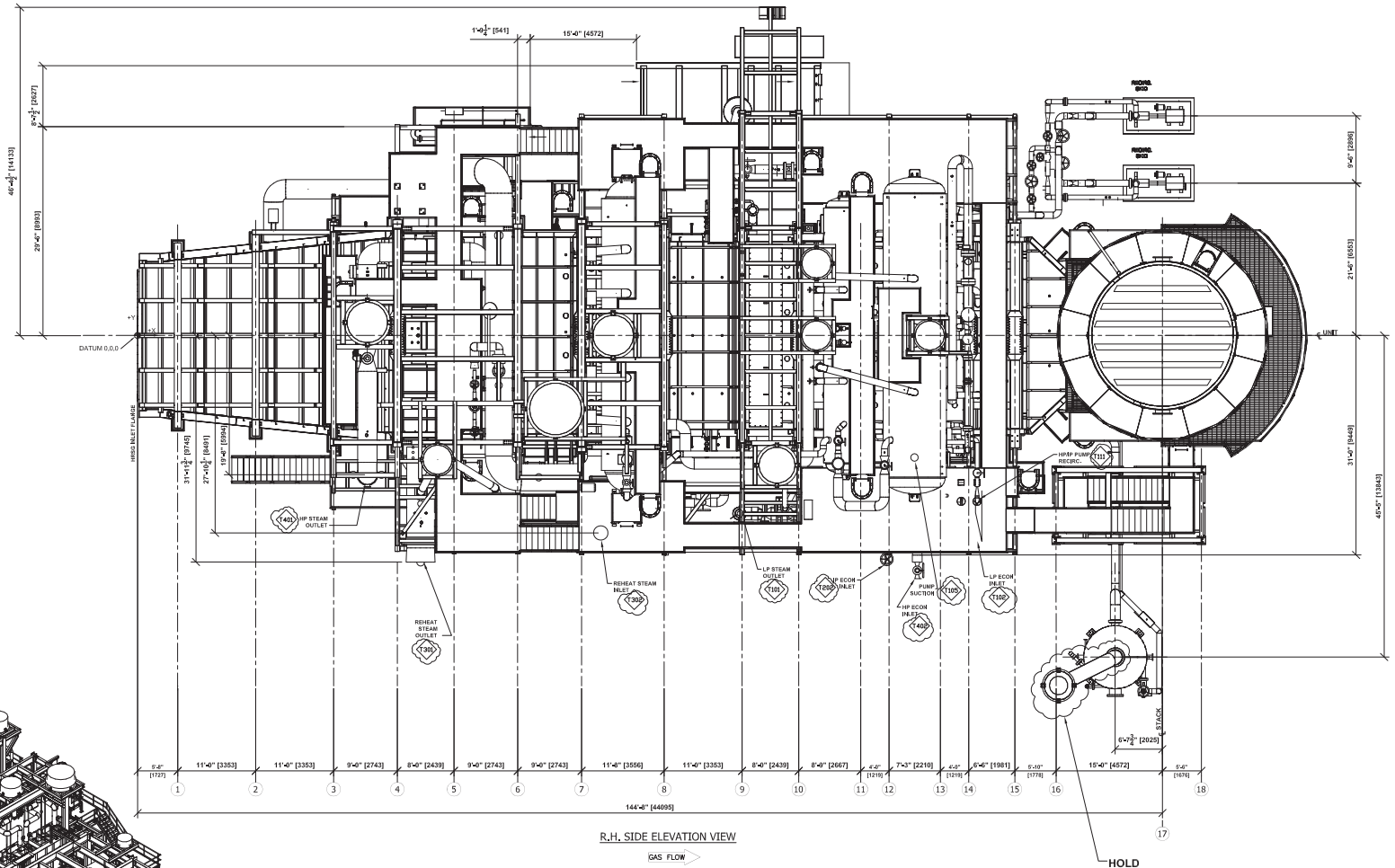
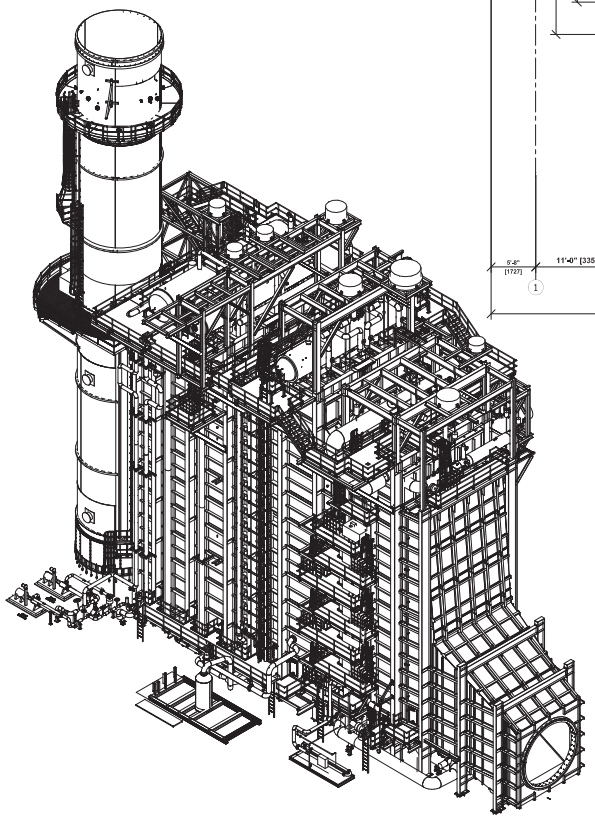
Drawing Status	FOR REVIEW
Revision Status	2
Projection	THIRD ANGLE PROJECTION
DRAWING FORMAT IS METRIC	METRIC / IMPERIAL
DRAWING UNITS	MM / 1'-1" - 3/4"
DIM. TOLERANCE	7.2MM / 1/16"
DEC. TOLERANCE	0.254 / 0.01
Customer	GENERAL ELECTRIC
Cust File No.	2066-DGA-G10101
Title	GENERAL ARRANGEMENT
Reference Dwg. No.	2064-DGA-G10101-4
Size	A0
Scale	NTS
Drawing No.	2066-DGA-G10101
Sheet	1 of 1





