USEA Energy Supply Forum
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Federal Energy Regulatory Commission
Current Energy Supply/Delivery Scheme

Estimated U.S. Energy Use in 2009: ~94.6 Quads

- Solar: 0.11
- Nuclear: 8.35
- Hydro: 2.68
- Wind: 0.70
- Geothermal: 0.37
- Natural Gas: 23.37
- Coal: 19.76
- Biomass: 3.88
- Petroleum: 35.27

Net Electricity Imports: 12.08

- Residential: 11.26
- Commercial: 8.49
- Industrial: 21.78
- Transportation: 26.98

Rejected Energy: 54.64

Energy Services: 39.97
Total Installed Generation Capacity

Source: Data derived from Ventyx Global LLC, Velocity Suite.
Exhibit 25: US Power Plants by Vintage and Fuel Type

Source: Energy Velocity, Company data, Credit Suisse estimates
Market Conditions Favor Coal to Gas Switching

Gas - Coal Generator Spread ($/MWh)

Source: Derived from Bloomberg, ESAC. Spot Central Appalachian coal and Henry Hub gas prices, relevant annual NOx and SO2 emissions cost, $15/ton coal transportation assumption.
Exhibit 140: Location of Un-Scrubbed Coal Plants

Source: Energy Velocity, Credit Suisse estimates
What’s Impacting Electric Utility Today?
Some Emerging Technologies that Will Impact T&D Systems Over the Next Decade
WE HAVE TECHNOLOGY.
LET'S GO.

LET'S FIGURE OUT A WAY TO CHARGE FOR SUNSHINE!

FIND OUT HOW EXISTING TECHNOLOGY IS HELPING TO MEET THE ENERGY CHALLENGE AT WWW.SHELL.US/LETSGO
Large-scale: Retrofitting and Conventional Clean Energy Generation are Job Creation Engines

Direct and indirect jobs created per $1M

Figure 4. Self-Contained Ringed Interconnected SuperGrid Integrated with Underlying Network
Exhibit 99: Demand Response Under Different Retirement Scenario

Demand Response % UCAP

Source: Company data, Credit Suisse estimates
Grid Benefits of Demand Response

- PJM Study Shows that a 3% Reduction in demand of Top 20 Five-hour Blocks in 5 Mid-Atlantic States Could Save $280 Million per Year

- The Brattle Group Estimates that a 5% Reduction in Grid Peak Load Can Result in $3 Billion Savings Annually, for PV Over 20 Years of $31 Billion
Electric Transportation - Key to the Nation’s Freedom from Oil
Regulation Services While Charging
Thank you!