
Overview of U.S. Energy Information Administration's energy tracking system



US-China Workshop: Domestic MRV of Climate Efforts

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Outline

- U.S. Energy Information Administration's (EIA) mission
- EIA's structure and processes
- Analysis helps verify data
 - “Kaya Identity” example
- Concluding remarks

EIA's Mission

U.S. Energy Information Administration's (EIA) Mission

- The U.S. Energy Information Administration (EIA) is the independent statistical and analytical agency within the U.S. Department of Energy
- EIA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment
- EIA is policy neutral
- Bottom line – no other governmental entity, including the Secretary of Energy or the President, may alter EIA data, analysis, or conclusions

EIA's Mission, continued

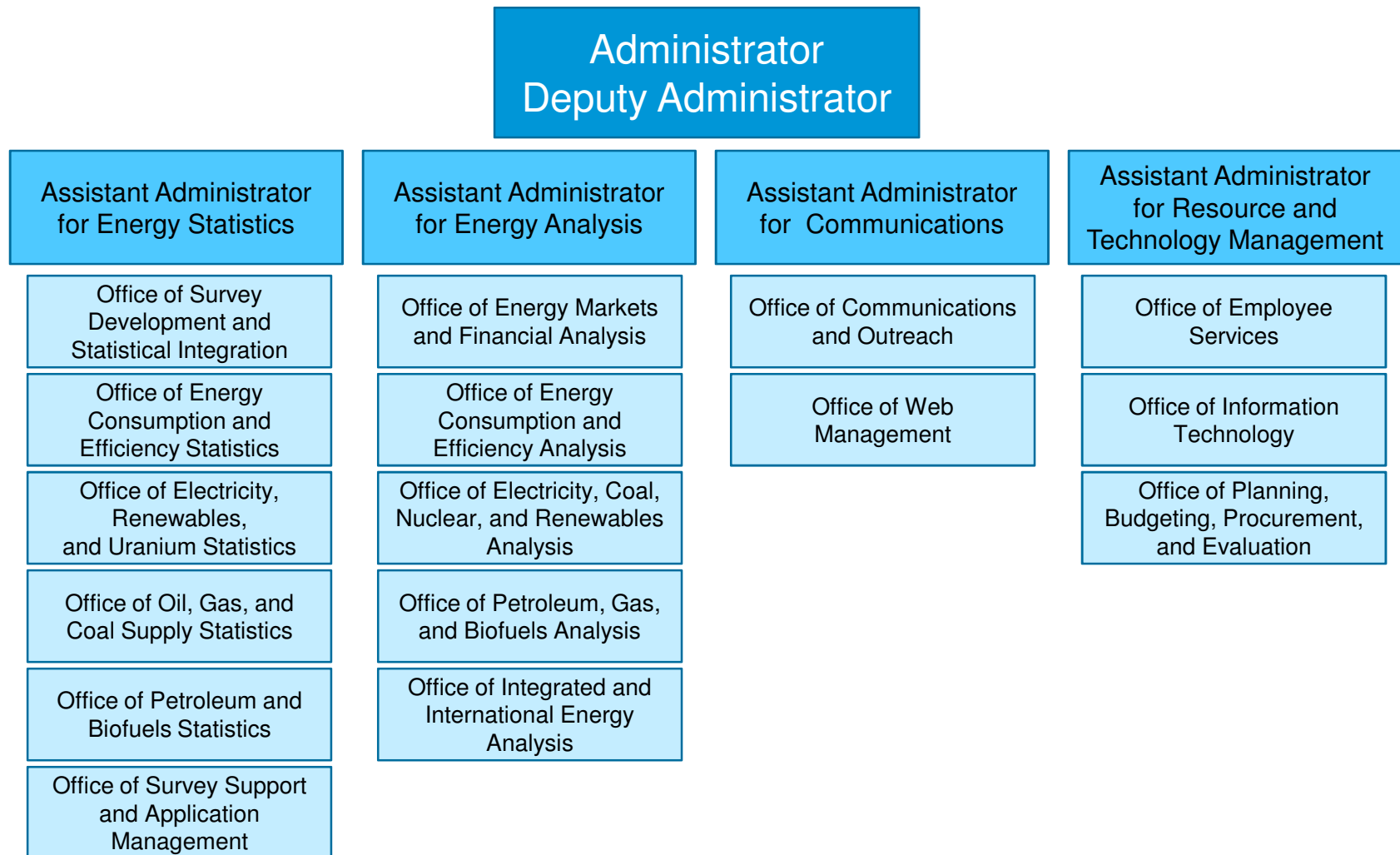
- EIA's surveys are mandatory
- EIA's surveys are multiple and varied and touch on all aspects of the energy industry
- EIA surveys suppliers and consumers (on a periodic basis)
- EIA has been doing this for 30+ years and has accumulated much industry knowledge
- Energy markets and other outside sources can enhance EIA's data

