



Working paper

**Innovations in National Energy Efficiency
Strategies and Action Plans**

The International Energy Agency,
in association with the European Commission and the European
Energy Network

©OECD/IEA, 2009 The terms and conditions are available online at:
<http://www.iea.org/about/copyright.asp>

Based on workshop held at the
International Energy Agency, Paris
21 October 2008



Nigel Jollands
Sara Pasquier
Energy Efficiency and Environment Division
IEA

The views expressed in this Working Paper are those of the authors and do not necessarily represent the views or policy of the International Energy Agency or of its individual Member countries.

Contents

INTRODUCTION	3
WORKSHOP AIMS	4
SCOPE.....	4
PAPER STRUCTURE	5
WHAT IS STRATEGY?	5
THE NEED FOR STRATEGY IN ENERGY EFFICIENCY	6
DEVELOPING NATIONAL ENERGY EFFICIENCY STRATEGIES AND ACTION PLANS.....	6
THE IMPORTANCE OF MANDATE	7
NEESAP ESSENTIAL ELEMENTS	7
<i>Link energy efficiency to broader policy context</i>	<i>8</i>
<i>Address important strategic questions.....</i>	<i>8</i>
<i>Prioritise measures</i>	<i>9</i>
<i>Include Action to achieve goals</i>	<i>9</i>
<i>Set targets</i>	<i>9</i>
<i>Take a learning approach.....</i>	<i>10</i>
<i>Ensure accountability</i>	<i>10</i>
<i>Encourage consultation and stakeholder engagement.....</i>	<i>11</i>
OTHER CONSIDERATIONS	12
<i>A metaphor.....</i>	<i>13</i>
<i>Levels of strategies and action plans.....</i>	<i>13</i>
<i>Resourcing</i>	<i>14</i>
<i>Challenges and opportunities: Global economic crisis.....</i>	<i>14</i>
CONCLUSIONS	15
LESSONS LEARNED	15
NEXT STEPS.....	15
SUMMARY OF WORKSHOP PRESENTATIONS	17
SESSION 1: WELCOME AND INTRODUCTION.....	17
SESSION 2: A CRITICAL LOOK AT CURRENT PRACTICE	18
APPENDIX 1: WORKSHOP AGENDA	21
APPENDIX 2: WORKSHOP LIST OF DELEGATES	24
REFERENCES	25



Introduction

The necessity to implement energy efficiency measures is now firmly on the political agenda. The G8, IEA member countries and European Union have clearly stated the importance of action on energy efficiency to address energy security, climate change and economic challenges.

IEA analysis shows the cost-effective potential for energy efficiency improvements is huge (2008, a) (2008, b). In order to capture this potential, many countries have developed, or are in the process of developing, national energy efficiency strategies (NEES) and action plans (NEEAP), collectively referred to hereafter as NEESAP. These strategies and action plans can help guide and encourage energy efficiency policy development and implementation by:

- placing energy efficiency policy within the broader policy context;
- prioritising resource allocation across the energy efficiency portfolio;
- capturing synergies between policies and avoiding duplication;
- allocating responsibility for implementation, monitoring and evaluation.

Given the importance of NEESAP, in May 2007, the IEA Governing Board at the Ministerial Level called on the IEA to “promote the development of efficiency goals and action plans at all levels of government” (2007). In support of its commitment, the IEA, in partnership with the European Commission and the European Energy Network (EⁿR), developed a workshop on *Innovations in national energy efficiency strategies and action plans*. This workshop provided countries, organisations and individuals involved in the NEESAP process with an important opportunity to share information and exchange innovative ideas.

Workshop Aims

The overall aim of the workshop was to encourage the development of high-quality NEESAP that lead to significant improvements in energy efficiency. The workshop accomplished this by creating an international forum for energy efficiency policy professionals and decision makers to exchange information on lessons learned, and identify innovations in NEESAP development, implementation and review. Specifically, the workshop focused on innovations and good practices with respect to the development process of NEESAP, including ex-ante evaluation and stakeholder engagement, the use of goals and targets, the structure and context of NEESAP, the measures and programmes proposed, quality implementation, and monitoring and evaluation.

