

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



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*2011 EIA Energy Conference*

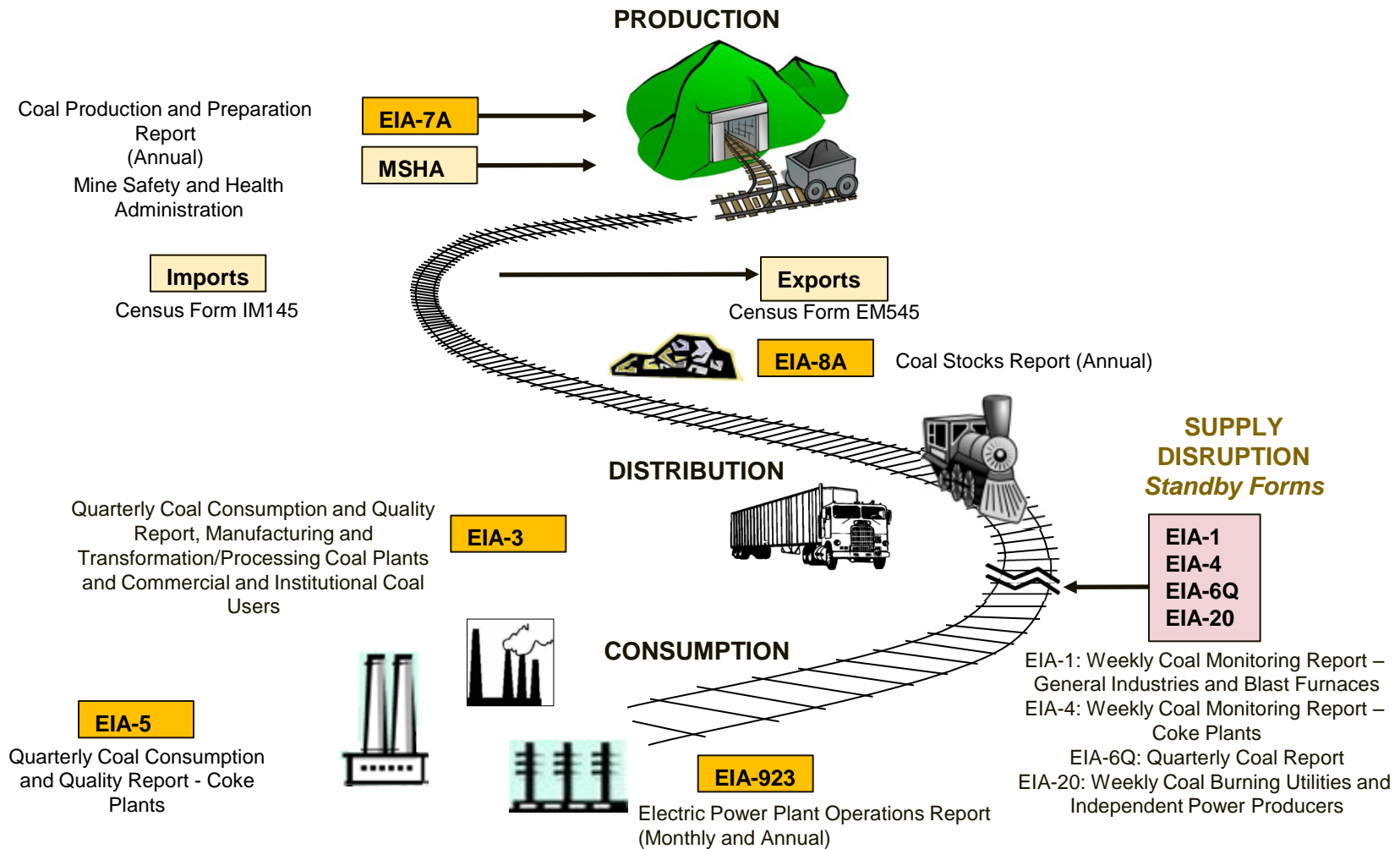
*Steve Harvey*

*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

