

Tough Choices in U.S. EIA's Data Programs



2011 EIA Energy Conference

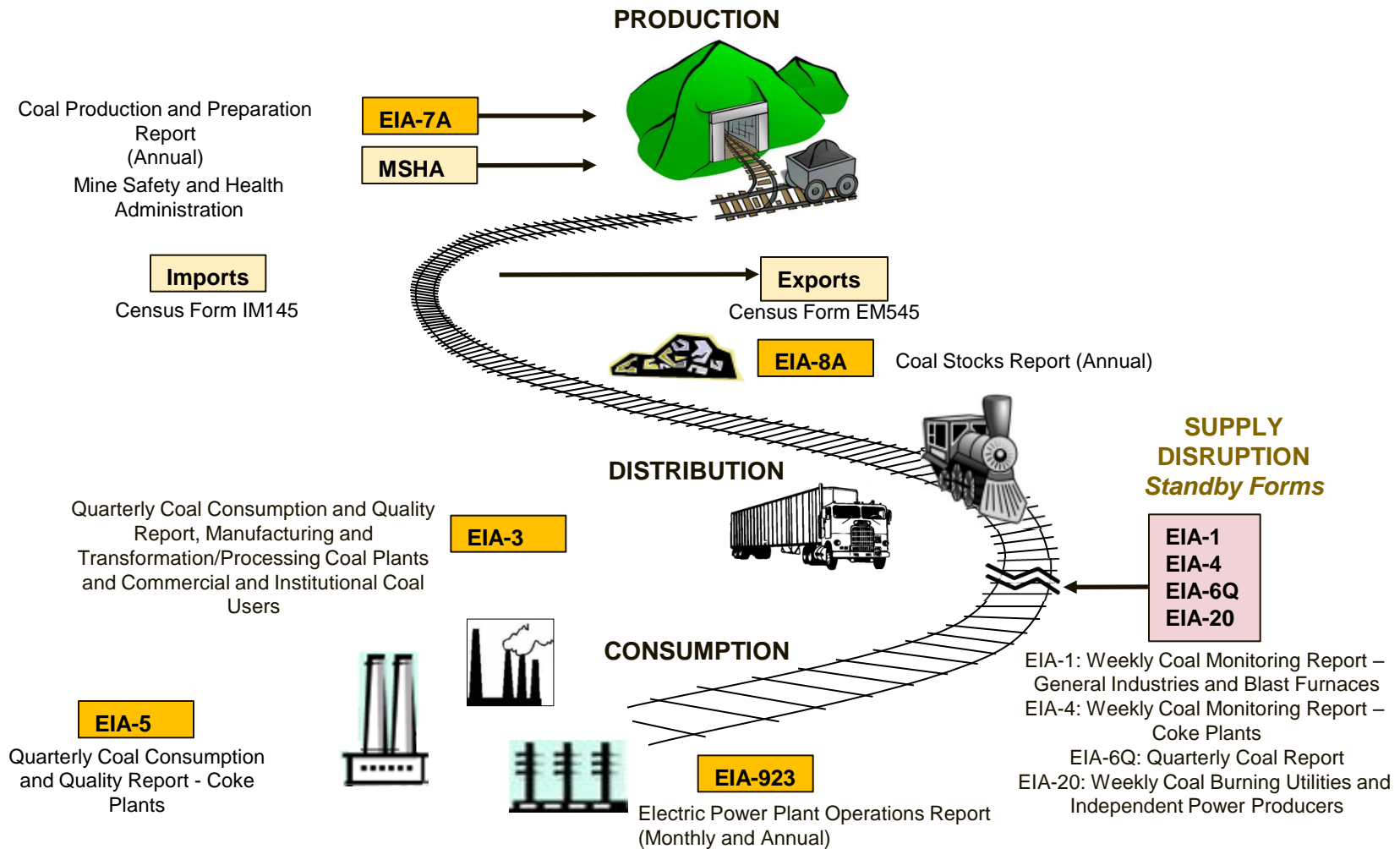
Steve Harvey

April 27, 2011 | Washington, D.C.

Agenda

- Office of Oil, Gas, and Coal Supply Statistics
- Office of Petroleum and Biofuels Statistics
- Office of Electricity, Renewables, and Uranium Statistics
- Office of Energy Consumption and Efficiency Statistics
- Office of Survey Development and Statistical Integration