Scope

The IEA has prepared this paper to capture the workshop’s key findings. It is important to note that this paper does not attempt to repeat in detail the many discussions of energy efficiency strategies already well covered in documents as far back as Lovins (1976), Geller and Nadel (1994) and more recently by the Energy Charter (2000) and the European Commission (2006). Rather, we attempt to focus on the specific issues raised at the workshop and the responses provided by delegates. Many of the questions, however, remained unresolved or partially resolved at the end of the day. Where appropriate, we have noted this outcome and in some instances added extra material to augment workshop notes.

As the workshop covered both NEES and action plans, this paper attempts to shed light on both. However, much of the discussion in the workshop focused on strategic-level issues. As a result, some areas of the paper focus more on NEES.

Paper Structure

This document briefly summarises the literature, first addressing the question, “what are strategies and action plans?” It then touches on the rationale and imperative for strategic direction in energy efficiency policy. Next, it considers the questions raised during the workshop including “why do NEESAP need a strong mandate,” and “what are the key elements to a NEESAP.” It also more closely examines additional considerations pertinent to NEESAP including sectoral vs. national strategies, resourcing issues and the global economic crisis. The report concludes with lessons learned from the workshop and the next steps that should be taken.

A summary of workshop presentations and two appendices, one with the workshop agenda and the other with the list of delegates, can be found at the end of this document.

What is strategy?

Many authors have attempted to define what a strategy is. Nicolai Foss maintains that in the corporate sector, “Strategy is the patterns of decisions...that determine and reveal (company) objectives, purposes or goals (and) produce the principal policies for achieving those goals.” According to Foss, strategy defines, “The range of business the company is to pursue, the kind of...organisation it is or intends to be, and the nature of the...contribution it intends to make...” (1997). Similarly, Gerry Johnson asserts that a strategy gives, “The direction and scope of an organization over the long-term, which achieves advantage for the organization, through its configuration of resources within a challenging environment, to meet the needs of markets and to fulfil stakeholder expectations” (Gerry Johnson and Kevan Scholes 2008, p. 15).

In a government context, according to Paul Niven, "Strategies represent the broad priorities adopted by an organization in recognition of its operating environment and in pursuit of its mission" (2003, p. 130).

Perhaps because of the range of approaches to the concept of a strategy, it is not surprising that strategy has no unequivocal definition. Nevertheless, the insights from these and other authors helped identify several of a strategy’s key elements. These include:

- long-term, high-level focus
- clear purpose, goals and objectives
- clear boundaries
- understanding of context and internal and external factors affecting success
- organisational structure and resources necessary to achieve goals and objectives

The need for strategy in energy efficiency

Responding to the complex challenges of climate change, energy security and economic development involves pulling energy efficiency measures together into a comprehensive, well-analysed plan that incorporates the key strategic elements mentioned above. This strategic approach to energy efficiency is necessary because of:

Barriers – markets can only achieve a certain level of energy efficiency because of the presence of barriers and market failures. These many barriers and market failures are pervasive and virtually impossible to tackle on an ad-hoc basis. In this context, a strategic approach to addressing barriers is needed.

Resource limits – governments are always constrained by resources. Given this reality, governments need to prioritise actions. This is particularly true for energy efficiency where actions across all sectors can be taken. Specifically, we need to optimise benefits, minimise costs, avoid wasteful misalignments, and utilise the most effective intervention mechanisms. An energy efficient strategy can provide this much needed coordination and priority setting.

Lack of policy integration – energy efficiency policy, given its diffuse connections to the varied aspects of daily life, must be integrated within broader economic, social and environmental policies and directives. Integration helps ensure energy efficiency measures maintain visibility among supply-side options. The publication *Energy Efficiency Initiative* (International Energy Agency, Energy Charter Secretariat et al. 1998, p. 168) advises incorporating the following elements into a strategic, integrated energy efficiency policy :

- potential for cost-effective energy savings
- improved technologies
- consumer access to resources, products and skilled assistance to help them make informed decisions.

Accountability – in many countries there is an increased focus on ensuring that government departments are held accountable. Strategies provide an opportunity to articulate expectations and assign responsibilities in order to improve accountability.

Developing national energy efficiency strategies and action plans

Workshop delegates all acknowledged the importance of setting strategy in order to direct energy efficiency policy development. The following section will summarise the salient messages that emerged from the workshop. This section begins with a discussion of the importance of strong government mandates for energy efficiency, then delves into an

analysis of the essential NEESAP elements, and concludes by exploring additional considerations pertinent to NEESAP.