EIA's Structure and Processes

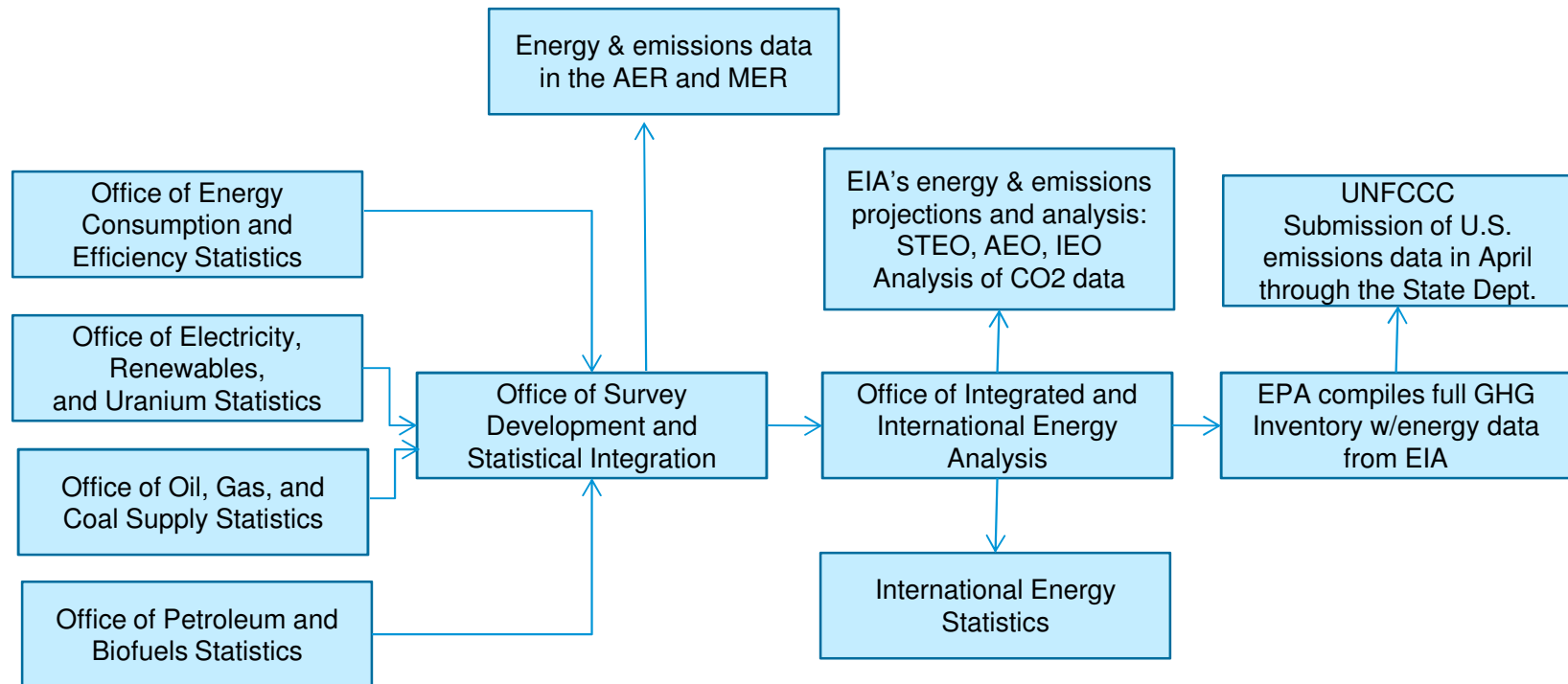
EIA was reorganized in 2010

- Seven offices were turned into four offices each headed by an Assistant Administrator
 1. Office of Energy Statistics
 2. Office of Energy Analysis
 3. Office of Communications
 4. Office of Resource and Technology Management

EIA's new organizational structure



Process flow of U.S. energy/emissions data



Measurement, Reporting and Verification

- Measurement

- Most entities reporting to EIA are market participants and measurement is part of their daily business requirements

- Reporting

- Survey forms can be filed online and most respondents have personnel familiar with the process
- For new respondents, or if there have been changes to existing forms, EIA works with them online or over the phone to answer any questions
- EIA is working on making forms and instructions more integrated

- Verification

- Survey forms have validation rules and flags that will trigger an investigation of the data