Coal Data Collection Program



2011 Coal Forms Clearance

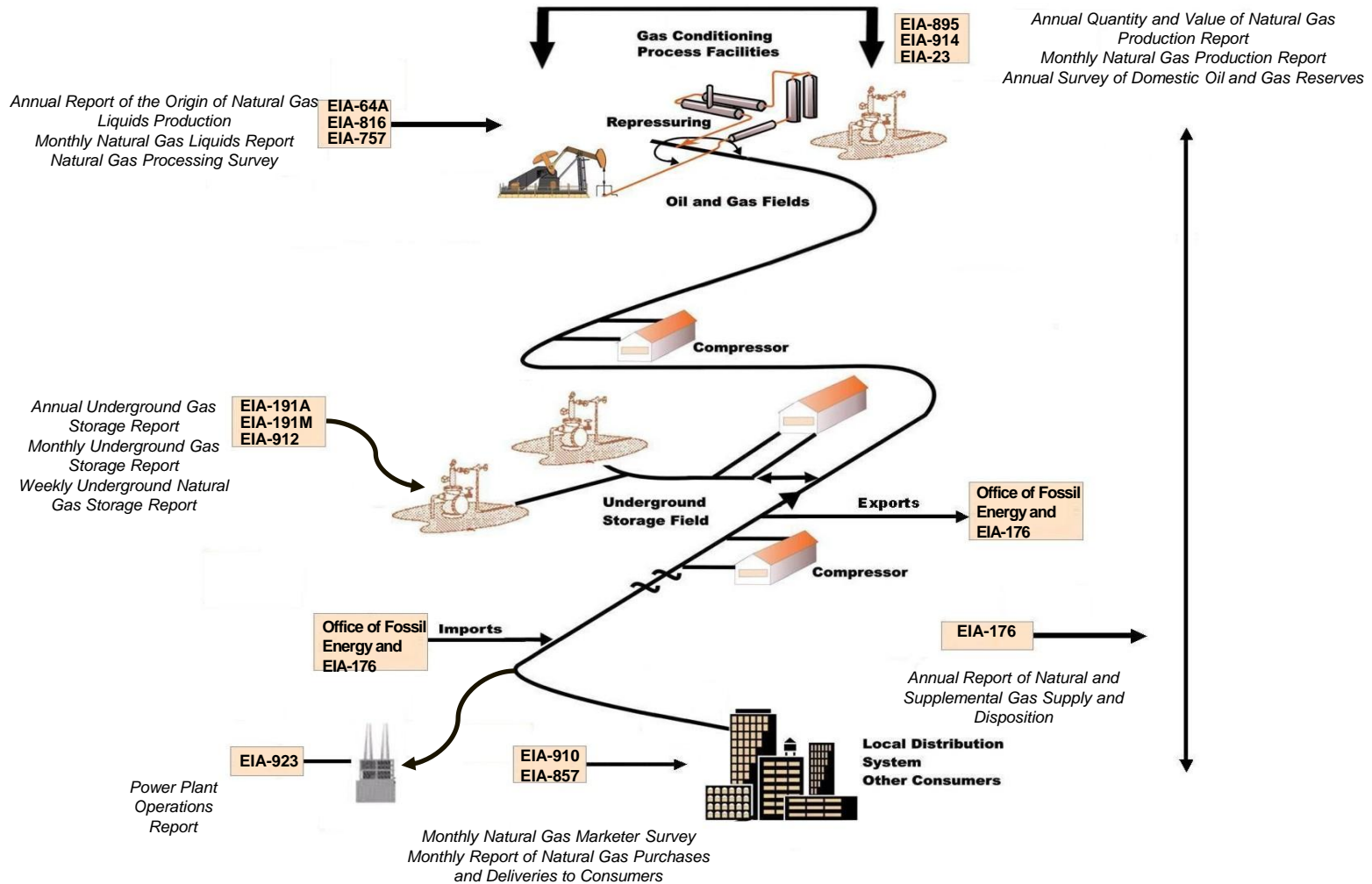
Proposed changes in March Federal Register Notice:

Less data protection: Only revenues and costs

Smaller annual production sample size: Increase threshold from 10 to 25 thousand short tons per mine.

Minor additional data collection

Natural Gas Data Collection Program



2012 Natural Gas Forms Clearance

Proposed changes in March Federal Register Notice:

Production: Possible elimination of the annual voluntary survey

Storage: Increase weekly sample from 70 to 85

Consumption:

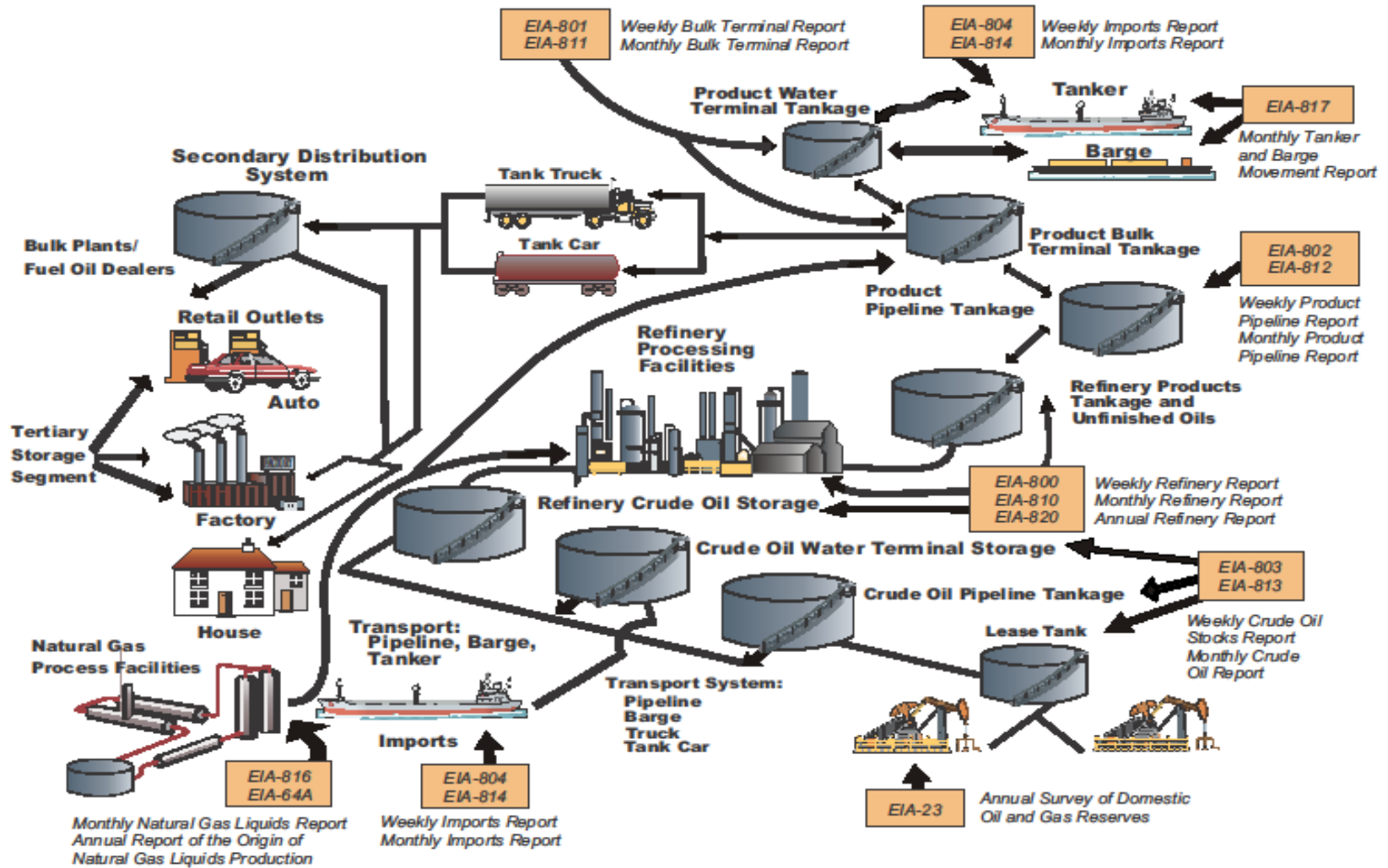
- Add an annual schedule to monthly marketers survey
- Add company and vehicle use to monthly utility survey
- Add participation in retail choice programs to annual utility survey

Challenge to Oil and Gas Reserves and Supply Program

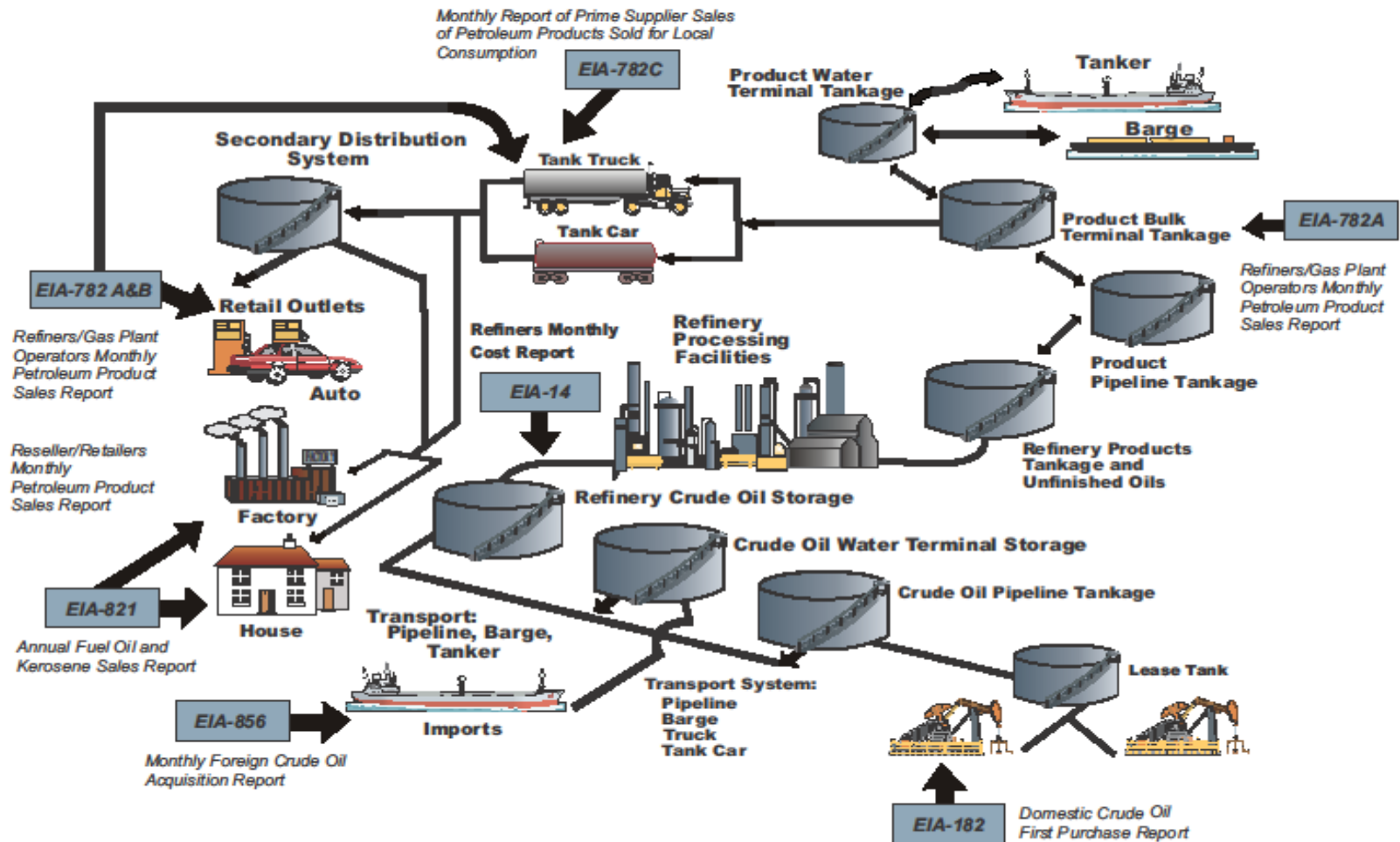
Developing a comprehensive approach to oil and gas reserves and production data collection