HOLD
PENDING FINAL DESIGN

General Electric International, Inc.
Energy
Power Plant Engineering

Drawing Status: FOR REVIEW			
Revision Status: 2	THIRD ANGLE PROJECTION	DRAWING FORMAT IS METRIC	
		METRIC	IMPERIAL
		DRAWING UNITS: MM	FT' - IN"
		DIM. TOLERANCE: 1.0M	1/16"
		DEC. TOLERANCE: 0.254	0.01
Customer: GENERAL ELECTRIC	Proprietary Information	Title: GENERAL ARRANGEMENT	
	Vendor Company Name:		
Reference Dwg. No.: 2064-DGA-G10102-4	Cad File No.: 2066-DGA-G10102	Size: A0	Scale: NTS
		Drawing No.: 2066-DGA-G10102	Sheet: 1 of 1

Witness: Lynn Gresock

Question Pietrorazio-3:

How does repositioning of the stacks reduce potential impacts on air navigation from the Waterbury-Oxford Airport?

Response:

In updating the Facility, CPV Towantic, LLC (CPV) retained the low 150-foot stack heights reflected in the most recent configuration of the approved Facility. Shifting the stacks further to the east and lowering the base elevation of the site to 830 feet AMSL (from 831 feet AMSL) avoided potential penetration of the Runway 18 LNAV Procedure (Primary Area) and the Expanded Category "A" Circling Approach Procedure for the Waterbury-Oxford Airport. The only remaining penetration for the relocated stacks is of the Visual Flight Rule (VFR) Horizontal Surface, which extends 5,000 feet from the airport at a height of 876 feet AMSL.

Witness: N/A

Question Pietrorazio-4:

There may be additional interrogatories following receipt and review of the requested information.

Response: N/A