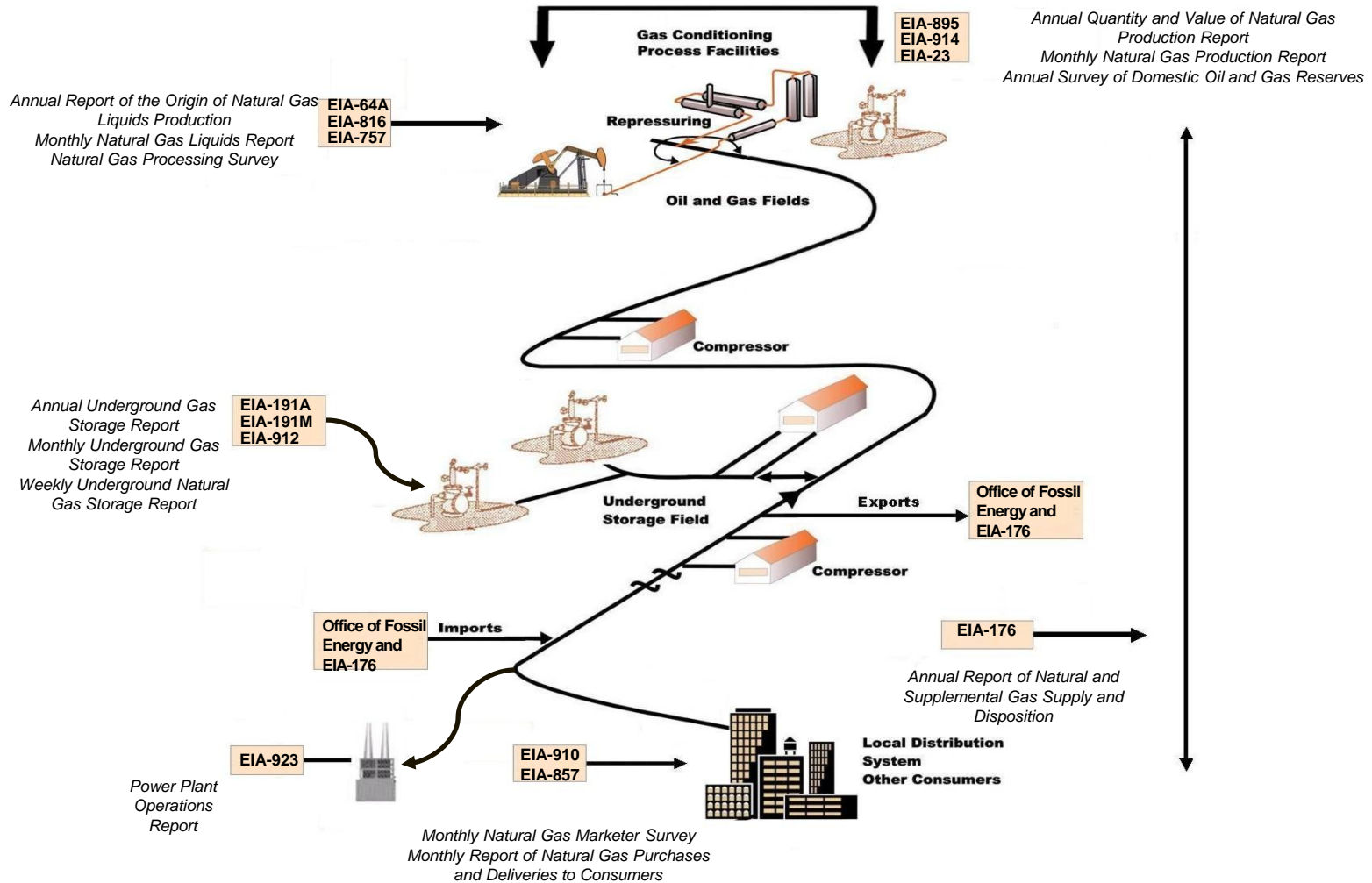
Proposed changes in March Federal Register Notice:

***Less data protection:*** Only revenues and costs

***Smaller annual production sample size:*** Increase threshold from 10 to 25 million 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