- Monthly and annual data
- Wet, marketed, and dry natural gas
- Government vs. third-party data
- Company vs. State respondents
- Mandatory vs. voluntary

PETROLEUM SUPPLY DATA COLLECTION



PETROLEUM MARKETING DATA COLLECTION



Potential Projects to Enhance Liquid Fuels Data

Petroleum: Explore use of International Trade Database System (ITDS) for all import and export data

Also:

- Improve estimation of weekly exports
- Add biodiesel into the petroleum supply and disposition balance
- Continue investigating ways to reduce unaccounted-for crude oil
- More fully integrate Petroleum Marketing survey forms with Petroleum Supply survey forms to allow for cross survey comparisons

Electric Data Collection Challenges

Energy Efficiency

- Improve comparability of data across respondents (difficult due to lack of standardization of terms)
- Better measurement of the reliability of the data and persistence of effects over time

Demand Response

- Expand collection to demand response aggregators.
- Collect more detailed information on dynamic rates.

Collection of data on power plant construction costs.



Challenges of Renewable Data Collection

Renewable Data Collection Programs

- Utility-scale central station systems.
- Solar and geothermal heat pump production and shipments.
- Distributed systems using utility records.

Questions

- Is this a comprehensive renewable data program?
- How can we improve data collection on distributed generation?
- How should we handle “divided” projects?
- Is there a need to survey wind turbine manufacture?



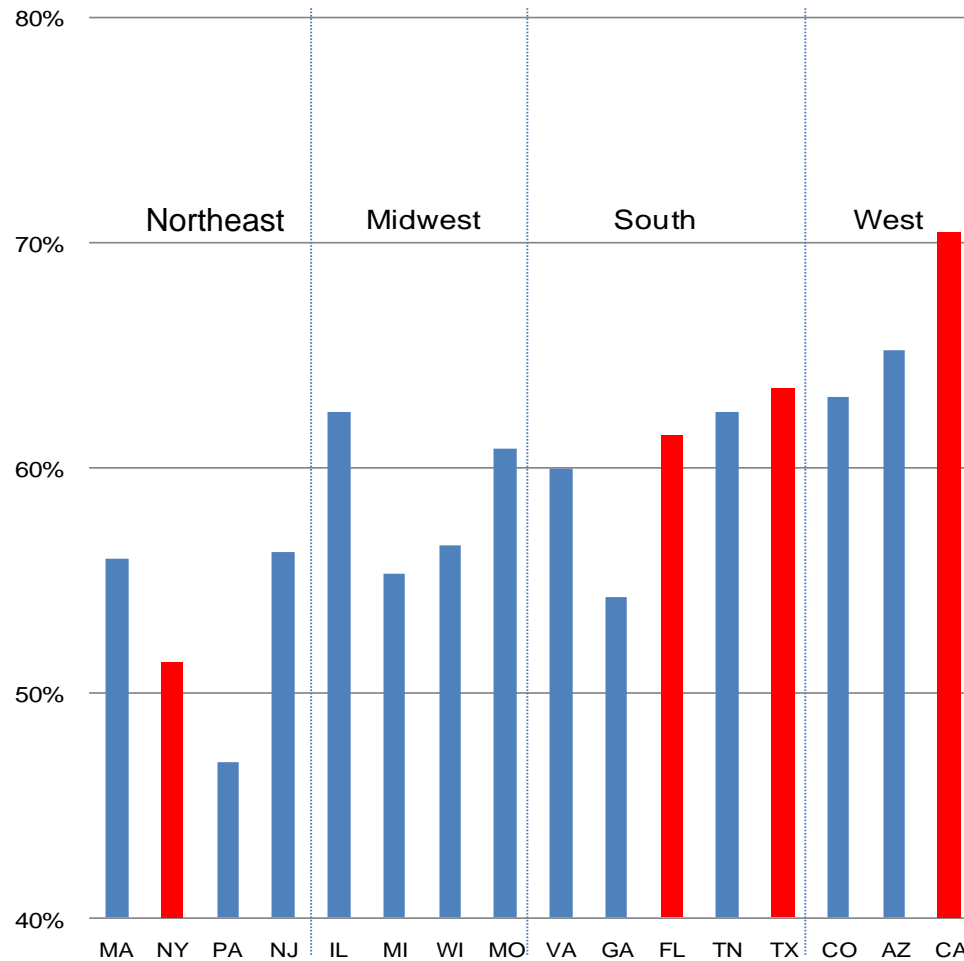
Challenges of Nuclear/Uranium Data Collection

- Collection of data on spent fuel was terminated several years ago (RW-859 survey). Should this be revived (or other related data collected) in the aftermath of the Fukushima accident?



