ENERGY EFFICIENCY

IEA Indicators workshop
June 6th, 2012

The use of indicators for developing and evaluating IEA policy recommendations

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What are the IEA 25 Energy Efficiency Recommendations?

1. Across sectors

1.1 Energy efficiency data collection and indicators;
1.2 Strategies and action plans;
1.3 Competitive energy markets, with appropriate regulation;
1.4 Private investment in energy efficiency;
1.5 Monitoring, enforcement and evaluation of policies and measures.

2. Buildings

2.1 Mandatory building energy codes and minimum energy performance requirements
2.2 Aiming for net zero energy consumption buildings
2.3 Improving energy efficiency of existing buildings
2.4 Building energy labels and certificates
2.5 Energy performance of buildings components and systems.

3. Appliances

3.1 Mandatory energy performance standards and labels for appliances and equipment;
3.2 Test standards and measurement protocols for appliances and equipment;
3.3 Market transformation policies for appliances and equipment.

4. Lighting

4.1 Phase-out of inefficient lighting products and systems;
4.2 Energy-efficient lighting systems.

5. Transport

5.1 Mandatory vehicle fuel efficiency standards;
5.2 Measures to improve vehicle fuel efficiency;
5.3 fuel-efficient non-engine components;
5.4 Improving operational efficiency through eco-driving and other measures;
5.5 Improve transport system efficiency.

6. Industry

6.1 Energy management in industry;
6.2 High-efficiency industrial equipment and systems;
6.3 Energy efficiency services for small and medium-sized enterprises;
6.4 Complementary policies to support industrial energy efficiency.

7. Energy utilities

7.1 Energy utilities and end-use energy efficiency.

Why the IEA 25 Energy Efficiency Recommendations?

- Address energy issues in IEA countries
- Address significant gaps in existing policies
- Address market imperfections
- Maximize energy savings at low cost
- Address environmental challenges

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Which criteria used to develop the 25 Recommendations?

- Analysis of existing energy efficiency policies
- Analysis of current energy trends per country and sector
- Analysis of countries energy priorities
- Estimate of the savings potential
- Cost of energy efficiency measures
- Dialogue with stakeholders

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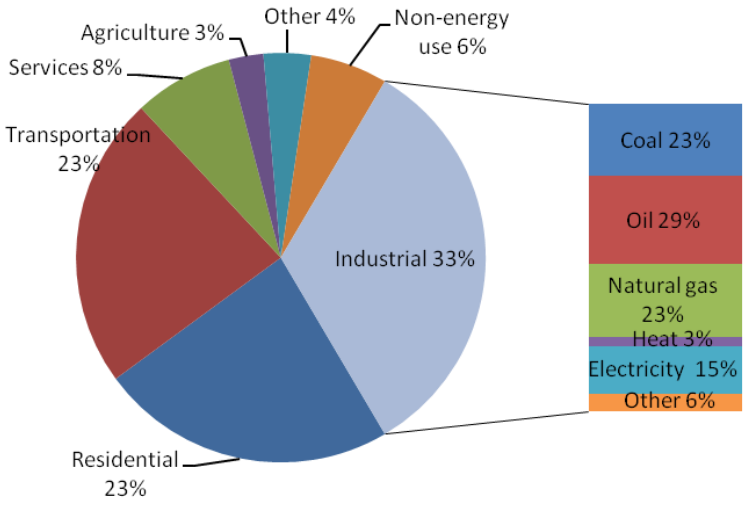
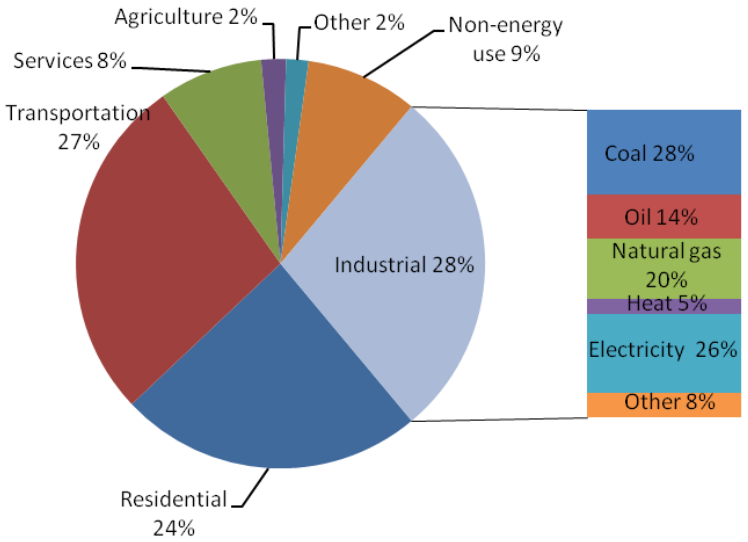
Information from energy balance provides useful insights…