The importance of mandate

Energy efficiency currently enjoys strong global commitment. Leaders reaffirmed the critical role that improved energy efficiency can play in addressing energy security, environmental and economic objectives at meetings such as the G8 Heads of State (2005 Gleneagles, 2006 St Petersburg, 2007 Heiligendamm, 2008 Hokkaido), and the May 2007 IEA Ministerial Meeting.

Support for energy efficiency over the past four decades, however, has been inconsistent. The early 2000s saw an increase in incentives to improve energy efficiency and a realisation that many market barriers to energy efficiency required policy attention. Consequently, governments are more often complementing market-based approaches with greater strategic policy support for energy efficiency measures.

Achieving significant energy savings depends on coordinating a myriad of small energy efficiency actions across society. Governments wield significantly more influence across all sectors of the economy than many other actors, and thus can play a key role in setting the strategic direction for energy efficiency. Government strategies must present convincing arguments to a wide national audience as to why energy efficiency should be 1) given a higher priority in energy policy and 2) better integrated into the range of government responsibilities (Energy Charter Secretariat 2000, p. 8).

In order for a government mandate to ensure long-term attention to energy efficiency, support must be durable. Long-term backing can be assured through embedding mandates in statutes. For example, the New Zealand Energy Efficiency and Conservation Strategy (NZECS) was written in accordance with section 10(2) of the Energy Efficiency and Conservation Act 2000 (2007, p. 2). Although the Act is periodically updated, the energy efficiency imperative is firmly rooted in the law.

NEESAP Essential Elements

Delegates agreed that in order for NEESAP to wield influence and maintain stakeholder attention, they must receive a strong government mandate. A mandate, however, is not sufficient to making a NEESAP strategic and effective. Delegates identified other essential NEESAP elements that will be discussed below.

Delegates agreed that countries adapt different NEESAP policy packages according to their political, cultural and economic priorities. As a result of the different contexts in each country, many conference delegates maintained there is no “one-size-fits-all” NEESAP template that countries should follow. Compare the cases of Cyprus and Germany, for example. Cyprus is a small country and has an isolated system without interconnections to European or other energy networks, and few indigenous energy sources (Cyprus Ministry of Commerce Industry and Tourism 2007). Germany, on the

other hand, is a coal rich, large economy, integrated into broader European energy networks. In compliance with Article 14(2) of the European Commission's Energy End-Use Efficiency and Energy Services Directive (ESD) (Directive 2006/32/EC), Cyprus and Germany, despite their differences, created National Energy Efficiency Action Plans (NEEAP). Although these countries' goals to increase economic development, improve energy security and mitigate climate change might be broadly the same, their energy efficiency strategies will necessarily differ to reflect their unique contexts.

Despite differences between countries, The Energy Charter Secretariat brochure titled *Advice on Developing an Energy Efficient Strategy* does offer a five-step process for developing NEES that involves conducting policy analysis, setting objectives and targets, developing a strategy and action plan based on determined analysis and objectives, implementing the plan and then performing on-going monitoring and evaluation (2000, p. 13).

Regardless of whether a template is appropriate or not, delegates determined that there are seven essential elements that should be exhibited across energy efficiency strategies. In particular, strategies should:

Link energy efficiency to broader policy context

Delegates found most NEESAP demonstrate an understanding that energy efficiency is part of the broader energy and socio-economic system. This understanding has led to many NEESAP incorporating a range of measures that cross sector lines and link to a broad range of government objectives, including economic development, security, environment and education (Energy Charter Secretariat 2000, p. 8).

Energy Efficiency Watch, in its publication on the *Screening of National Energy Efficiency Action Plans*, found that the European Union's NEEAP encourage member states to address energy efficiency in a broad, holistic systems context (Energy Efficiency Watch 2007, p. 47). Rather than occurring in isolation and applying only to specific actors (individual sectors or decision-maker groups), most NEEAP established cross-sectoral energy efficiency packages that simultaneously impact different parts of the market (Energy Efficiency Watch 2007, p. 22).