Analysis by internal data users helps verify data

Advantages of analysis by internal data users

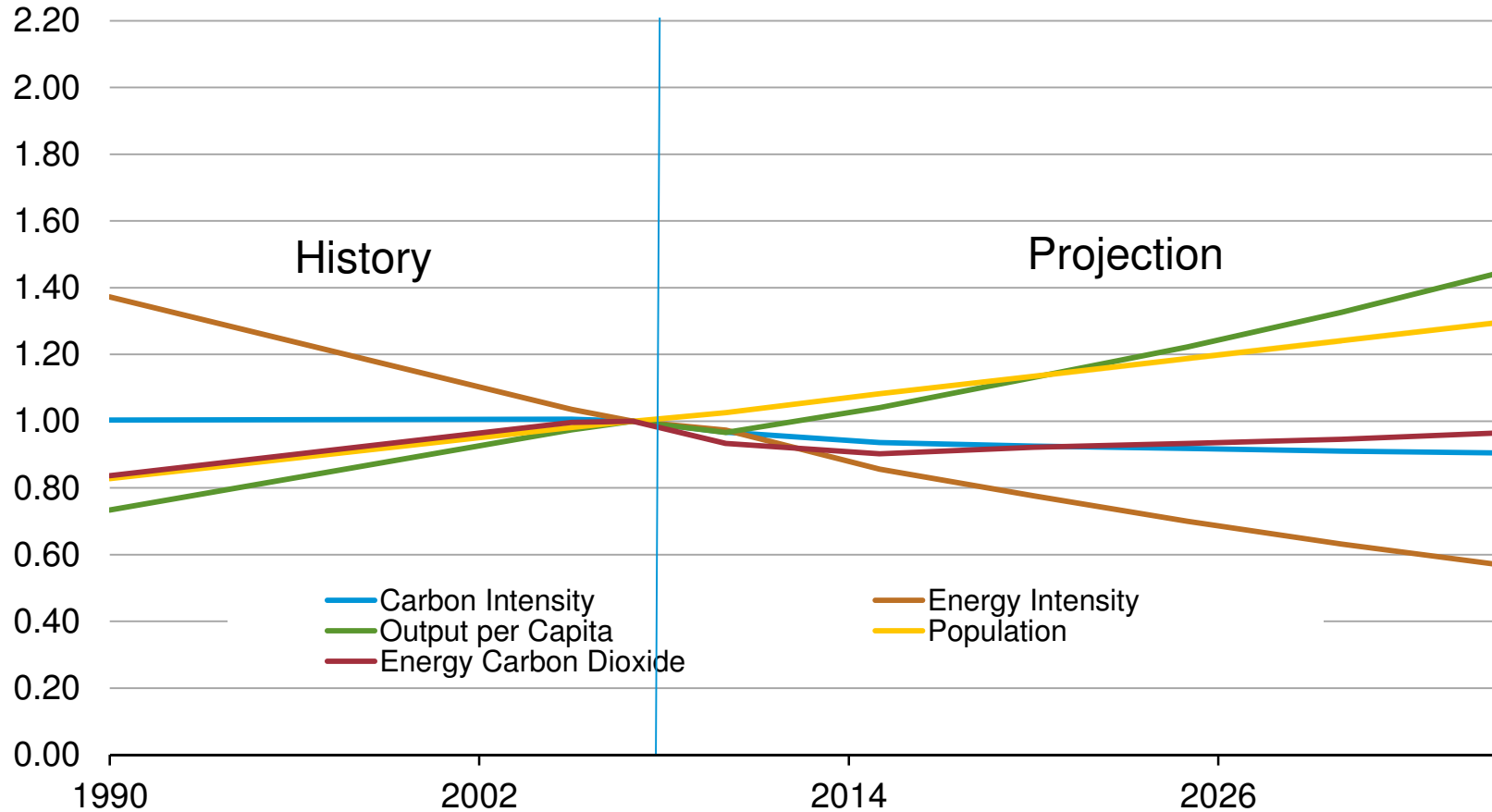
- Internal data users are the first line of review outside of the data gatherers themselves
- Intimate knowledge of the topics
- Removed from the data gathering process
- Access to multiple data sources
- How data fits into the larger picture

An Example: Key “Kaya identity” concepts

- Population times per capita output equals GDP
- Energy intensity of the economy
 - primary energy consumption per unit of real GDP
 - energy efficiency + structural and behavioral changes
- Carbon intensity of the energy supply
 - Carbon emissions per unit of energy consumption
 - Measure of de-carbonization
- Carbon intensity of the economy
 - carbon emissions per real unit of the GDP
 - efficiency + structural changes + de-carbonization

