

Challenges for Transitioning the U.S. Electric Utility Industry to a Low-Carbon Generation Path

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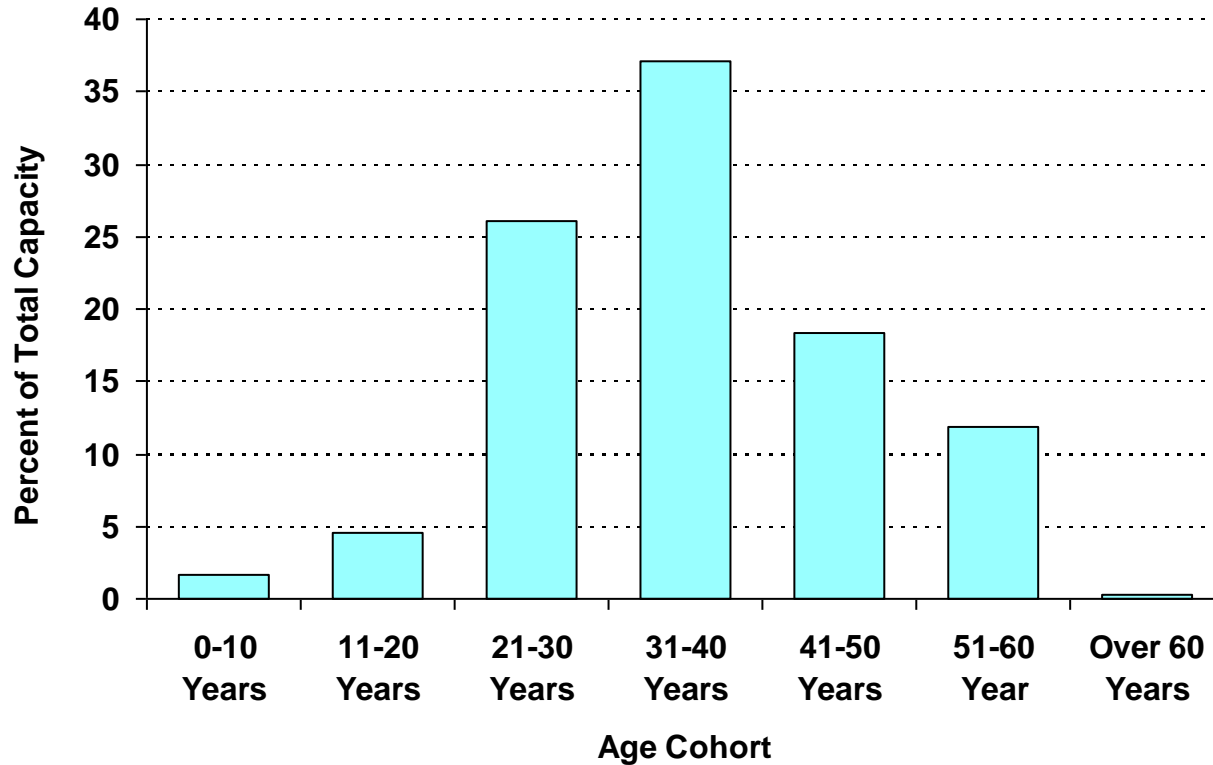
PSEG