France's NEEAP, for example, focuses on critical priorities by clearly linking energy efficiency to four broader energy-sector foci established by law and demonstrates how energy efficiency measures will be crucial to attaining the national energy objectives (2008, p. 18).

Address important strategic questions

With the broader policy context established, delegates suggested thoughtful consideration should be given to the following questions:

- What is the long-term direction of the NEESAP and its policies (i.e. goals)?

- Which markets and what kinds of activities are involved (scope)?
- What is the comparative or competitive advantage for the NEESAP?
- What resources are required, and are they available?
- Which external/environmental factors could affect the policies' success?
- What are the expectations of decision makers (i.e. stakeholders)?

Prioritise measures

Although a country may thoroughly consider the above questions, it can fail to deliver results if its measures suffer from lack of funding or other resources. Delegates considered that a NEESAP is a critical tool for prioritising resource allocation across the energy efficiency portfolio to achieve national objectives. Delegates also thought a country should prioritise working towards goals it can realistically achieve. Achieving goals helps demonstrate early effectiveness and leads to confidence building.

Include Action to achieve goals

According to delegates, any strategy must be complemented by a series of actions to achieve stated goals. While strategies take a high-level view, action plans complement strategies by fleshing out the details of what specific actions are needed, by whom and when. In practice, strategies and action plans can often become one and the same document, as is the case for EU NEEAP.

Set targets

Part of creating an action plan is setting energy-efficiency targets. Delegates found that targets are useful for both focusing attention and for monitoring outcomes.

The IEA conducted a small study in December 2008 on targets (Jollands 2008). The study was based on survey responses from 11 IEA member countries on energy efficiency-related targets. Of note, the study found that:

- The use of energy efficiency targets across the IEA is common.
- Target definitions vary across countries. In contrast to the 1990s, few countries now use aggregate energy intensity targets (energy/GDP). Instead, aggregate energy savings targets are more common.
- Most targets are set at the national level, and a few are set on regional or local levels.
- Mandatory targets are common.
- Most targets relate to the period between 2010 and 2020.

ESD obliges a minimum indicative final energy end-use target of 9% for countries developing NEEAP. Five of the seventeen participating countries adopted higher targets -- Cyprus (10%), Lithuania (11%), Italy (9.6%), Romania (13.5%), and Spain (11 % by 2012). Three additional countries -- Ireland, the Netherlands and the United Kingdom --

stated they intended to achieve higher savings than 9% (European Commission 2008, p. 5).

Relating to targets, delegates made two additional points. First, they were clear that the decision to make targets mandatory or indicative should depend on the government, i.e. there is no “right” approach to targets that will work for all countries. A second concern was that governments must be held accountable for reaching the targets they set. Accountability will be discussed in more detail below.

Take a learning approach

Delegates defined “a learning approach” as the process of deliberately monitoring and evaluating the effectiveness of energy efficiency measures and the NEESAP in order to expand successful measures and redevelop or discontinue poor performing measures. Delegates maintained that this process is essential to ensuring the effectiveness of NEESAP is maximised and adapted to new challenges and goals.

New Zealand provides a good example of a country that adopted a learning approach with its NEESAP. New Zealand’s 2007 Energy Efficiency and Conservation Strategy builds on the experience and achievements of its 2001 predecessor and includes a section on lessons learned from the first strategy. High performing programmes from the 2001 strategy were continued, and underperforming programmes were examined and modified (2007, p. 10).

The United Kingdom also conducted a review of the delivery of its policies and measures in its 2004 Energy Efficiency Action Plan and used the feedback to strengthen the package of measures in its 2007 strategy.

In order for evaluations to be accurate, delegates emphasised that monitoring methods must measure real savings. They also noted that harmonising analytical and reporting methods is crucial to ensuring sound improvements. The European Commission delegates mentioned that they are currently working on a calculation framework to monitor savings.

Ensure accountability

Workshop delegates all agreed that accountability is key, but differed on how and where to allocate accountability. Centralised accountability (i.e. with a single energy efficiency agency), for example, ensures easier management, coordination and evaluation, whereas more widely distributed accountability (across many agencies) promotes policy support and commitment from a larger number of agencies and decision makers and expands ownership of NEESAP goals. Distribution can also foster better integration of energy efficiency into mainstream policies and expand the resource base.