Index of U.S. Kaya factors from 1990 to 2035

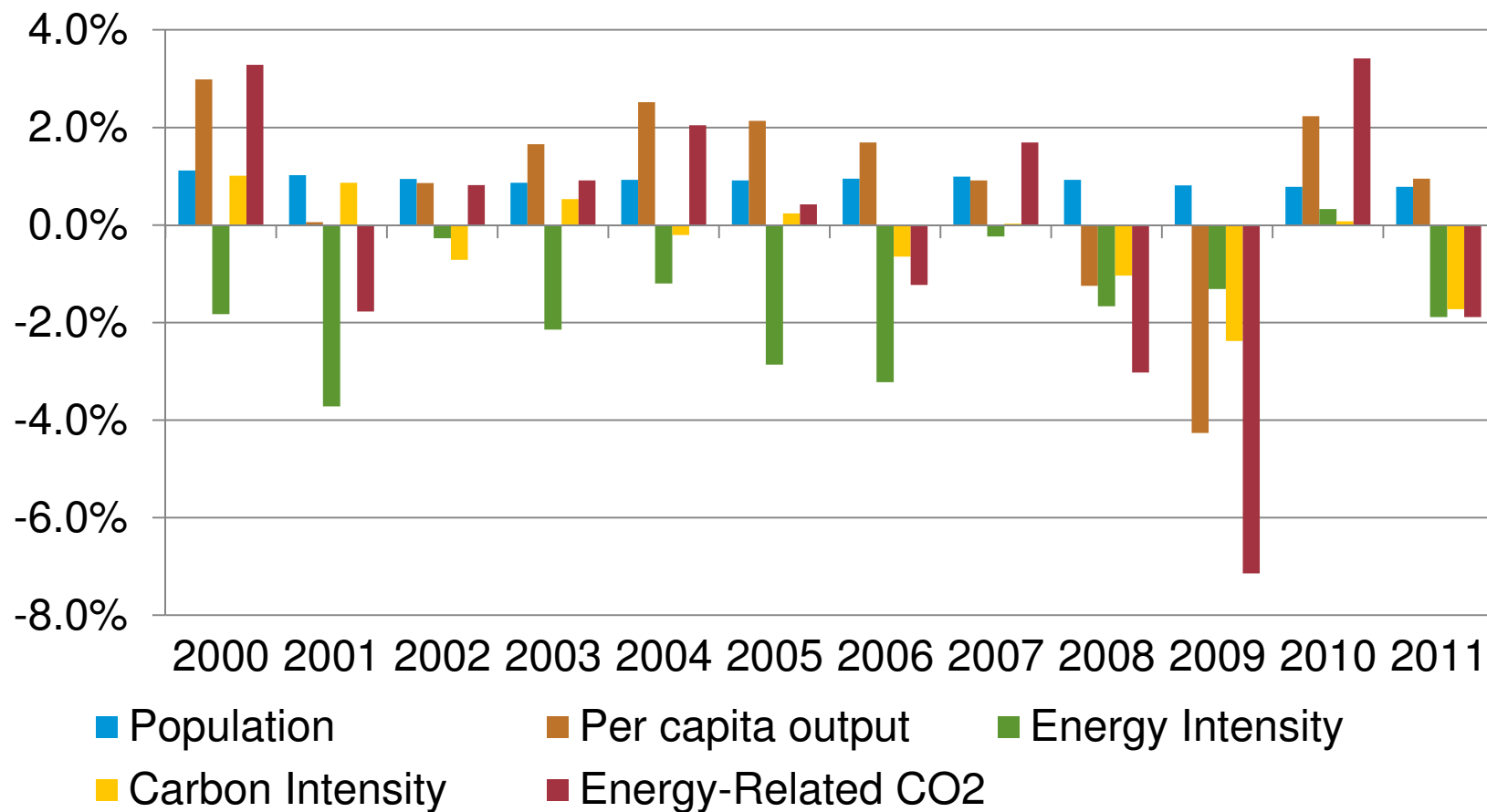
2007 equals 1.00



Source: History, MER and AER; Projection, AEO2012

Changes in U.S. Kaya factors (2000 – 2011)

percent change



Source: MER and AER

Summary/conclusions

- Important components of EIA's data collection:
 - Mandatory surveys backed by law
 - Agency independence
 - Multiple surveys allow for cross checks of data
 - Validation rules
 - Active involvement with respondents
- Important components of EIA's data analysis:
 - Policy neutral: analyze but don't recommend
 - Internal data users can see the bigger picture by analyzing data
 - Expertise is built up over time
 - Data tell a story – understand the story and verify the data

For more information

U.S. Energy Information Administration home page | www.eia.gov

Short-Term Energy Outlook | www.eia.gov/steo

Annual Energy Outlook | www.eia.gov/aeo

International Energy Outlook | www.eia.gov/ieo

Monthly Energy Review | www.eia.gov/mer

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