PSEG's Direction

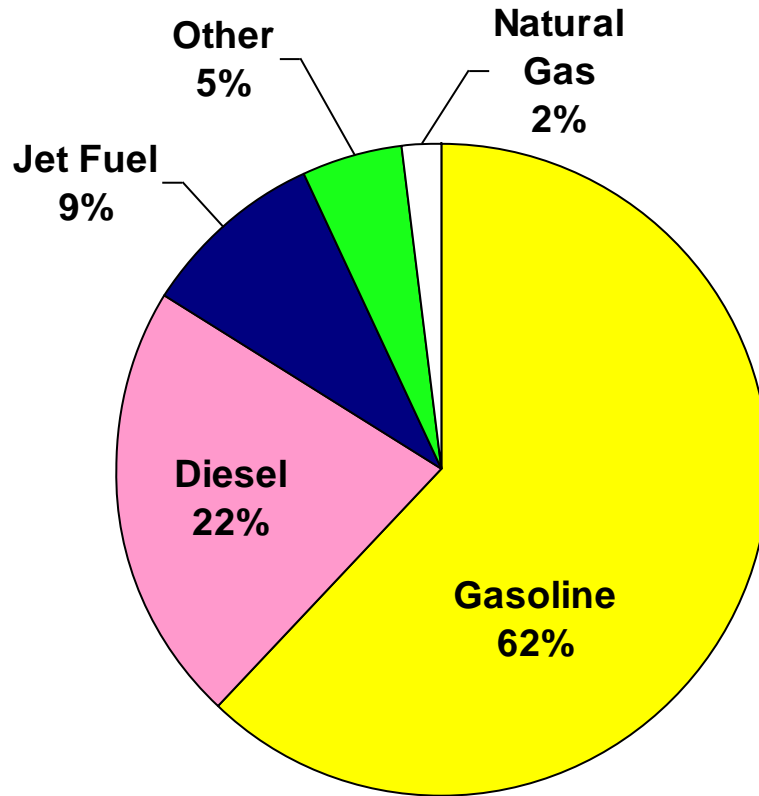
“Our vision is to be increasingly recognized as a leader for people providing safe, reliable, economic and green energy”

PSEG CEO Ralph Izzo

Age of U.S. Coal Plants



Fuel Used for Transportation



93% is petroleum based

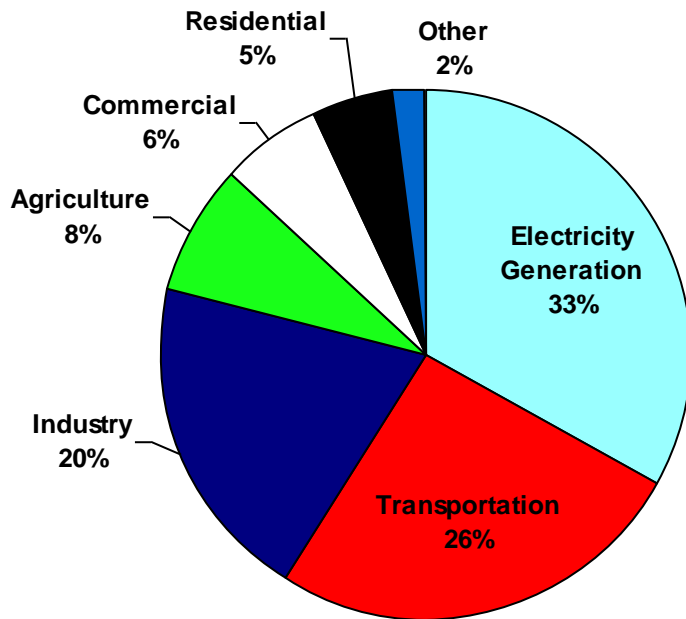
Source: DOE

Challenges

- **Magnitude**
- **Complexity**
- **Human**

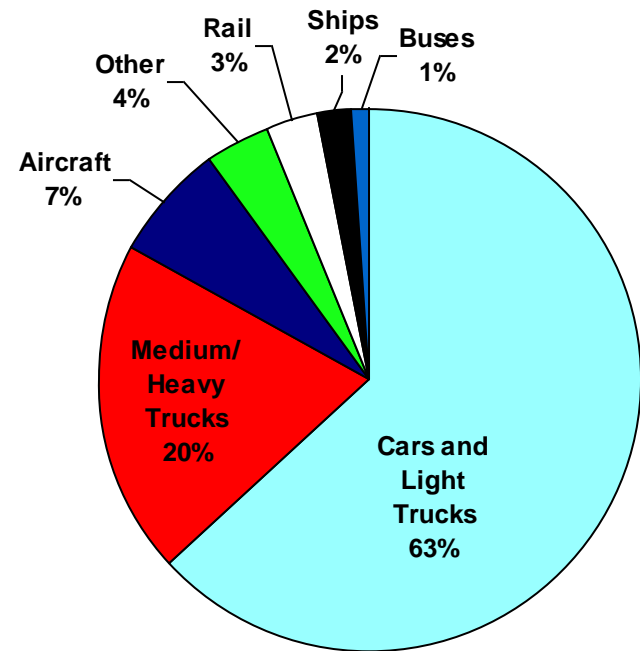
U.S. Carbon Emissions

Sources of Greenhouse Gas Emissions – All Sources



Source: DOE

Sources of Greenhouse Gas Emissions – Transportation Sector



Source: US EPA

Complexity of the Challenge

- **Supply and demand side solutions**
- **Technological breakthroughs**
- **Intermittent supply**
- **Distributed supply**
- **Carbon capture**
- **Transmission and distribution efficiency**
- **Other environmental issues**
- **Smart grid**

