



U.S. Gas Turbine Industry Briefs Congressional and Administration Leaders on fundamentals of gas turbine technology, and opportunities for job creation and economic growth provided by U.S. gas turbine manufacturing

Washington, DC - February 2016

On February 24th, 2016 the Gas Turbine Association (GTA) and American Gas Association (AGA) provided a briefing on the opportunities and challenges of America's gas turbine manufacturing sector to a standing-room only audience of thought leaders and Congressional staffers representing both parties and houses of the U.S. Congress.

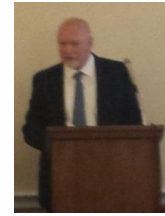
The briefing on "Gas Turbine Technology: Key to Energy Efficiency and a Cleaner Environment" was held at the Rayburn House Office Building on Capitol Hill, and included representatives from the Gas Turbine Association and American Gas Association. Representatives from several major turbine manufacturers including Siemens Power Generation, GE Power, and Solar Turbines, as well as a leading academic turbine researcher, Professor Karen Thole of Pennsylvania State University, provided information and perspectives to the assembled audience.



A standing-room only crowd of government officials and congressional staff and turned out to hear about the latest developments and opportunities in America's natural gas and gas turbine industries. *Photo credit: Mike Aller*

Real-World Perspective on America’s Energy Future

The briefing provided an overview of the fundamentals of gas turbine technology, and the role that gas turbines have to play in the new revolution of energy abundance associated with the discovery and harvesting of vast reserves of shale gas in the United States and North America. Kenneth Hall of Siemens Energy, the current chairman of the Gas Turbine Association, provided an overview and introduction to the industry. Richard Meyer from the American Gas Association followed with an introduction and update on the current revolution in natural gas production within North America, the outlook for continued production in the current environment of low energy prices and the overall prospects for the industry over the coming decades. Roger Schonewald of GE Power and Leslie Witherspoon of Solar Turbines followed with a review of the fundamentals of gas turbine designs, engineering and applications for gas turbines, including power generation, combined heat & power for industrial users, and the oil and gas industry. Bill Day of the Gas Turbine Association provided an overview of the economic impact of the gas turbine industry for the U.S., as well as the opportunities for growth and job creation in the U.S. turbine manufacturing industry if the federal government invests in additional research and development (R&D) resources within this sector. Karen Thole of Penn State University wrapped up with an examination of the current US Government R&D funding programs in the turbine industry, the close collaboration between universities and industry partners in addressing technical challenges in the turbine sector, and the opportunity to instill future generations of engineers with the knowledge and expertise necessary to solve challenges in gas turbines and beyond for decades to come.



Many observers view natural gas as a “bridge fuel” to support a cleaner power generation system until renewables and other ultra-low emission generation technologies are available at scale. However, we need to pay attention to how long that “bridge” might last – it could be several decades, and that represents a real market opportunity worldwide for U.S. manufacturers in coming years.

*– Kenneth Hall, Siemens
GTA Chairman*



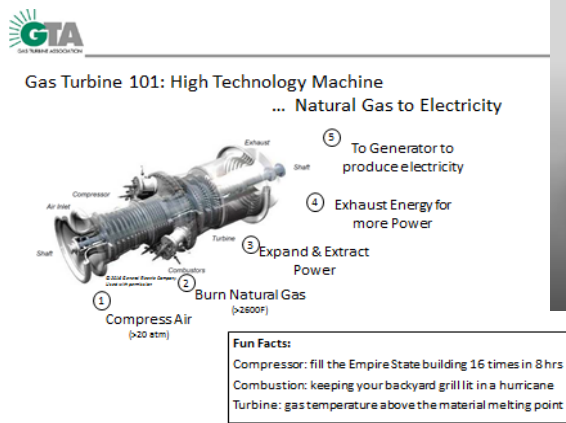
A lively question-and-answer session highlighted several topics of interest following the panelists’ presentations, including global competition, EPA’s Clean Power Plan, and STEM education.



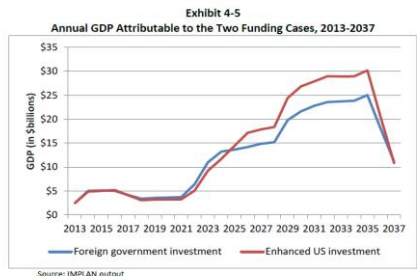
Richard Meyer of the American Gas Association provided an overview of America’s natural gas success story and future trends in the industry.

Investments in Gas Turbine Engineering = Increased US Jobs and Manufacturing Exports

The overall emphasis of the briefing was the message that natural gas is playing an increasingly important role in the U.S. power generation mix (surpassing coal for the first time in 2015), and on track to continue to expand its role and influence in the U.S. power generation landscape for several decades to come. Certain members of the U.S. policy community view natural gas as a “bridge fuel” to support a cleaner power generation system until renewables and other ultra-low emission technologies are available at the scale and cost basis necessary to supplant the majority of U.S. power generation resources. However, that “bridge” could be as long as 40 years - it could be until nearly the middle of the century until renewables and energy storage technologies are developed to the degree necessary to support a majority of the U.S. power generation base, and there is a market opportunity in that time in the trillions of dollars. Given that trajectory, it makes sense to invest in increased efficiency and performance of gas turbines, to ensure that the United States remains a global leader in this technology, and the U.S. gas turbine manufacturing industry preserves both its domestic market share as well as a significant portion of the global market for these technologies. A recent market analysis released by the GTA highlighted that these investments in gas turbine technologies could result in as many as 30,000 additional high-paying jobs and \$5.4 billion in increased economic activity in the U.S. over the next 25 years.



Importance of Gas Turbines in the Economy



GDP increases \$5.4 billion in 2032 from enhanced US investment.

Gas Turbine R&D: Industry, Universities, and Government What needs to be done in the future?

For more information, please contact Bill Day, PhD (billday3@comcast.net) or Richard Shelby (rshelby@caphillgrp.com) with the Gas Turbine Association, or visit the GTA’s website at www.gasturbine.org