



Best Policy Practices for Promoting Energy Efficiency in the UNECE Region

Tim Farrell

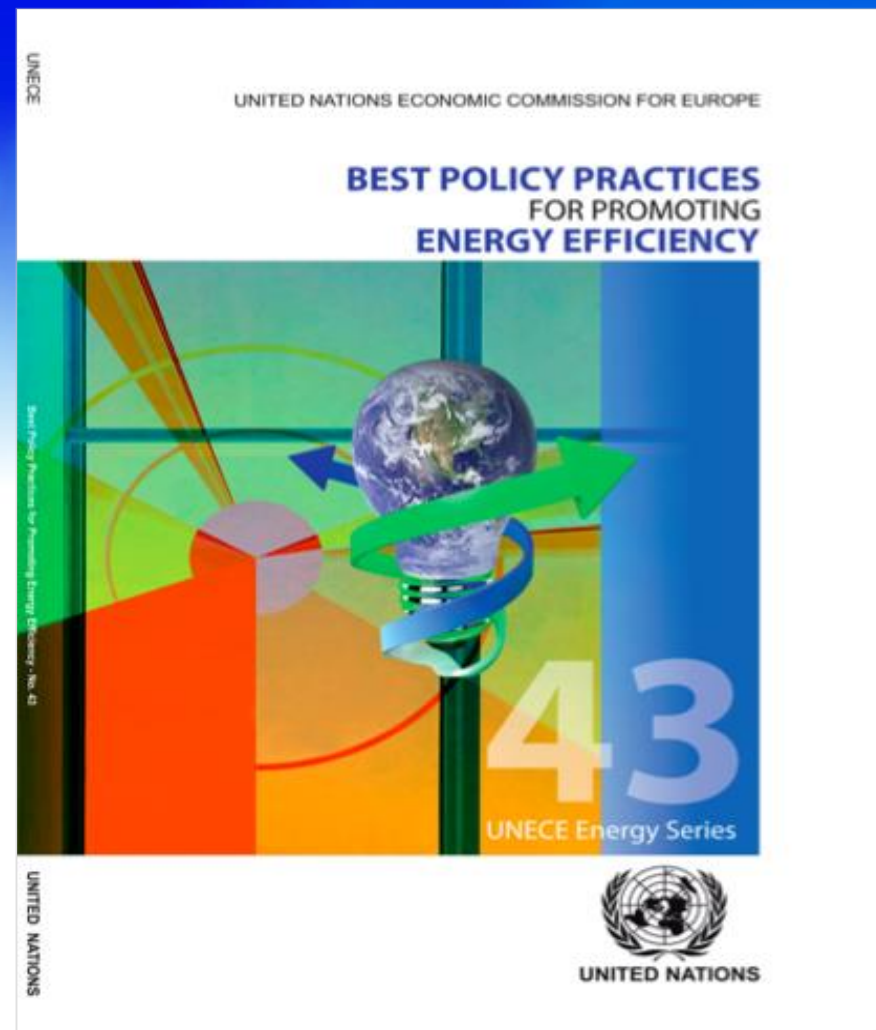
Chair, Group of Experts on Energy Efficiency

24th session of the UNECE Committee on Sustainable Energy

Geneva, 18-20 November 2015

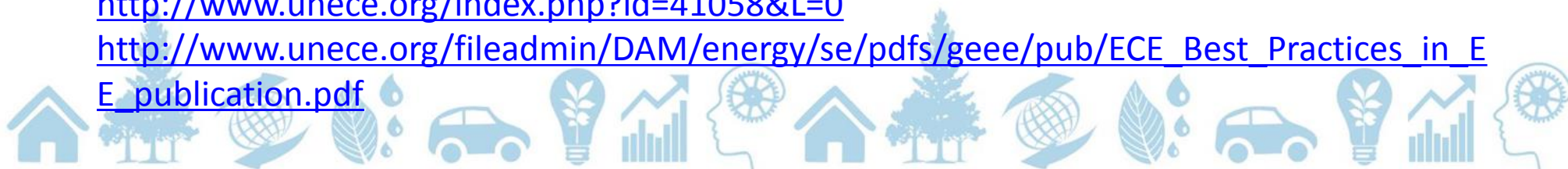


A Structured Framework of Best Practices in Policies to Promote Energy Efficiency for Climate Change Mitigation and Sustainable Development



<http://www.unece.org/index.php?id=41058&L=0>

http://www.unece.org/fileadmin/DAM/energy/se/pdfs/geee/pub/ECE_Best_Practices_in_E_E_publication.pdf





Best Policy Practices for Promoting Energy Efficiency

A structured framework of best practices in policies to promote energy efficiency for climate change mitigation and sustainable development

- *Investment Imperative for Energy Efficiency*
- *Identifying Best Practice Policy Options in Energy Efficiency*
- *Best Practices in Energy Efficiency: High Impact Policies and Measures*
- *Implementing the Menu: Developing Policy Implementation Capability*

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Best Policy Practices for Promoting Energy Efficiency (cont.)