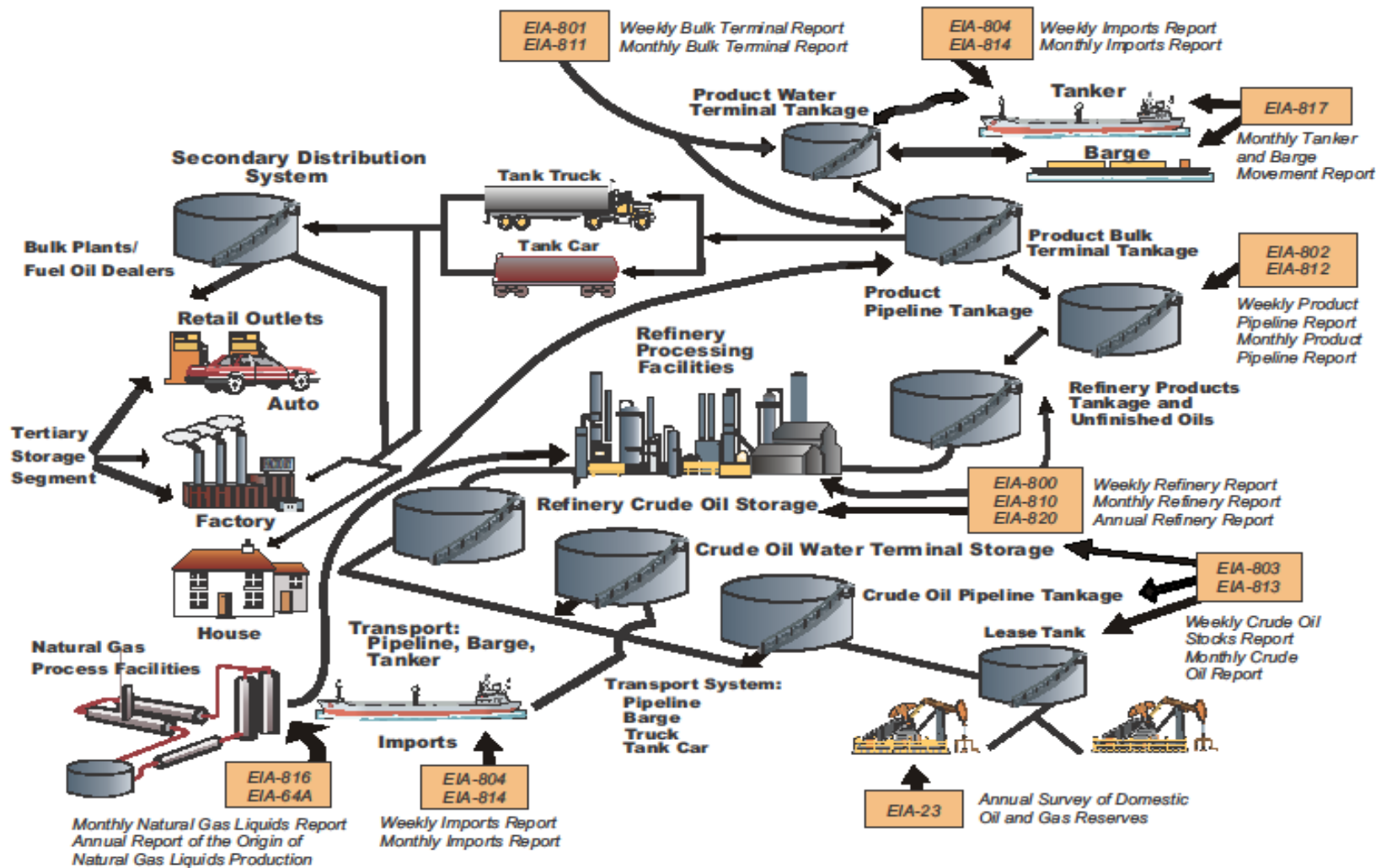
# Challenge to Oil and Gas Reserves and Supply Program

