GE’s Powering Efficiency Center of Excellence

Channeling GE’s cross-business capabilities together 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.

Upgradesto 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:


Reductions in CO2 emissions from these plants by 9% can:

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 163 square miles of forest per year**
$30 million gained from performance improvements

*Per-year figures for a 1,000 MW plant
**Per EPA, 106 metric tons of CO2 is absorbed annually by one acre of average U.S. forest