Four key attributes are used to identify best practice policies:

1. Significant outcomes. Demonstrated, quantifiable, ability to contribute to a large energy demand reduction and significant multiple benefits.

2. Complementarity. An easy fit with other national, regional and international efforts for ease of implementation and a supportive complementarity with other policies

3. Political alignment, governance and accountability attributes help ensure policies are politically palatable, likely to persist in multi-layer governance frameworks.

4. Marketability and market impact ensure policies will work in the global and local energy efficient technology markets, attractive to decision-makers, likely to attract finance.



Menu of energy efficiency policies and measures (cont.)



Policies for
Household
Energy Efficiency

Policies for
Transport
Energy Efficiency

Policies for
Industry
Energy Efficiency

Utility Policies for Energy Efficiency

A foundation of Governance and Finance Policies



Why identified policies are best practices?



- *They have been through ongoing policy reviews*
- *They have undergone improvement cycles*
- *Recognized in international reviews*
- *Evolved policies that have a 'survival of the fittest' track record*



Strategic Approach to Balance Selected Policies



- *Focus on priority energy efficiency potentials where tangible economic gains can be made*
- *Ensure balance of effort and actions over sectors in the society*
- *Ensure an effective mix of resources (financing) delivery capability (energy efficiency operational agency, utilities, ESCOs,) and market motivators (labeling, regulations etc.) are developed*
- *Ensure a critical mass of effort*
- *The development of a national strategy within a statutory framework provides the balance and makes clear to all the intent, capabilities that are mobilized, and accountability in order to deliver a balanced and effective programme*





Menu of Policy Options

Examples on EE in buildings

- ***Energy efficiency certification of buildings*** (Ireland, Energy Performance Certificates scheme)
- ***Minimum energy performance standards (MEPS) via Building Codes*** (EU Directive on Energy Performance of Buildings)
- ***More efficient heating in existing buildings*** (Netherlands, New Zealand, Denmark, Germany, PEEREA, China)



Policy / measure	Policy Selection Attributes			
	Significant economic energy demand reductions and significant multiple benefits	Policy / measure	Political alignment, governance and accountability attributes	Marketability and market impact
<div>Existing homes insulation / weatherization</div> <div>Includes a wide array of technology options: double glazing, draught sealing, insulation, heating and cooling options, shading, low emissivity coatings for 'cool roofs', lighting and appliance replacement and disposal etc.</div>	Heating is 40% of household energy. Health benefits in programmes at up to 4:1 benefit-cost ratio significantly exceed energy cost reductions providing strong returns to government.	Energy efficiency policies can deliver a range of wellbeing, social and health outcomes, including addressing energy poverty.	Opportunity to offer direct social benefit. Can be used to redirect energy subsidies for improved social outcomes, and offers a delivery path for diverse government priorities.	Can develop new product and supplier activities as well as delivering diverse new services.
	<p>Netherlands. The government has committed EUR 150 million to a EUR 600 million revolving fund, EUR 400 million in grants for rental houses and funds for local government implementation of housing energy efficiency. The Voluntary Energy Saving agreement for the rental housing sector targets 1 million retrofits by 2020 with energy savings of 21 PJ. Energiesprong is a related market development programme working with owners, financiers and industry to refurbish 111,000 social housing units to near zero energy levels with a 30 year energy performance contract funded from long term energy savings. http://energiesprong.nl/transitionzero/</p> <p>New Zealand Warm Up Heat Smart provided USD 300 million of grant-tiered targeted energy efficiency grants to households. The monetized benefits include health impacts and an overall programme benefit-cost ratio of 4:1. Over a 20-year period the programme delivers USD 1-1.5 billion in benefits, 99% of which are health benefits with reduced mortality accounting for 74% of benefits. http://www.eeca.govt.nz/eeca-programmes-and-funding/programmes/homes/insulation-programme</p> <p>PEEREA. Cogeneration and District Heating – Best Practices in Municipalities, addresses the role of local authorities in promoting cogeneration and district heating, which are used in many Energy Charter member countries but often not to their full potential. Successful programmes are contingent upon the capacity of local authorities to implement measures that meet local needs. http://www.encharter.org/fileadmin/user_upload/document/Energy_Efficiency - Cogeneration and District Heating - 2006 - ENG.pdf</p>			

