

Data and Indicators in Support of Policy Needs, and Prioritising Policy Interventions. International Perspective.

Session 4. How Indicators can be used to Support Policy Objectives; Appropriate Indicators in different Contexts and regions.

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International
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Beyond Energy Intensity...

An indicator, that is not all that useful;

- **Different development starting points**
- **Intensities vary with; history, structure, activity mix, resource endowment, climate, culture...**
- **Differing potentials for change;**

**An EE indicator, that is not all that meaningful;
given current societal priorities.**

- **Long tail of recession, suppressed activity, unemployment, real estate and currency values...**

...to a richer set of EE Policy Challenges

EE policies need to be;

- Pertinent – meeting the needs of multiple levels of governance; global, countries, sectors, individuals.
- Relevant – addresses topical challenges, recession, restructuring, growth!!
- Substantial – address material EE challenges and opportunities in society
- Engaging a political / high level policy and public audience;

We are always trying to inform and influence leaders and consumers

Rise out of technical context to a socio-economic paradigm

Levels of multiple benefits from energy efficiency improvements

International

- Energy prices
- GHG emissions
- Resource management
- Development goals

National

- Macroeconomic effects
- Public budget impacts
- Job creation
- Energy security

Sector specific

- Asset values
- Energy provider and infrastructure benefits
- Industrial productivity and competitiveness

Individual

- Health and social improvement
- Energy affordability and poverty alleviation
- Consumer surplus (disposable income)

International level

- k. Reduced GHG emissions** e.g. when energy efficiency improvements result in reduced demand for fossil fuel energy.

WEO projects that 45% of global GHG emission reductions will be from EE

- l. Energy prices** e.g. If energy demand is reduced significantly in several markets, energy prices can be reduced.

WEO Russian energy efficiency potential equivalent to gas exports

- m. Natural resource management** e.g. Alleviation of pressure on natural resources, waste reduction, air quality and ecosystems.

- n. Development goals** e.g. national development goals such as eradicating poverty; increasing economic growth; improving environmental sustainability; and improving access to energy services.

UNDP – Montenegro energy efficiency could boost GDP growth by 5-7%

National

- g. Job creation** e.g. energy efficiency work and increased disposable income can generate direct and indirect jobs in energy and other sectors.

17 -19 jobs per €M in energy efficiency – but attribution is tricky

- h. Reduced public expenditures** e.g. lower public sector energy bills, reduced imports and better foreign currency reserves, lower outlays on fuel subsidies.

- i. Macroeconomic effects** e.g. increases in GDP; improved trade balance; national competitiveness; and employment.

- j. Energy security** e.g. reduced energy demand can improve energy system security across the 4 dimensions of risk – fuel availability, accessibility, affordability, and social and environmental acceptability.

Sectoral level

d. Industrial productivity and competitiveness

e.g. reductions in resource use and pollution; improved production and capacity utilisation; less operation and maintenance

Productivity benefits worth 2.5 times more than value of energy savings

e. Energy provider and infrastructure benefits e.g.

Help energy providers in providing a better energy service to their customers, reducing operating costs and improving profit margins.

10% of value of energy savings flows to utilities

f. Increased asset values e.g. Investors willing to pay a sales premium, tenants a rental premium, for property with better energy performance, particularly commercial.

USA EPA; \$1 in energy efficiency investment provides \$3 in asset value

Individual level ***(individual, household, enterprise)***

- a. Health and social improvements** e.g. as a result of improved heating and cooling and air quality in buildings; more efficient transport systems and power generation.

NZ; 90% of benefits are health. PV Health benefits 1.5-2 time energy benefits

Developing Countries; 50% reduction in childhood pneumonia from clean cook stoves

- b. Energy affordability and poverty alleviation** e.g. the impact on reducing fuel poverty; improving quality of life; increasing access to energy and aggregate impacts for poverty alleviation.

- c. Increased disposable income**

e.g. energy efficiency improvement at individual or firm level should reduce energy bills for the same energy services and free more disposable income.

Consumer surplus used by households on next best utility

So how do we develop the EE indicators that we need?

1. Ask the right policy questions

Not how many kWh/m².ann; rather,
how much energy;

- is required due to larger homes?
- due to smaller households?
- to maintain correct temperatures?
- can we offset increasing demand for energy services with efficiency?

Not how many P.km.ann; rather

- How much energy by trip type; commute, emergency, leisure?
- How well integrated are our travel modes?
- What's the economic value of cheaper commuting?

So how do we develop the EE indicators that we need?

2. Policy scaled decision making

- Country level potentials analysis to identify why sectors and sub-sectors are important
 - which sectors are struggling with spare capacity?
 - can EE policies help get that sector working again?
- EE potentials at the level of technologies, end use activities or policy interventions to identify why policies might be priorities
 - is PT a better investment than EV or VFEM?
- Ex-ante analysis of projected; public costs, private costs, public benefits, private benefits of preferred policies
 - align beneficiaries with investments