GE’s Powering Efficiency Center of Excellence

Channeling GE’s cross-business capabilities to help steam plant customers lower emissions without sacrificing performance

- Coal plants generate 41% of the world’s electricity
- The average global efficiency of coal plants could be increased to 37.4%
- Applying hardware and software technologies could reduce CO2 emissions across the world’s fleet by 9%
- Coal forecasted to remain the world’s second largest energy source through 2030

**Upgrades to existing steam plants can help slash various pollutants**

- SOx: Sulfur Oxides, 99%
- NOx: Nitrogen Oxide, 95%
- Hg: Mercury, 90%
- PM: Particulate Matter, 99%

The +3.4% efficiency increase can lead to:

- Hardware improvements and digital solutions +3.4% in average global power plant efficiency
- Reductions in CO2 emissions from these plants by 9%
- 9% emissions reduction equivalent to 168,000,000 U.S. cars being taken off the road

**Steam Turbine Upgrade**
Can help remove up to 70,000 tons of CO2 per year

**Boiler Optimization Software**
Can reduce NOx up to 15%

**The power of 1%**
A one percentage point efficiency improvement translates to:

- 22 MW additional output
- 120,000 tons of CO2 eliminated, equivalent to the amount absorbed by 165 square miles of forest per year
- $30 million gained from performance improvements

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*Per-year figures for a 1,000 MW plant
**Per EPA, 1,06 metric tons of CO2 is absorbed annually by one acre of average U.S. forest

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**Data Source:**
1. GE
2. U.S. Environmental Protection Agency