Policy / measure	Policy Selection Attributes			
	Significant economic energy demand reductions and significant multiple benefits	Complementarity, synergies and integration attributes	Political alignment, governance and accountability attributes	Marketability and market impact.
Public Transport and low energy modes	23% fewer vehicle kilometers, and a reduction in 27000 sq. kilometers of parking is possible by 2050 by applying shift and avoid policies to reduce the need for energy intensive modes (IEA 2014)	Energy efficiency and mobility service quality improvements can pay for the necessary maintenance and renovation of older public transport systems, and minimize future land use impacts.	The returns from energy efficiency offset costs and enable governments maintaining close control of budgets to advance public transport projects.	Engaging the many stakeholders that are involved in urban transport is critical to policy success.
	<p>The huge diversity of different policies, each tailored to the unique situation in many cities, makes it difficult to identify individual best practices. However the IEA publication, <i>A Tale of Renewed Cities</i> is a comprehensive guide to transforming cities by improving the efficiency and the delivered mobility services of urban transport systems, and contains case studies and policy guidance. Two relevant examples from this publication are:</p> <p>Poland. EBRD-EIB public-private funding of efficiency upgrades to Warsaw metro and tram companies in 2011. By working with local commercial banks, EUR130Bn was leveraged with EU Cohesion funds to provide a EU740Bn improvement program to 2030.</p> <p>Nigeria. The 2005 Lagos State Transport Master Plan set economic development targets for a sustainable public transport system that doubled public transport mode share (PT2x) by 2025. The resultant bus rapid transit system has reduced average transport costs by 50% for commuters while reducing congestion on BRT routes by 40%. (IEA 2013b)</p> <p>APERC CEEDS. Best practices in Energy Efficient Urban Passenger Transportation outlines policies that avoid or reduce the need to travel or use motorized vehicles with policies that promote livable communities and transit-oriented development (TOD).... http://aperc.iecej.or.jp/file/2013/12/24/Final_Report_CCEEDS_Phase_3.pdf</p>			

Barriers to Implementing Best Policy Practices



- *Capacity to implement policies effectively in many countries is overestimated*
- *Institutional commitment and capacity is critical – obstacles: poor governance, unwillingness to commit*
- *Adaptation of policies to country contexts requires capacity and experience with policies*
- *Marketing effort is underestimated: consumers are quite indifferent to energy efficiency*





Status and Best Practices on Energy Efficiency Workshop



1 October 2015, Yerevan



Percent that agreed or strongly agreed

I would be interested in attending a follow-up, more advanced workshop on this same subject

83%

The material was presented in an organized manner

100%

The main messages were well communicated

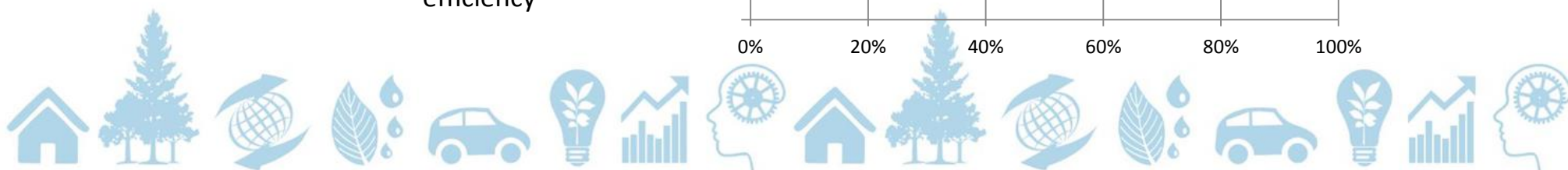
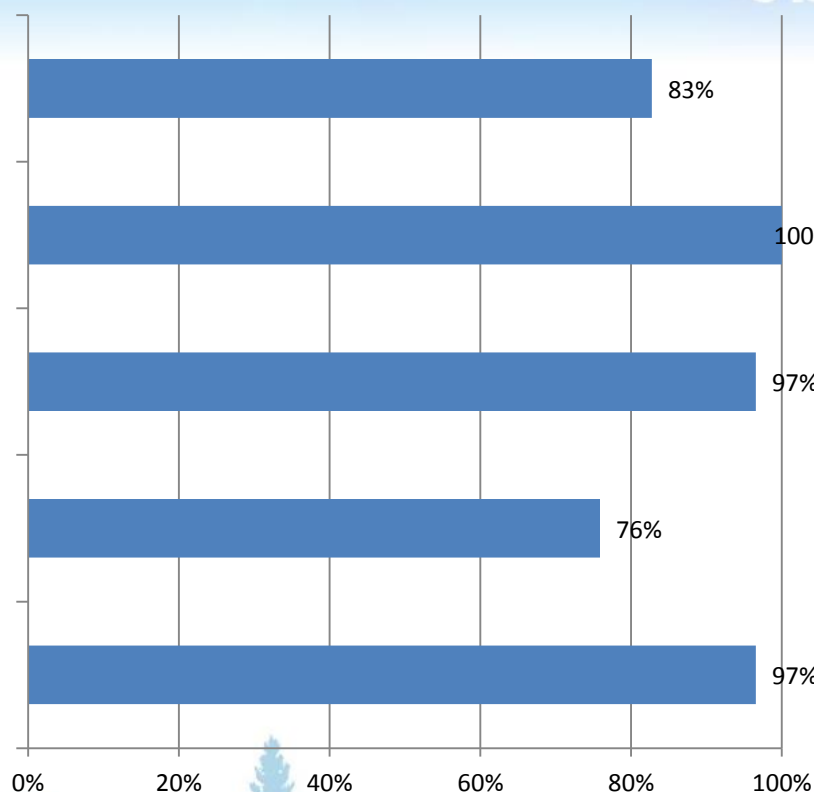
97%

