

Reciprocating Engines in CHP Opportunities and Barriers

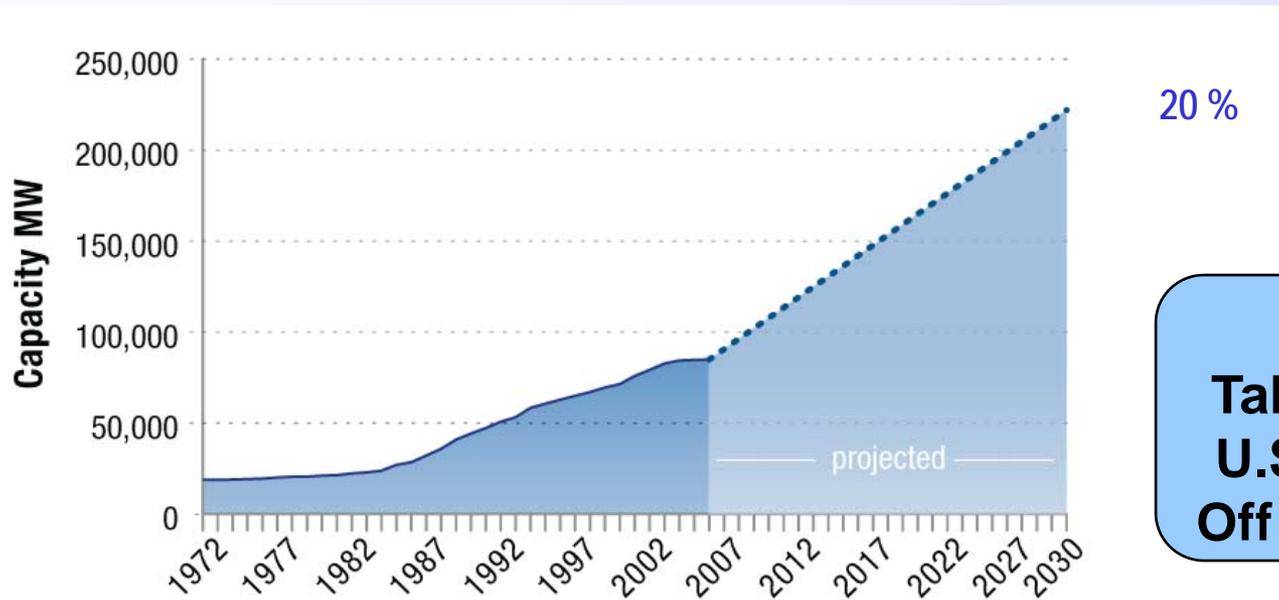
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With input from members of EMA

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What If CHP Represented 20% of US Generating Capacity in 2030?