All delegates agreed that in either system there needs to be one person in charge. It was suggested that this person should be the Minister or Secretary of Energy and that he or

she should hold, in the decentralised model, authoritative cross-government coordination functions for energy efficiency.

Examples of NEESAP with relatively centralised accountability include Ireland and Australia. Ireland's NEEAP states The Department of Communications, Energy and Natural Resources is the lead Department in implementation of the energy efficiency strategy (2007, p. 2).

Australia's National Framework for Energy Efficiency (NFEE) also has a clearly defined governance structure. This structure is composed of the Ministerial Council on Energy (MCE) that takes high-level responsibility for national energy policy and identifies policies and programmes that will deliver significant improvements. The structure also includes the Standing Committee of Officials (SCP) that advises the MCE Ministers, and the Energy Efficiency Working Group (E2WG) that provides strategic advice on energy efficiency policy and programme delivery (2009).

On the other hand, New Zealand's NZEECS uses a distributed accountability that assigns specific tasks and roles to several government agencies. For example, the Ministry of Economic Development (MED) is in charge of reporting the progress made on implementing the NZEECS to the Minister of Energy in order for emerging problems and opportunities to be identified. The Energy Efficiency and Conservation Authority (EECA) is in charge of delivering programmes and actions, and also of monitoring sector-level achievements. The Ministry of Transport leads the transport energy efficiency initiatives. The NZEECS staff is in charge of identifying which agencies are accountable for delivering each individual programme and for meeting targets. Agencies report the impact of each programme to the MED and demonstrate how each one contributes to the overall objectives (2007, p. 79).

Encourage consultation and stakeholder engagement

Delegates urged energy efficiency policy makers to consult with a diverse range of stakeholders in the preparation of NEESAP. Delegates' experience suggests good consultation during NEESAP preparation is essential for:

- ensuring transparency in the development process;
- testing government assumptions about the effectiveness and priorities of measures;
- building broad support for NEESAP measures;
- ensuring all actors and implementing agents understand what their responsibilities are.

Delegates acknowledged that it is difficult to define an ideal level of consultation because each context differs.

Several countries have used consultation extensively in their energy efficiency strategy development. For example, Australia's NFEE states that stakeholder consultation is an

essential and ongoing part of the development of an effective National Framework. According to the NFEE, Australia consulted stakeholders on a frequent basis through workshops and meetings. The outcomes of these consultations were compiled in the Stakeholder Consultation Report (2009).

The delegates also discussed in more detail the links between local, regional and national governments, energy companies, NGOs, end users and other stakeholders. Delegates determined that stakeholder engagement - at all scales and stages of NEESAP development - plays a central role in ensuring commitment, support and resources in implementation. The following are a few examples of local/national engagement.

As mentioned during the workshop, the Ministry of Power of the Russian Federation and regional administrations collaborate extensively through the Coordination Council of Energy Efficiency.

The U.S. “National Action Plan for Energy Efficiency” involves significant collaboration between national and state governments and extensive stakeholder consultation (utilities, regulators, state officials, consumers). The U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA) established this plan to better coordinate energy efficiency action with its state counterparts. By creating this multi-government and multi-stakeholder programme, the DOE sought to ensure utilities undertake efficiency and demand management programmes, and to encourage utilities and states to implement other efficiency programmes that minimise consumer energy service costs and reduce environmental impacts (2009).

New Zealand’s NZEECS specifically refers to the collaboration between local and national authorities and lays out concrete programmes with actions that involve local government. According to NZEECS, local government has vital communication links with households, businesses and the energy industry that are useful in the implementation stage (2007, p. 77).

Switzerland’s energy efficiency action plan, prepared by the Federal Department of the Environment, Transport, Energy and Communications (DETEC), comprises a package of measures that combines incentives, direct promotional measures, regulations and minimum standards to be carried out by the federal government, parliament and the cantons. The federal government supports efforts by the cantons by helping them transform existing energy labels into eco-labels that are uniform across cantons (2008).

In Italy the links between local and national government are also very strong, with regional and local energy agencies acting on behalf of the national government in the field of information and communication (European Commission 2008, p. 10).

Other Considerations

In addition to the essential elements of a NEESAP listed above, the delegates outlined several other issues that are important within the context of NEESAP development.