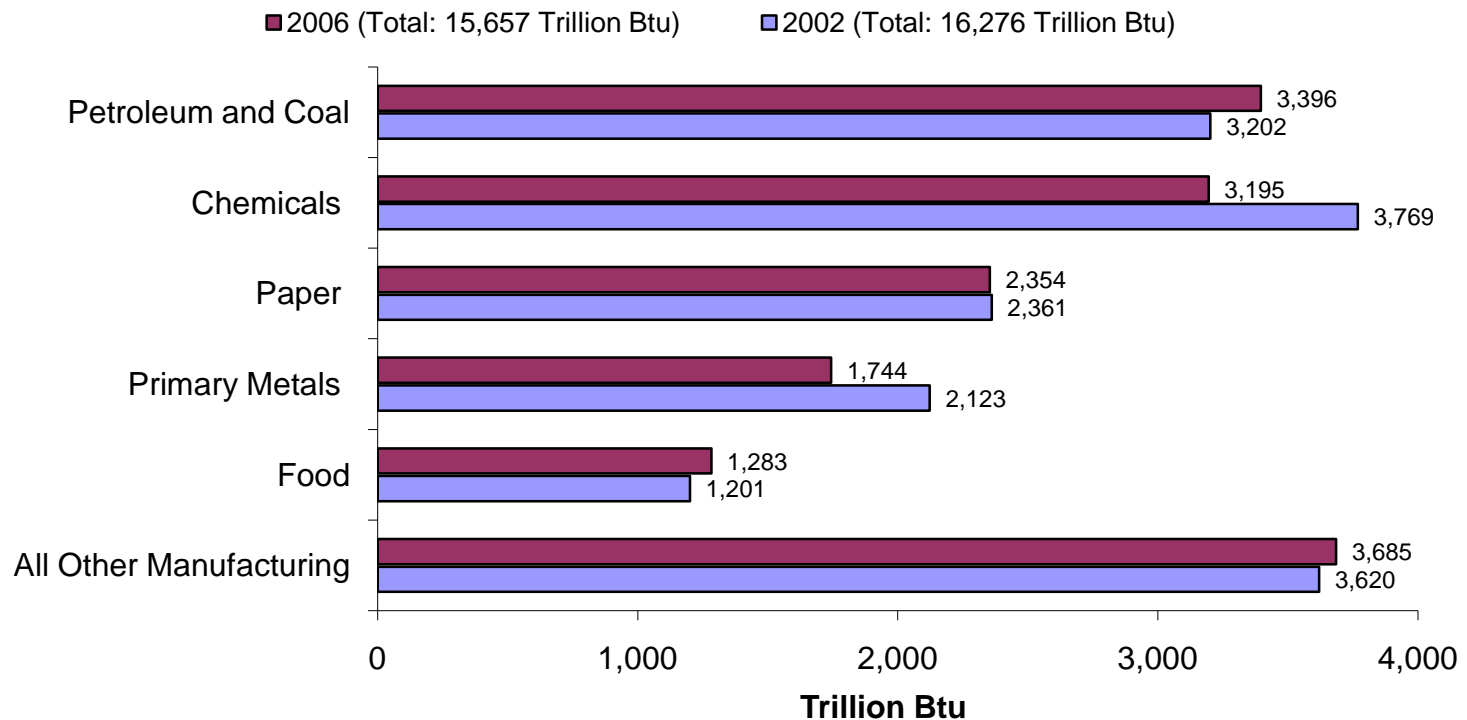
RECS 2009 Data Released in March

Homes Using Energy-Efficient Lights (2009)