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

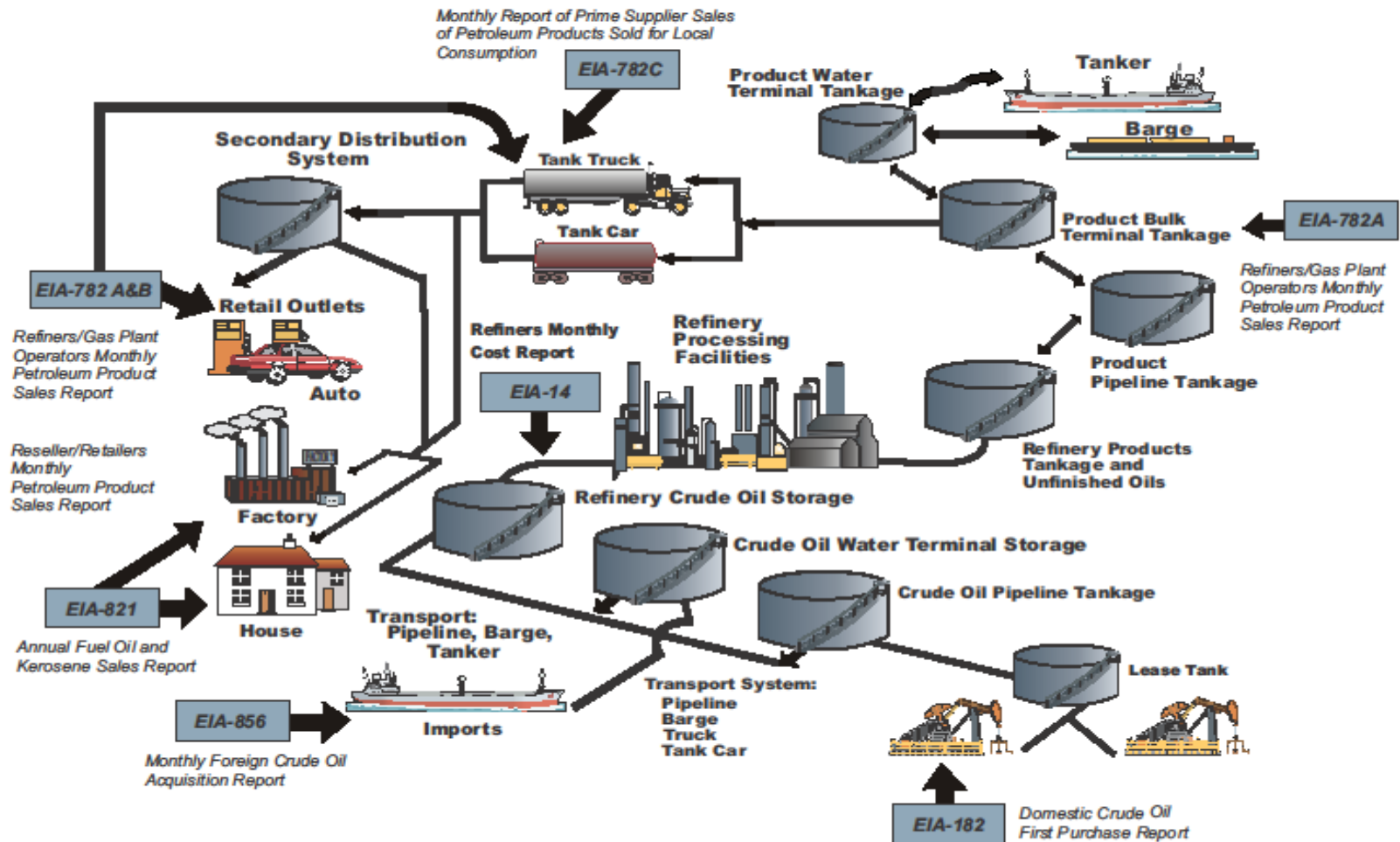


# PETROLEUM SUPPLY DATA COLLECTION





# 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?



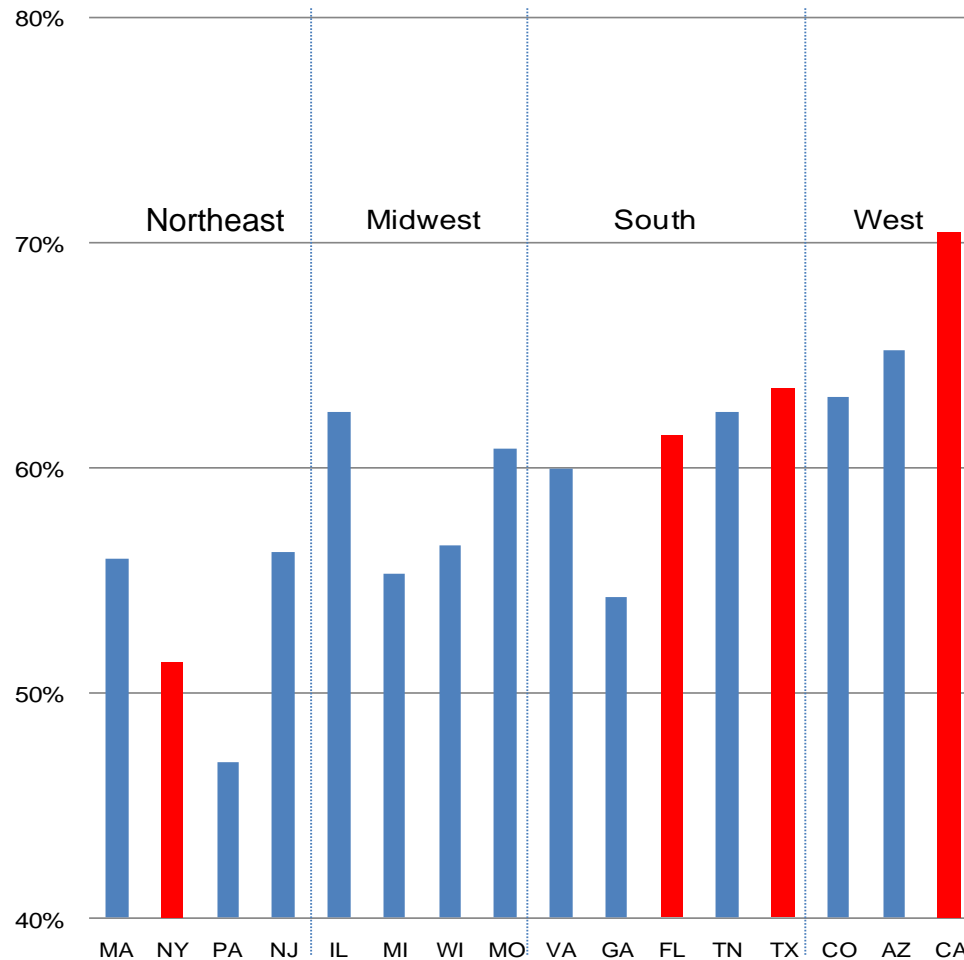
# Challenges of Nuclear/Uranium Data Collection

- 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?