1973



World: 4 676 Mtoe

2008



World: 8 428 Mtoe

While industrial energy consumption increased by 52% between 1973 and 2008, its share of total final consumption decreased by 5 percentage points

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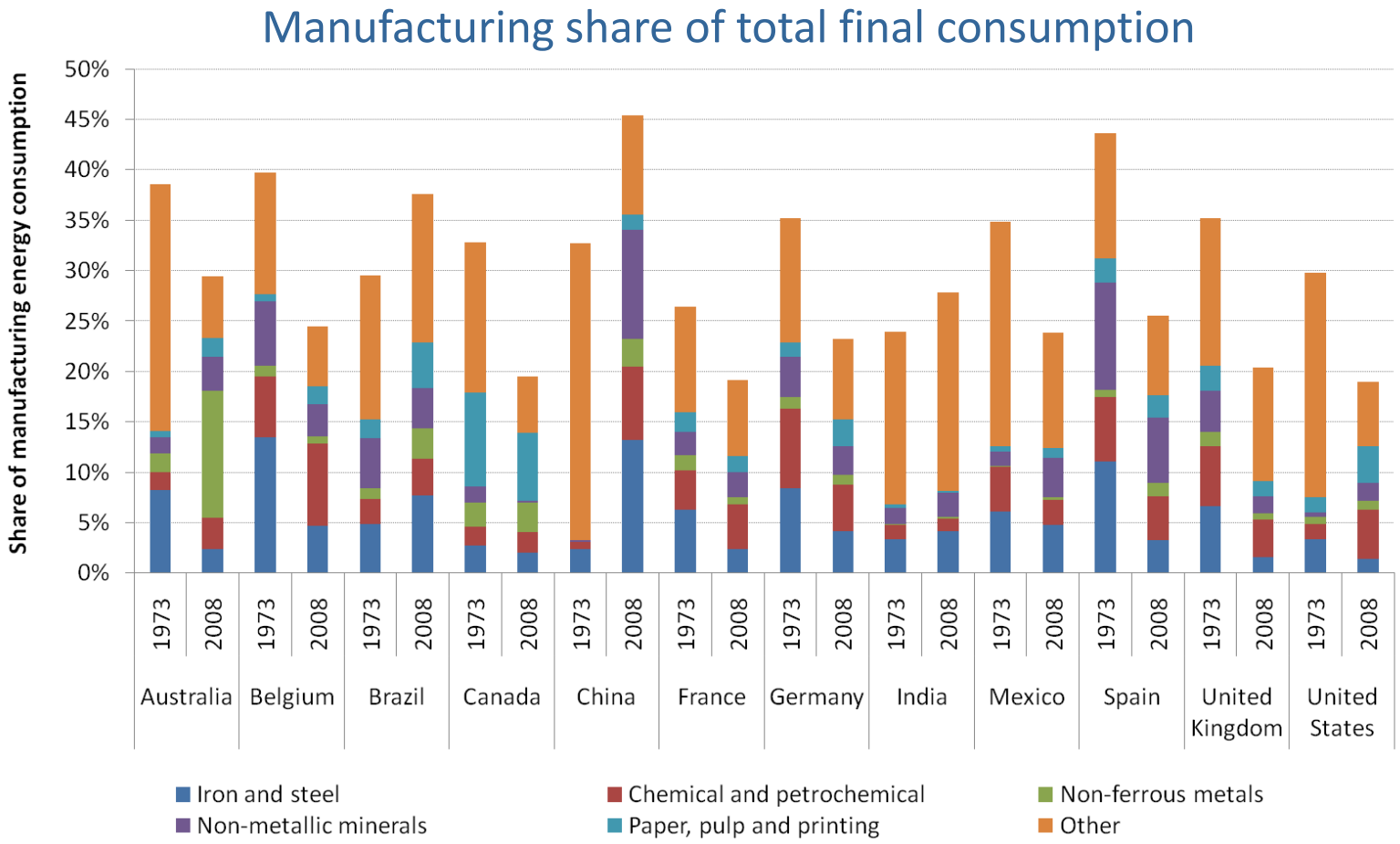
… that can help a country prioritize its data collection strategy



The industry mix identifies the largest energy consumers within the manufacturing sector

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Why data collection and Energy efficiency indicators are important?

- What are the latest trends in global energy use and CO_2 emissions?
- How do factors such as demography, economic structure, income, lifestyle and climate affect there trends?
- Why are countries' energy intensities so different?
- What areas offer the greatest potential to further improve energy efficiency?
- What progress are we currently making in our efforts to improve energy efficiency?
- Which data will best support energy efficiency policy development?