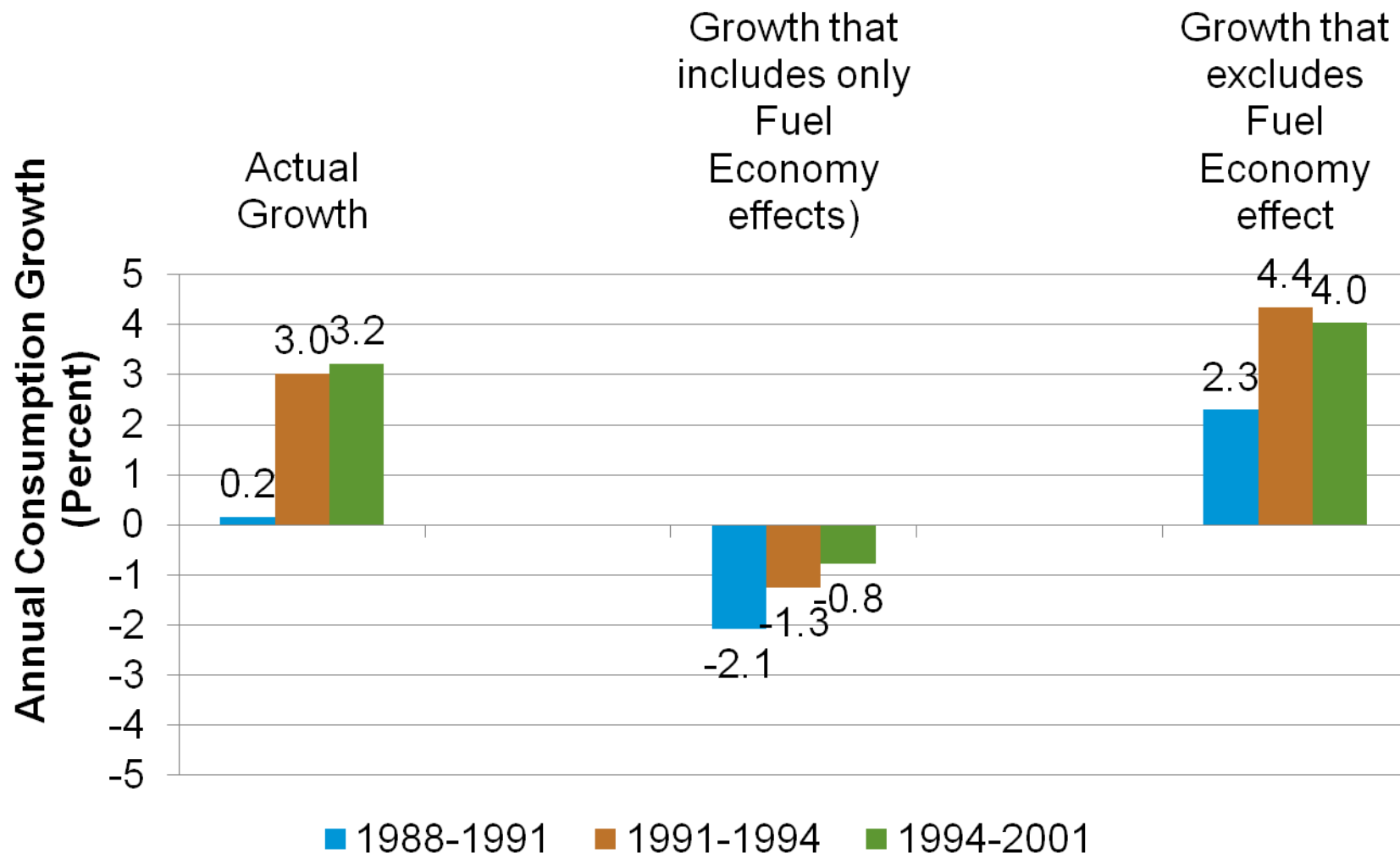


EIA Partners with the Census Bureau on the Manufacturing Energy Consumption Survey

Manufacturing Fuel Consumption Has Declined 3.8 Percent From 2002 to 2006



EIA Partners with FHA to Publish Transportation Characteristics Data



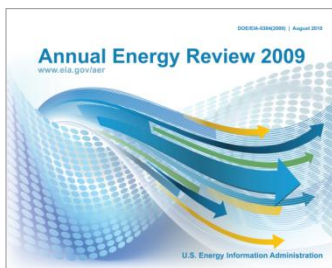
Latest Developments on Commercial Buildings Survey

- CBECS 2007

- National estimates will not be possible, no public use file
- Experimental method was a cost-cutting tactic
- Remedies: better appreciation of relationship between project costs and project risks; better project management; closer monitoring of contractor performance

- CBECS 2011

- Quality improvements contemplated (cost enhancements)
- Efficiency improvements (cost mitigators)

