U.S. Energy Projections

EGNRET -43

Chiang Mia, Thailand

November 12-13, 2014

Many assumptions have changed for 2014*

Macroeconomic

- Revised U.S. Census Bureau population projections. The population projection for 2040 in the AEO2014 Reference case is almost 6% below the 2040 projection used for the AEO2013 Reference case

Residential, commercial, and industrial

- Updated costs and improved representation of residential lighting applications, including wider representation of light emitting diode (LED) lighting and outdoor lighting, based on the 2009 RECS and two U.S. Department of Energy (DOE) report

Transportation

- Revised attributes for battery electric vehicles, including: (1) product availability, (2) electric drive fuel efficiency, and (3) nonbattery system costs by vehicle size class, battery size, and added battery cost per kilowatthour based on vehicle power-to energy ratio for vehicle type—applied to hybrid electric, plug-in hybrid electric, and all-electric vehicles.

* **http://www.eia.gov/forecasts/aeo/**

Transportation: USDOE Vehicle Technology Office*

- The U.S. Department of Energy on August 14, 2014 announced the investment of more than $55 million for 31 new projects to accelerate the research and development of critical vehicle technologies that will improve fuel efficiency and reduce costs
- These new projects aim to meet the goals of the Energy Department's EV Everywhere Grand Challenge, a broader initiative launched in March 2012 to make plug-in electric vehicles (PEVs) as affordable and convenient to own and drive as today's gasoline-powered vehicles by 2022

*http://energy.gov/eere/vehicles/vehicle-technologies-office

Buildings: Office of Energy Efficiency and Renewable Energy*

- The U.S. Department of Energy (DOE) advances building energy performance through the development and promotion of efficient, affordable, and high impact technologies, systems, and practices. The long-term goal of the Building Technologies Office is to reduce energy use by 50%, compared to a 2010 baseline.

*http://energy.gov/eere/efficiency/buildings

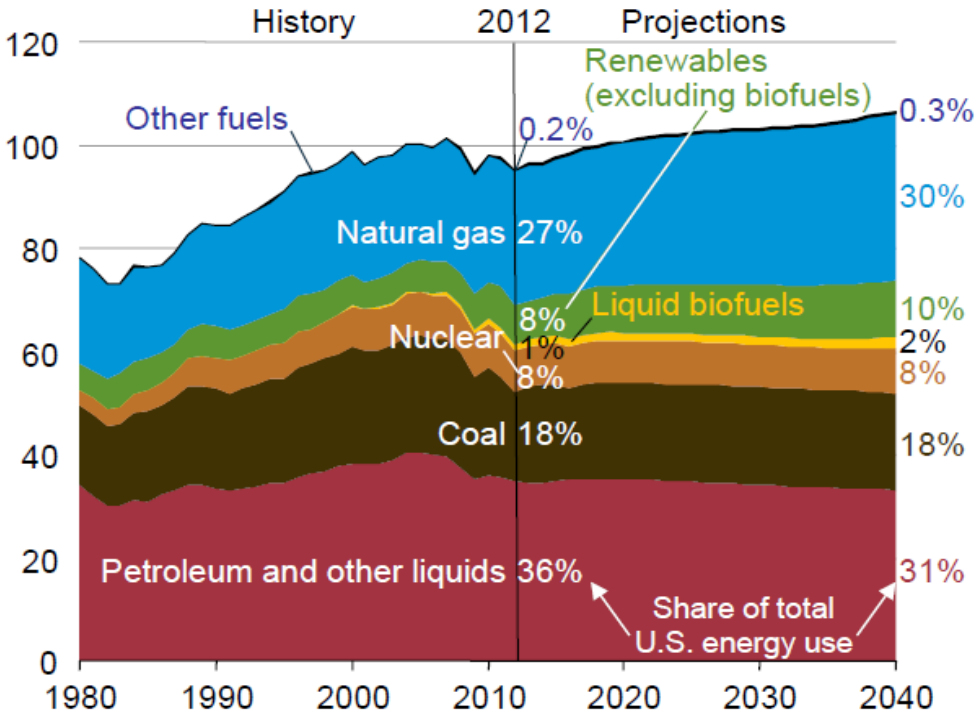
Solar PV: Office of Energy Efficiency and Renewable Energy*

- The SunShot Initiative aggressively supports development of low-cost, high-efficiency photovoltaic (PV) technologies in order to to make solar electricity cost-competitive with other sources of energy by 2020. As of February 2014, only three years into the decade-long SunShot Initiative, the solar industry is already more than 60% of the way to achieving SunShot's cost target of $0.06 per kilowatt-hour for utility-scale PV (based on 2010 baseline figures).

*http://energy.gov/eere/sunshot/photovoltaics

US DOE EIA Annual Energy Outlook 2014*

Figure MT-9. Primary energy use by fuel in the Reference case, 1980-2040 (quadrillion Btu)



* **http://www.eia.gov/forecasts/aeo/**