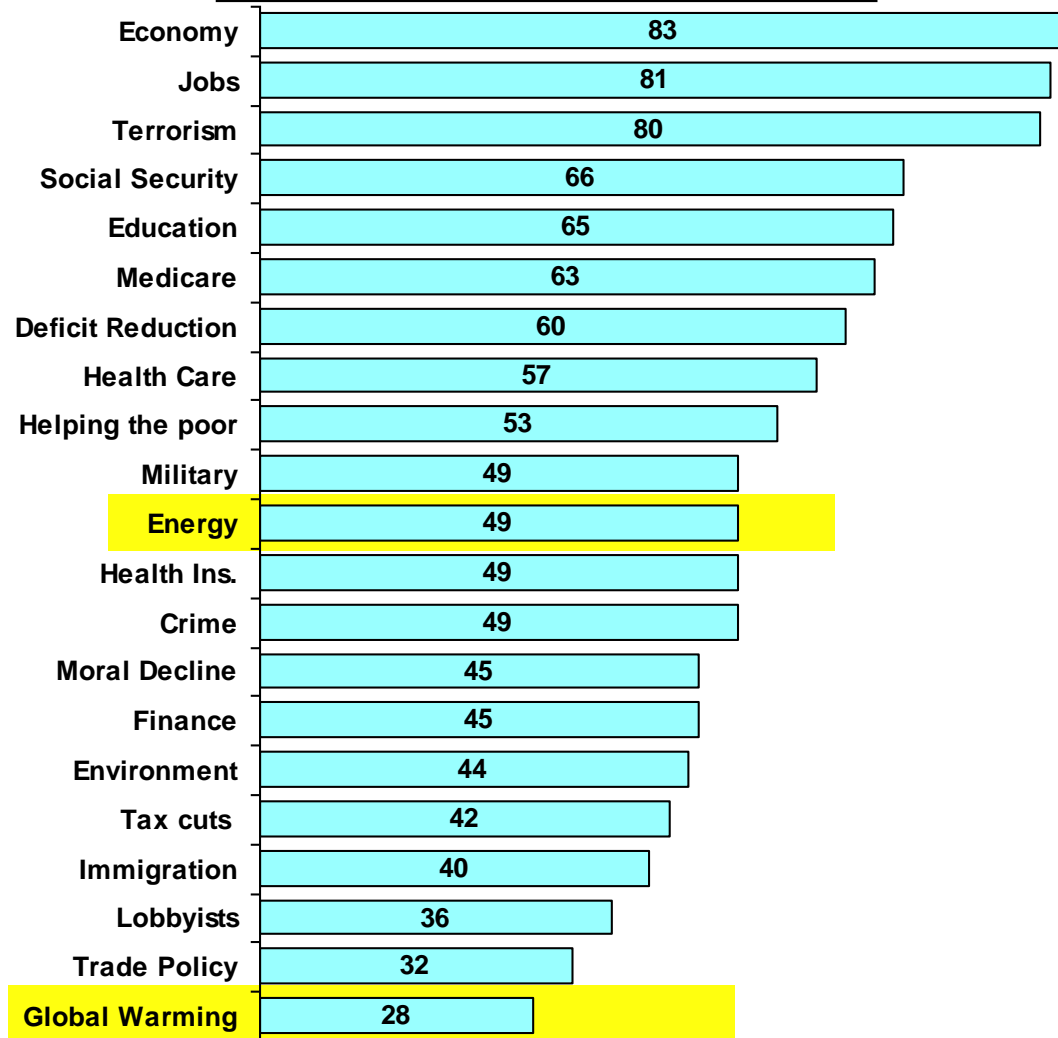
The Human Element

Two sides of the human coin

- **General public support**
- **Political courage**

Public Priorities

Public Top Priorities for 2010



Source: Pew Research, January 2010

Path to Success

Build the bridge

- **Implement environmental regulations**
- **Scale up EE/clean energy investments**
- **Build public support**

Long Term

- **Investment opportunities**
- **More than good engineering and financial incentives**



Cross the bridge together