Timing

Delegates discussed the role of timing in the NEESAP process. The critical issue is whether it is necessary to first develop governance structures or to develop NEESAP and establish institutions later – an issue most relevant to countries that do not have an energy-efficiency governance structure in place prior to NEESAP development. The general conclusion was that in this situation, the country should either develop institutions first, or develop NEESAP at the same time it strengthens its institutions.

A metaphor

Building on the essential elements identified above, delegates likened a successful NEESAP to a car. According to the analogy, the car's four wheels represent:

- education, information and behaviour change messages for stakeholders;
- regulation capacity to enforce actions;
- financial instruments to stimulate investment and affordable new technology in energy efficiency and;
- continuous monitoring to refine implementation.

Next, fuel – compared in this analogy with NEESAP resources and financial backing – is essential to propelling a car forward. The driver, or institutions in the NEESAP example, takes responsibility for the car and must be held accountable for successfully completing the journey.

Levels of strategies and action plans

Delegates discussed whether national strategies are necessary or if it is sufficient for a country to create a series of sectoral strategies. The delegates turned their attention to the United States to address this question. Because of its federal system, the United States developed multiple national energy efficiency strategies covering sectors where the federal government has influence (the states hold significant regulatory power). Four of the U.S. sector strategies were highlighted during the conference (appliance and equipment efficiency standards, Energy Star product labelling program, industrial energy efficiency, and state/utility-focused National Action Plan for Energy Efficiency). Each programme includes a strategy, an outline of key objectives, and a legislative and regulatory plan.

After discussing the United States' approach, delegates said that although sectoral approaches are useful in federal systems, in general, it is preferable to have national strategies because they increase the profile of energy efficiency and act as a driver for strategic policy change. That said, delegates warned that although having a national strategy is necessary, it is not sufficient, i.e. although New Zealand's 2001 strategy increased the profile of energy efficiency and renewable energy and acted as a driver for strategic policy change, the strategy failed to improve energy efficiency across the entire

economy. Achieving such improvements requires the essential elements discussed above.

Resourcing

There was consensus that examination of NEESAP resource requirements is an essential part of any energy efficiency economic analysis. Politicians and leaders must be informed that adequate resourcing is crucial to developing and implementing NEESAP.

It was also clear from the discussions during the workshop that the costs of developing NEESAP vary greatly from country to country. The development of the Portuguese energy efficiency strategy cost EUR 200,000 per year for two years. The New Zealand strategy required resources for twenty staff members. Delegates expressed interest in the IEA conducting future research on the cost of developing an energy efficiency strategy.

Challenges and opportunities: Global economic crisis

How the global economic crisis will impact energy efficiency policy and NEESAP funding remains to be seen, but the crisis is likely to affect the resources available to government institutions for energy efficiency programme implementation, energy demand and energy prices. In this context, it is possible that energy efficiency implementation may lose momentum. Looking back at the Asian economic crisis, the force behind energy efficiency programmes did slow significantly. It is important to consider whether the current crisis will:

- impede the ability of governments to acquire needed resources;
- strangle private sector capacity to invest in new technologies;
- halt less resilient economies from achieving energy efficiency advances and;
- shift priorities to more essential social and economic functions of the government.

Despite these risks, the economic crisis can also be seen as an opportunity with fiscal rescue packages being used to fund energy efficiency programmes and to invest in priority areas. Thus, the traditional role of energy efficiency objectives may be evolving and expanding from climate change mitigation and energy-savings to include options for using energy efficiency to minimise the effects of economic slowdown. With its inherent cost effectiveness and future expense-reduction capability, energy efficiency may be one of the best stimuli to re-invigorate national economies. Energy efficiency objectives may also include development of energy efficiency skills and services to redeploy workers. Although this structural change is slow, the need to retrofit existing building stock is vast and probably one of the most cost-effective energy efficiency and development options (Laustsen 2008).

NEESAP can play an important role in identifying priorities and organising energy efficiency resources. In this way, they can ensure that energy efficiency measures included in economic stimulus packages deliver maximum benefits.

Conclusions

Lessons learned

This workshop provided an international forum for energy efficiency policy professionals and decision makers to exchange information on lessons learned, and identify innovations in NEESAP development, implementation and review.