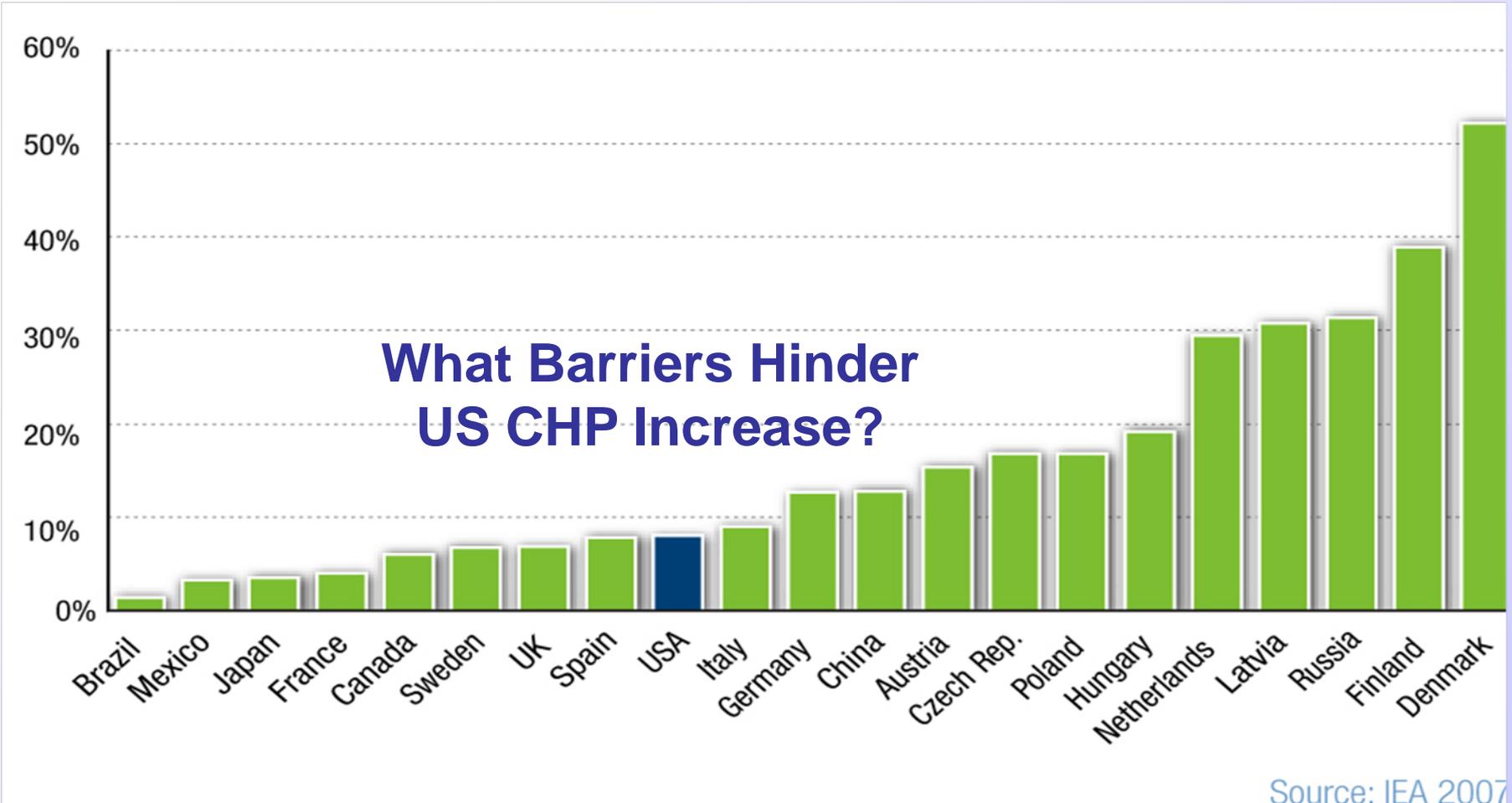


**Same as
Taking 61% of
U.S. Car Fleet
Off of the Road**

20 % of U.S. Electricity Generating Capacity	240,900 MW
Annual Energy Savings	5.3 Quads
Annual CO ₂ Reduction	848 MMT
Annual Carbon Reduction	231 MMT
Number of Car Equivalents Taken Off Road	154 million

Source: EIA

CHP's Actual Share of National Power Production



Challenges & Opportunities

Market Environment

Energy Policy. "Over the fence."
Federal/State CHP incentives – tax, SGIP, manufacturing

Gas Price Volatility

Need to stabilize variations through collective/coop purchasing

Connectivity New standards

Interconnect challenges still exist.
Net metering for CHP -- via AB 1613?

Emissions Recognition - Incentives

NOx limit is world class.
Demands aggressive after-treatment

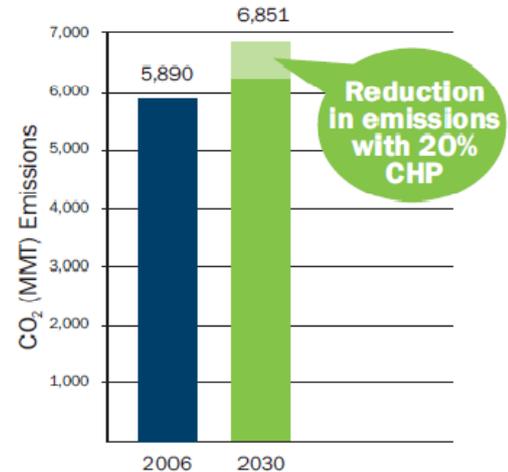
Efficiency & Reliability

High efficiency, lower cost, durability and reliability

Tax treatment, Grants, Incentives

Stimulate "Green" Capital Investment, Smart Grids

CHP Can Avoid 60% of the Potential Growth in GHG Emissions Between 2006 and 2030



20% CHP capacity avoids 60% CO₂ Growth in 2030