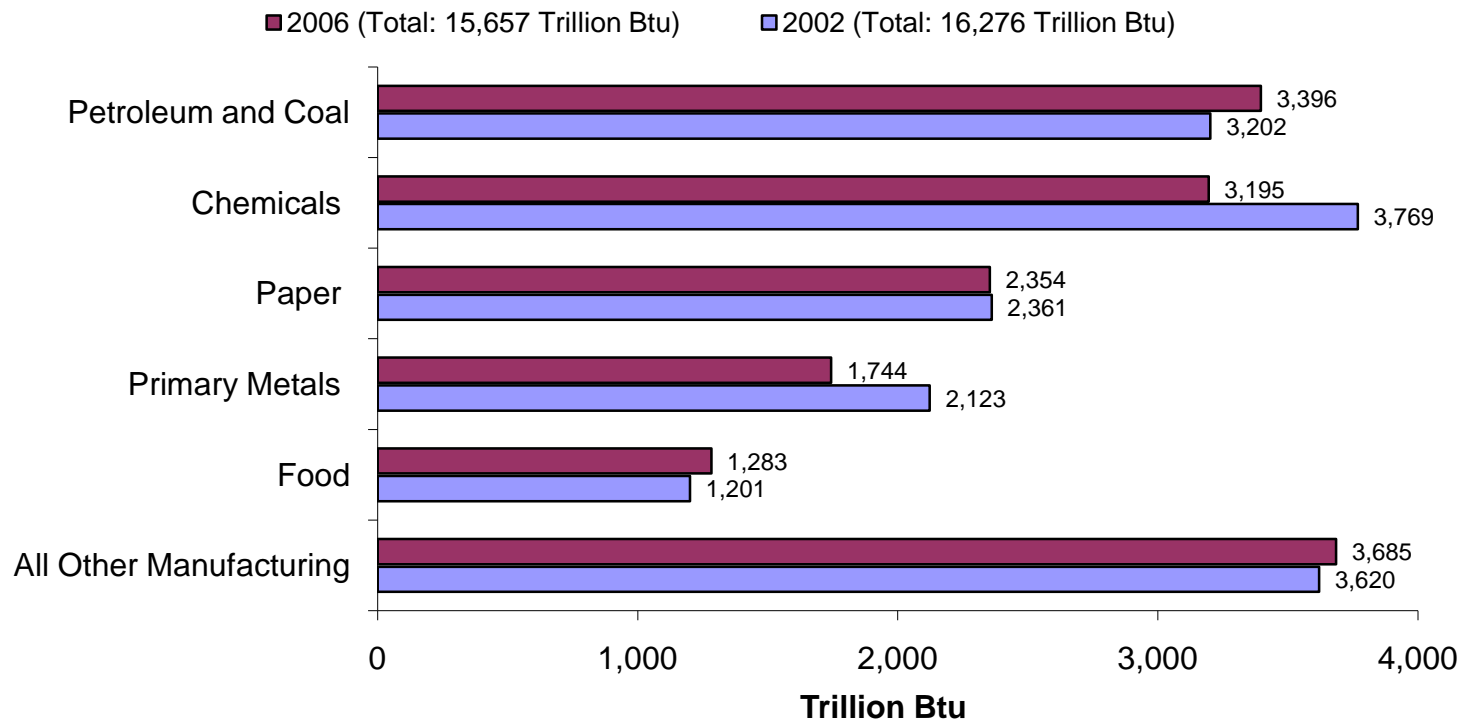
# RECS 2009 Data Released in March

## Homes Using Energy-Efficient Lights (2009)



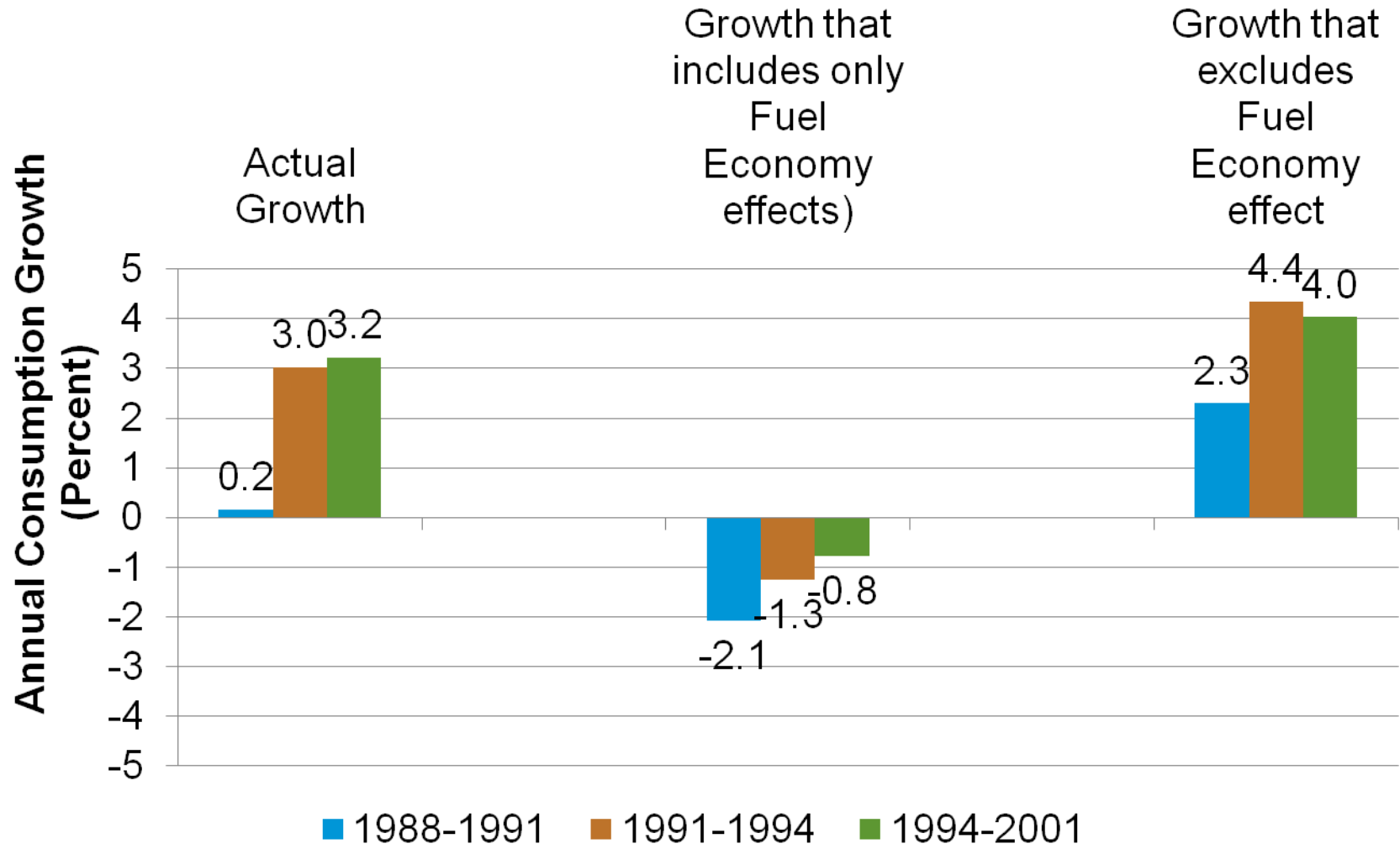
# EIA Partners with the Census Bureau on the Manufacturing Energy Consumption Survey

## Manufacturing Fuel Consumption Has Declined 3.8 Percent From 2002 to 2006





# EIA Partners with FHA to Publish Transportation Characteristics Data



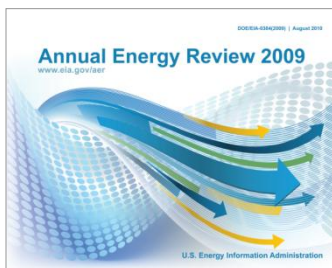
# Latest Developments on Commercial Buildings Survey

- 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)

