

# Gas Turbine Association

---



*S.2900*  
*Reducing the Electric Power*  
*Carbon Footprint*  
*October 20, 2010*

*Richard S. Tuthill, Chair*  
*Board of Directors*  
*Gas Turbine Association*

# *Gas Turbine Association*

- *Alstom Power*
- *Florida Turbine Technologies*
- *General Electric*
- *Rolls Royce*
- *Siemens Energy*
- *Solar Turbines*
- *Strategic Power Systems*
- *United Technologies*
- *Vibro Meter*

## S.2900

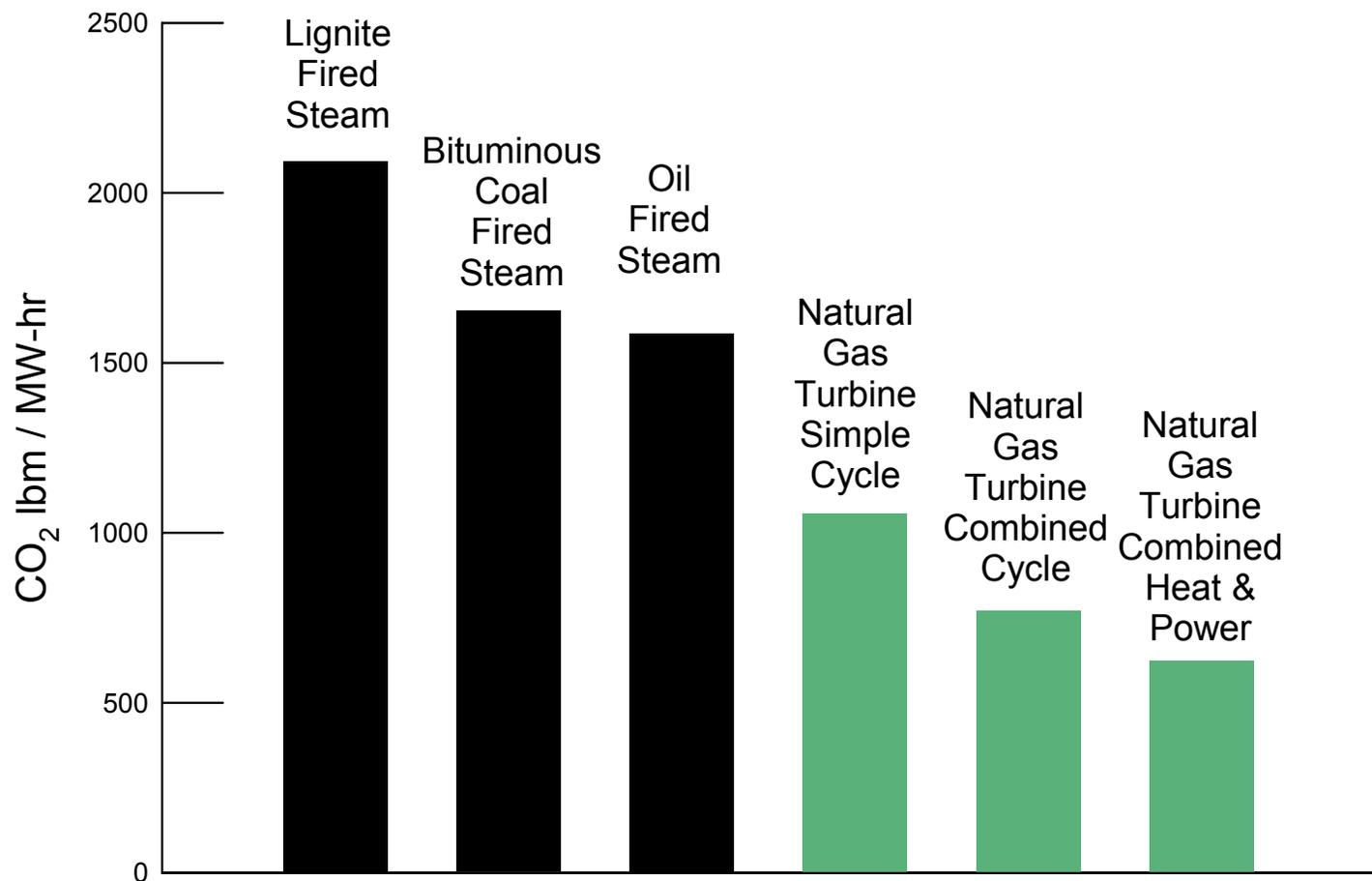
- *Introduced By Senator Kirsten Gillibrand (D-NY)*
- *Prime Objective is to Fund Ground Power Gas Turbine Technologies*
  - *Raise Natural Gas Fired Gas Turbine Efficiencies*
    - *Phase One – Combined Cycle > 62%, Simple Cycle > 47%*
    - *Phase Two – Combined Cycle > 65%, Simple Cycle > 50%*
  - *Authorizes \$340M Over Four Years (\$85M per Year)*
  - *Combined Cycle, Simple Cycle, CHP, All Engine Sizes*
- *Similar Bill Has Passed the US House (Under Suspension of Rules)*
  - *Introduced by Paul Tonko (D-NY 21<sup>st</sup> District), HR.3209*
- *DoE/Fossil Energy Prepared to Request Funding Under Authorization*

## *Why S.2900 Is Needed*

- *Gas Turbines Are Highly Efficient and Clean*
  - *Capital Costs and Installation Cycle Times Very Reasonable*
- *Natural Gas Contains Hydrogen – CH<sub>4</sub>*
  - *Coal Is Approximately Pure Carbon – C*
  - *Oil Has Less Hydrogen – C<sub>n</sub>H<sub>2n</sub>*
- *We Must Preserve Our Domestic NG Supplies By Using Less*
  - *Requires Raising the Efficiency of Gas Turbines Further*
  - *Requires Higher Than Market Rate of Technology Investment*
- *Japanese National Program Has Recognized This Need Already*

*A Joint Public-Private Effort Is Needed to Reduce Atmospheric Carbon*

# Gas Turbines – Part of the Solution



**High Thermodynamic Efficiency + Low Carbon Fuel = Low CO<sub>2</sub> Emissions**