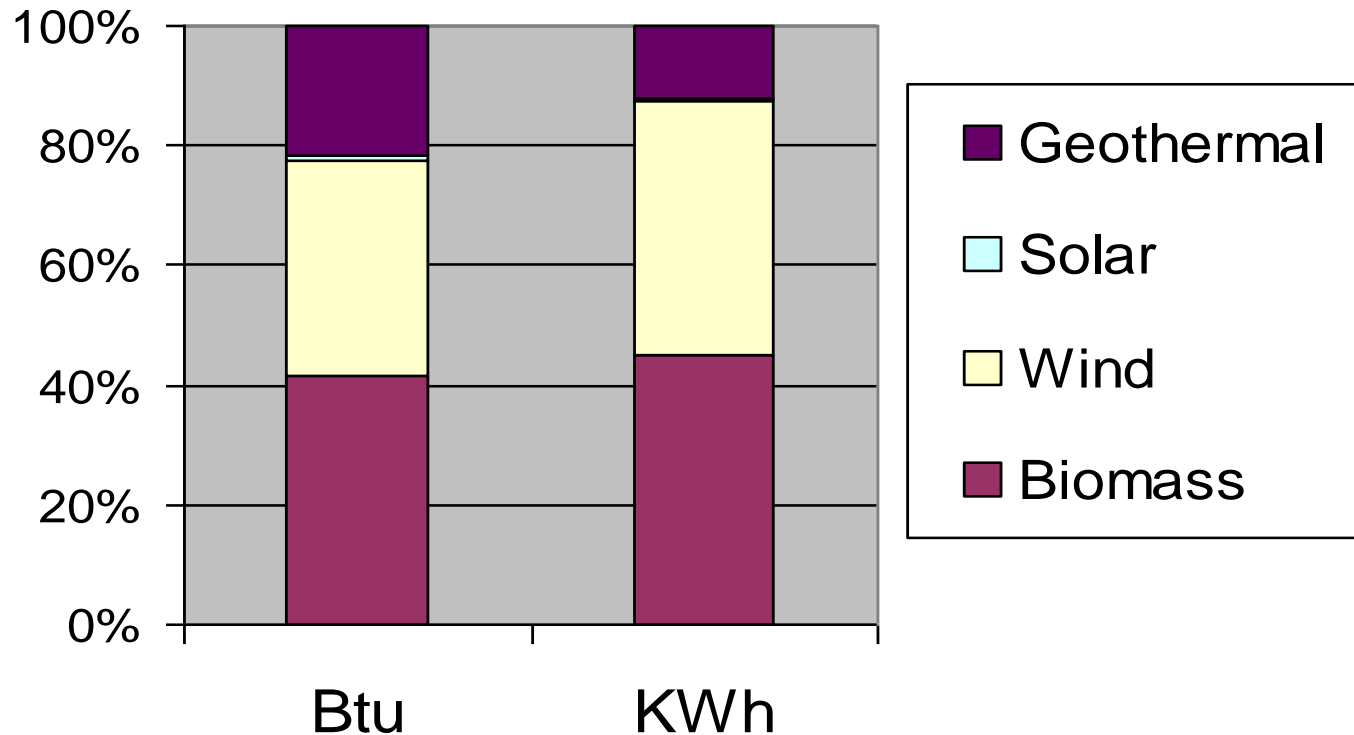


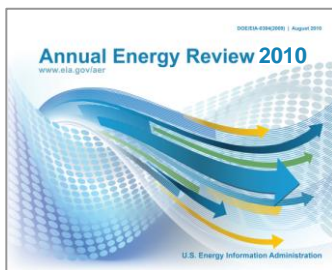
Current picture of renewable energy in U.S. energy balances

- U.S. total primary energy consumption in Btu uses two heat rates for noncombustible sources of energy:
- (Hydropower in kWh) (9,854 Btu/kWh) = consumption in Btu
- (Wind energy in kWh) (9,854 Btu/kWh) = consumption in Btu
- (Solar energy in kWh) (9,854 Btu/kWh) = consumption in Btu
- (Geothermal energy in kWh) (21,017 Btu/kWh) = consumption in Btu

Why the current picture doesn't work:

Shares of Electricity Generation by Renewable Energy Source, 2008





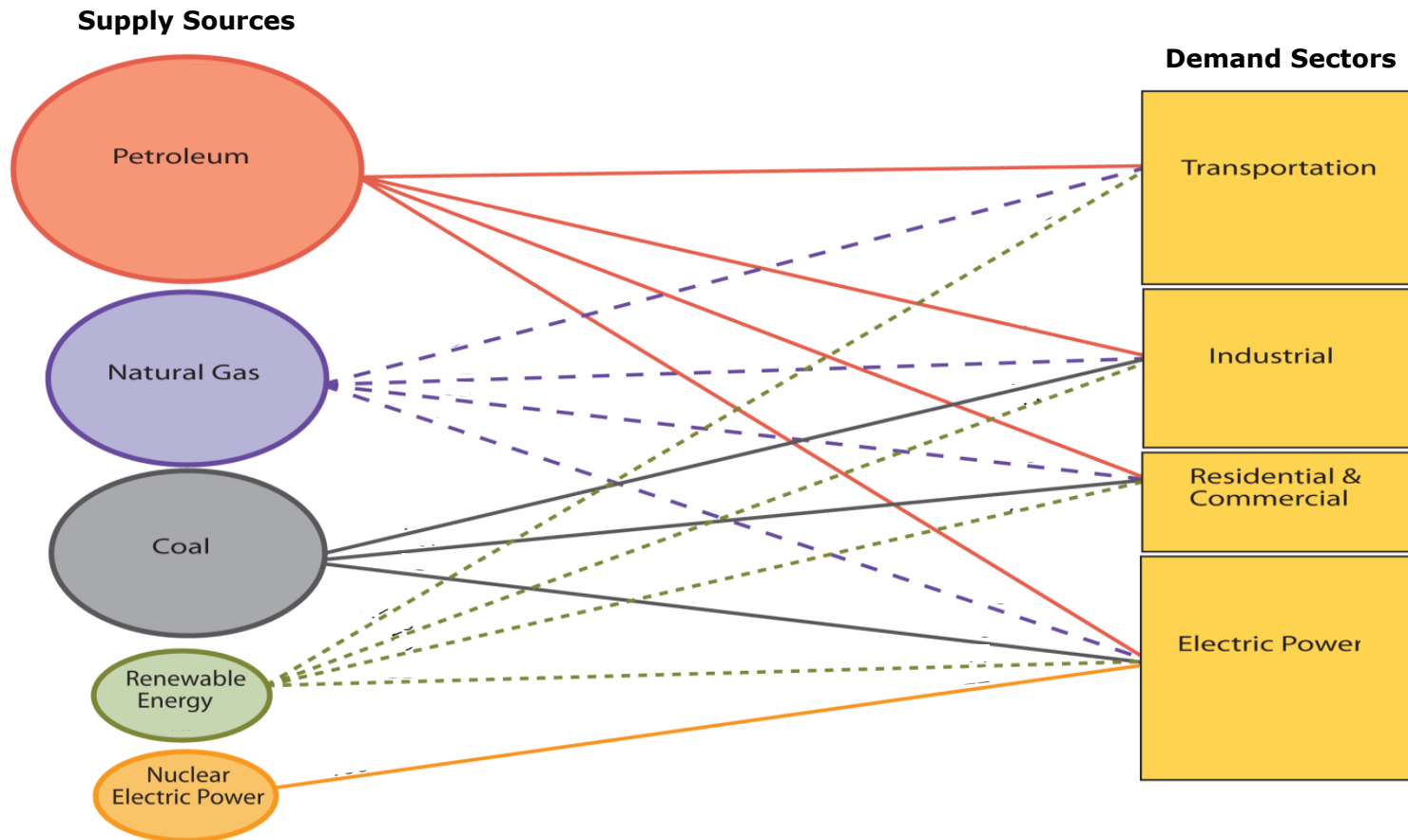
New picture of renewable energy in U.S. energy balances