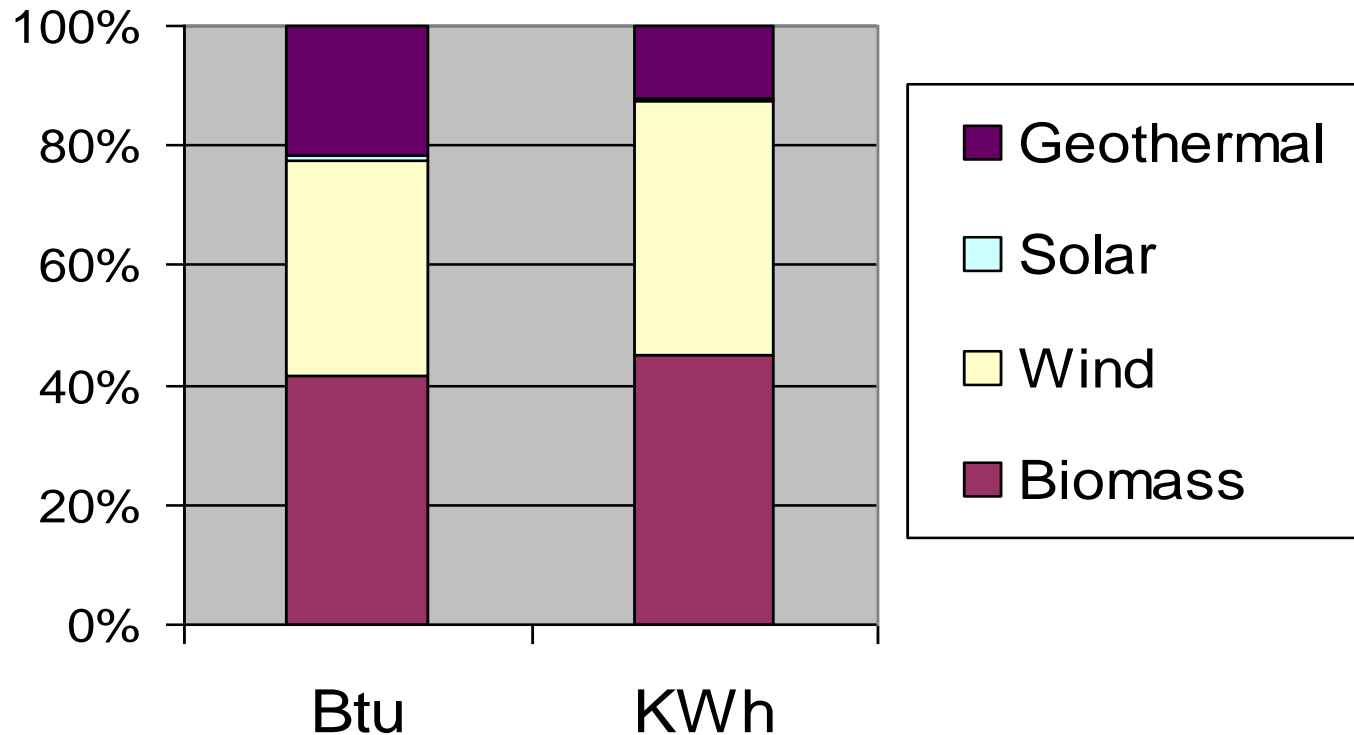


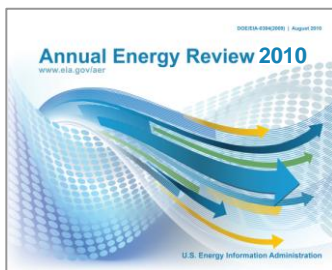
## Current picture of renewable energy in U.S. energy balances

- 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





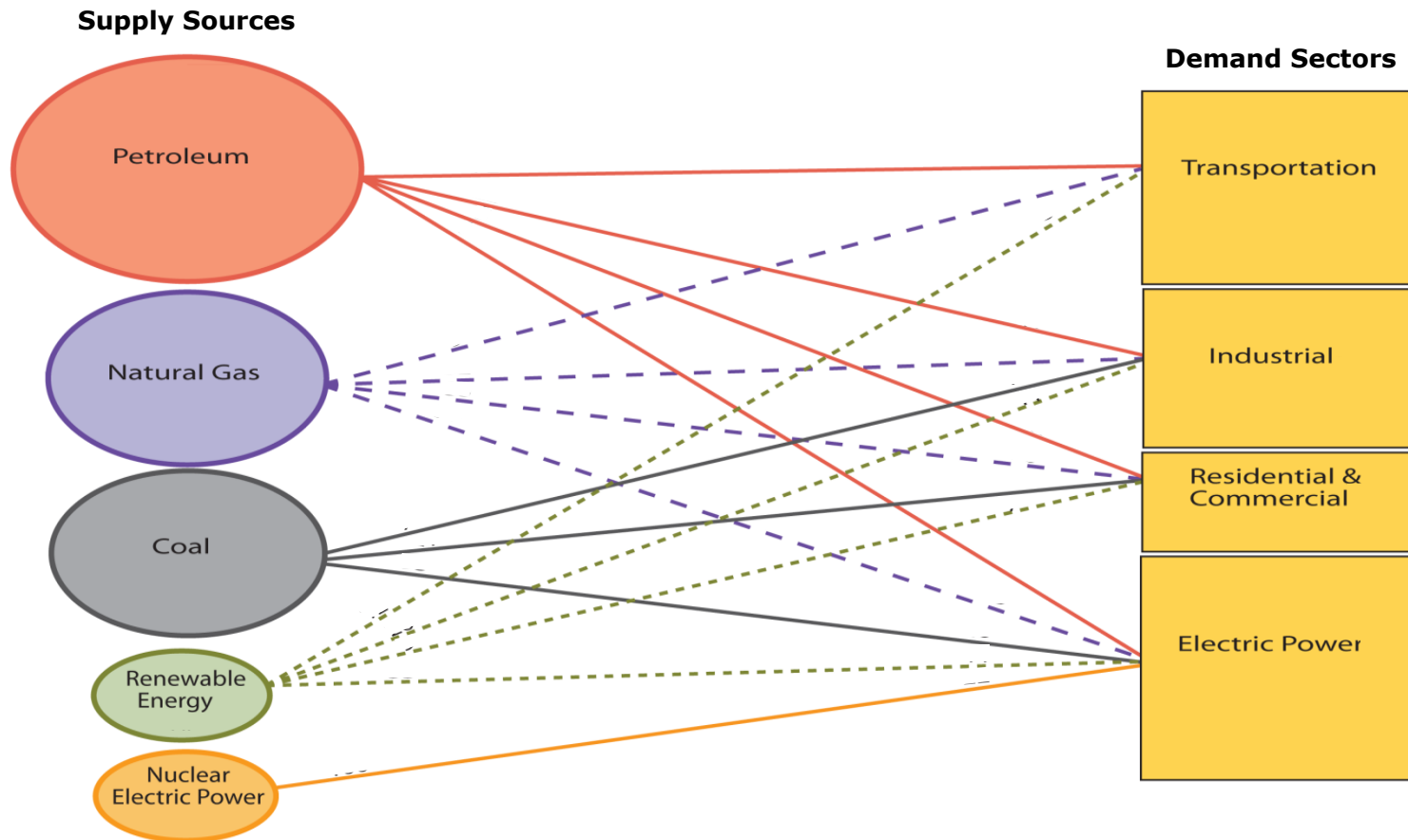
## New picture of renewable energy in U.S. energy balances