The workshop was relevant to my job

76%

The content of Best Practices is useful for countries wanting to accelerate energy efficiency

97%



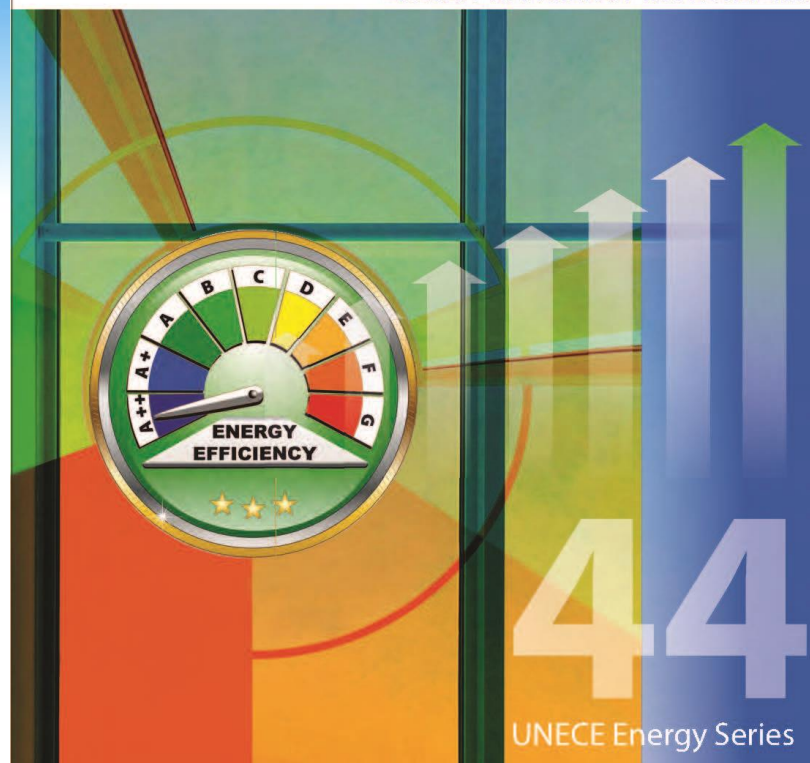


Synthesis Report Based on Case Studies from Armenia, Azerbaijan, Belarus, Brazil, China, Croatia, Egypt, Georgia, Kuwait, Montenegro, Morocco, South Africa, Tajikistan, Thailand, Tunisia, Uruguay, Zambia

<http://www.unece.org/index.php?id=40546>

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

**ANALYSIS OF NATIONAL CASE STUDIES ON POLICY REFORMS
TO PROMOTE
ENERGY EFFICIENCY INVESTMENTS**



UNITED NATIONS



Analysis of National Case Studies on Policy Reforms to Promote Energy Efficiency Investments



- Energy efficiency benchmarking
- Review, analysis and options to move forward to established benchmark for selected countries in each of the five regions
- Comparative analysis of reviewed case studies regarding their current status with respect to the established benchmark
- Conclusions and recommendations related to enhancement of energy efficiency investments in participating countries
- Recommendations of collaborative measures that UN RCs can undertake to catalyze new energy efficiency investments in the regions

<http://www.unece.org/index.php?id=40546>

<http://www.unece.org/energywelcome/areas-of-work/energy-efficiency/activities/promoting-energy-efficiency-investments-for-climate-change-mitigation-and-sustainable-development.html>

(tab Case Studies)





Thank you for your attention!

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<http://www.unece.org/energyefficiency.html>