- Heat rates for noncombustible fuels
 - New Table 1.3: “Captured” and “adjustment for fossil fuel equivalence”

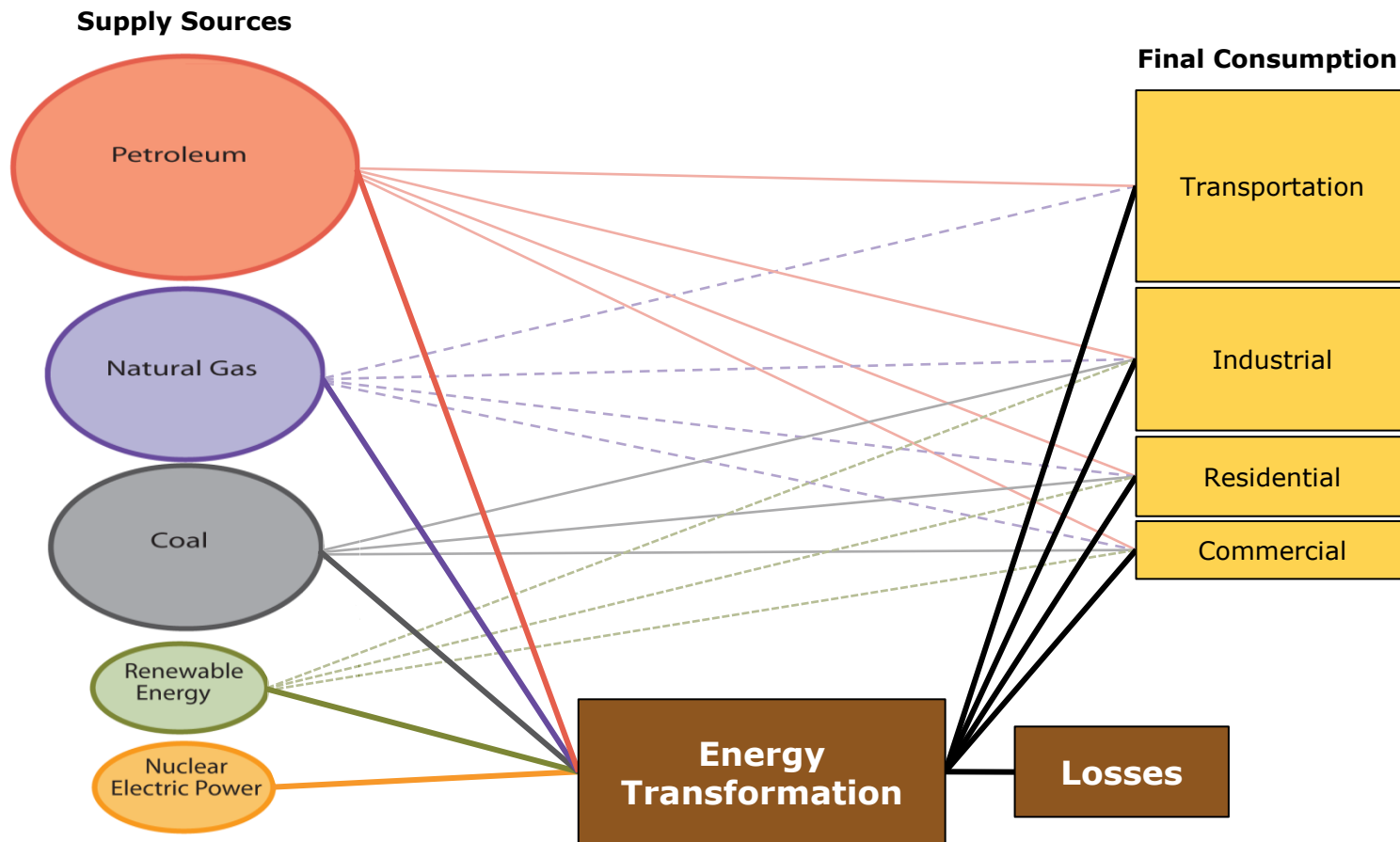
Renewable Energy				
Noncombustible Energy			Biomass	Total
Captured Energy	Adjustment for Fossil Fuel Equivalence	Total		

- AER renewables section: Fossil-fuel heat rates – by source
- New Appendix F: Technology-specific heat rates – by source
- Value for total primary energy consumption will decrease due to the lower heat rate for geothermal

Current picture of primary energy flow by source and sector



Proposed new picture of primary energy flow by source and sector



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