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

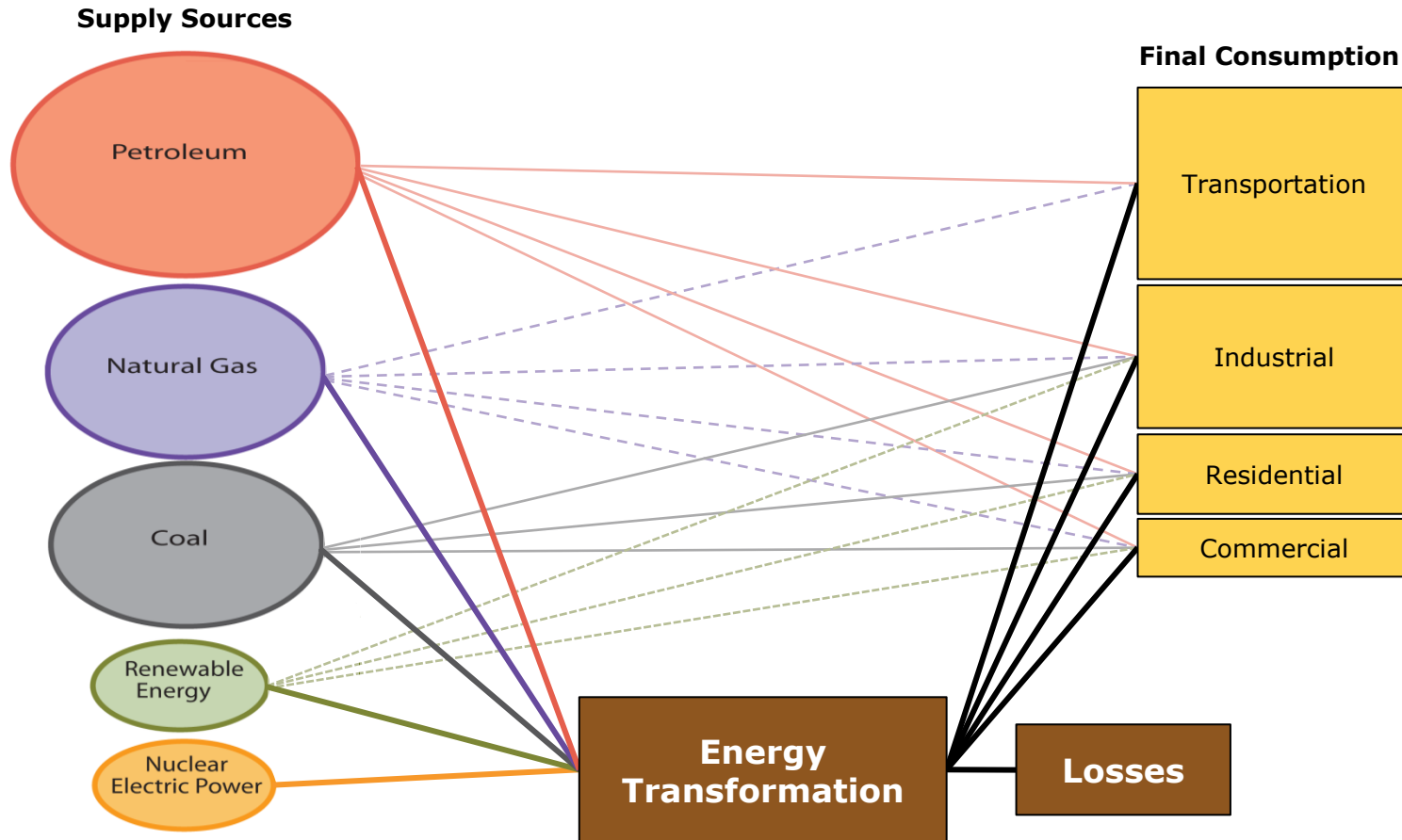
Renewable Energy				
Noncombustible Energy			Biomass	Total
Captured Energy	Adjustment for Fossil Fuel Equivalence	Total		

- 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





# Contact Information

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