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Evaluation

- Evaluation is crucial as EE impacts are difficult to measure
- Evaluation is important in all phases of EE policy:
  - Learning from previous EE policy and programs
  - Process and market evaluation during implementation helps assists EE managers to make needed corrections;
  - Checking progress towards overall targets and goals
- Although critically important, evaluation is often not done
  - Evaluation remains superficial in most countries
  - Evaluation and data collection capacity is critically low
  - Evaluation is often considered an “overhead” cost

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Evaluation

- **Success factors:**
  - Include evaluation within policy & program design
  - Adopt and require common methodologies and protocols
  - Invest in accurate data and statistics
  - Assure adequate funding, including evaluation set-asides
  - Develop and retain high calibre staff
  - Create an "evaluation culture"
  - Require evaluation as part of oversight arrangements
- **Adopt "good governance" especially for evaluation:**
  - Data credibility
  - Independence and objectivity of analysis
  - Transparency of results

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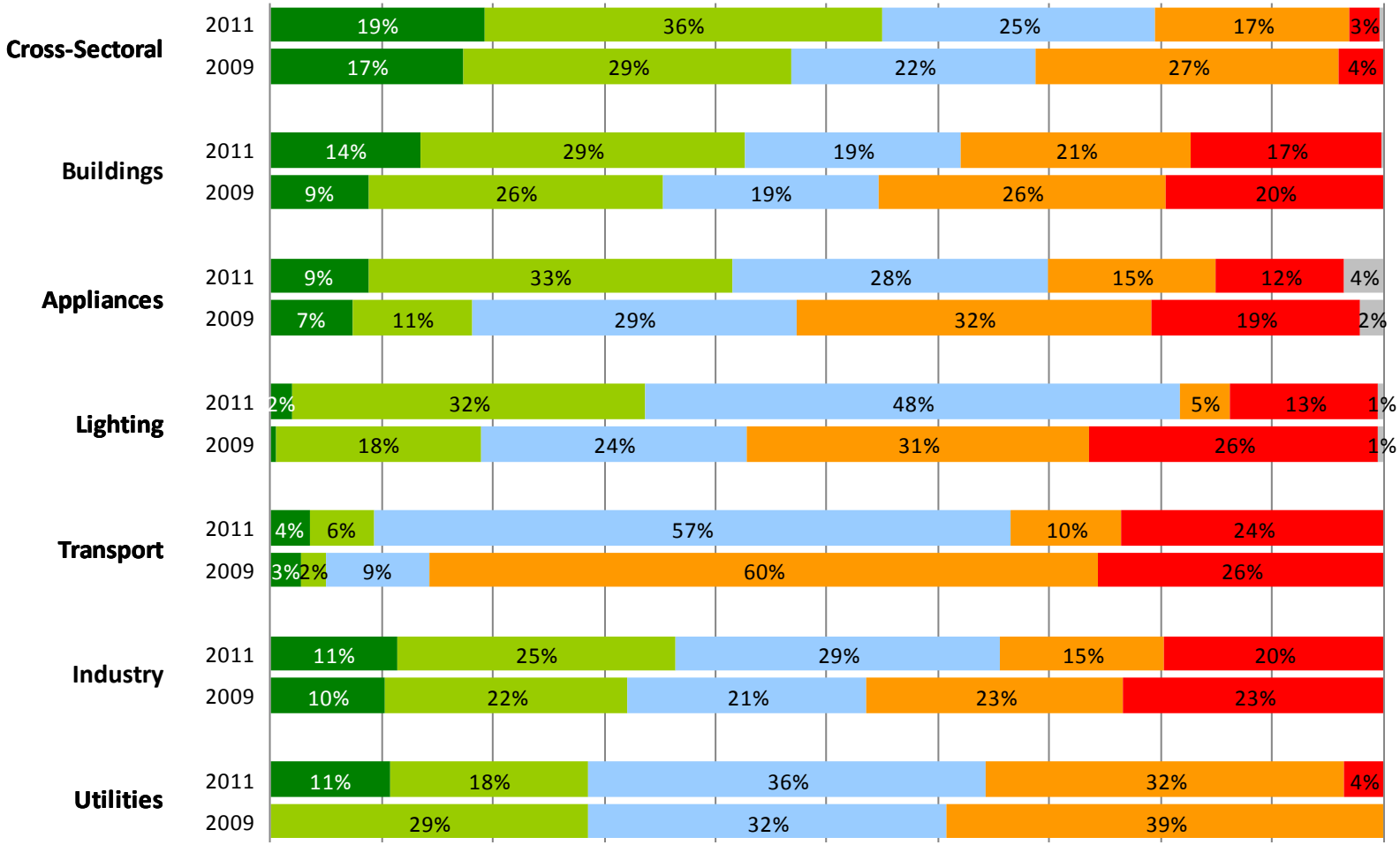
Evaluation results



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Thank you for your attention

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