As a result of discussions held during this workshop, it is clear that there is significant international experience with NEESAP and a growing understanding that essential NEESAP elements include:

- a systems perspective (linking energy efficiency to the broader policy context)
- clear rationales and expectations for NEESAP goals and scope
- a focus on critical priorities
- an action plan
- targets
- a learning approach
- accountability
- consultation and stakeholder engagement

That said, delegates concluded that many NEESAP are still mainly compendiums of actions and not overarching government initiatives. To improve NEESAP, governments need to give more attention to:

- making explicit the governance and resourcing challenges ahead for NEESAP and exploring how they might be addressed;
- securing the resources and capital or strategies to recycle rapid savings;
- addressing the institutional failure in some economies that could substantially delay the necessary widespread roll-out of energy efficiency policy;
- developing a sense of the dependencies between interventions, necessary hierarchies and the order in which elements of interventions need to be rolled out.

Next steps

To address the above issues, workshop delegates debated the next steps and made the suggestions below.

On an international level, policymakers should strive to:

- link NEESAP to the highest level of political commitments;
- receive agreement from across G8/IEA member countries to align efforts and pursue a global programme to implement the IEA's 25 energy efficiency recommendations;
- ensure the IEA monitors international progress with NEESAP development and implementation in order to share experience between countries.

On a national level, policymakers should strive to:

- Develop strategic policy capability in energy efficiency – expand synergies in energy efficiency initiatives and between climate change policy, broader energy strategy and energy efficiency policies.
- Identify the national potentials, priorities, and strategic mixes of interventions to ensure best roll-out of interventions.
- Maximise energy efficiency effectiveness by ensuring accountability from energy efficiency agencies and mainstream policy departments.
- Expand a very limited pool of energy efficiency analytical, technical and strategic expertise.
- Contribute to international alignment and cooperation efforts.

Pursuing these actions can assist countries in improving energy efficiency strategies and action plans. With more effective NEESAP, the aim of significantly enhancing the energy efficiency of our economies can be achieved.

Summary of Workshop Presentations

Session 1: Welcome and Introduction

Welcome: Meeting Chair Tudor Constantinescu, EⁿR

Mr. Constantinescu welcomed delegates and outlined the challenging agenda for the day. He relayed the importance of the energy efficiency issue and the essential role of NEES.

Opening address: Ambassador Richard Jones, Deputy Executive Director, IEA

Ambassador Jones welcomed delegates and introduced the importance of NEES. In his presentation he made four key points:

- Energy efficiency is imperative. In the context of three global energy challenges (energy security, holding down energy costs and climate change) energy efficiency provides a cost-effective solution.
- IEA energy efficiency policy recommendations set the priority for energy efficiency action. These twenty-five policy recommendations could save around 8.2 Gt CO₂ per year by 2030 if fully implemented globally without delay.
- Implementation of energy efficiency policy is critical.
- National energy efficiency strategies provide an essential guide to implementation.

Overview – Purpose of the day: Rick Bradley and Nigel Jollands, IEA

Drs Bradley and Jollands outlined the format of the day and reminded delegates that the overall aim was to encourage the development of high-quality energy efficiency strategies and plans that lead to significant improvements in energy efficiency. The day was organised to provide an opportunity for policy professionals to exchange information and to discuss innovations in NEES development, implementation and monitoring. The focus was on innovations and key challenges. Frank debate was encouraged. The agenda was organised into 3 sections:

- the big picture - setting the context
- a critical look at current practice - focus on innovations & challenges
- facilitated roundtable discussion - drawing together key lessons

Making energy efficiency happen in Europe: the role of national energy efficiency action plans: Fabrizio Barbaso, Deputy Director General, Directorate-General for Energy and Transport, European Commission

Mr Barbaso gave a wide-reaching presentation on the role of National Energy Efficiency Action Plans (NEEAP) in the European Union. He noted the critical role NEEAP play within the broader energy strategy of the Commission and outlined the very important components a NEEAP should address. He finished his presentation with an overview of the current status of Member State NEEAP.

Session 2: A critical look at current practice

From design to delivery – making a NEES operational: Tom Eischen, Commissaire du Gouvernement à l'Energie, Luxembourg Ministry of Economy, Foreign Trade and Energy

Mr. Eischen began his presentation with an overview of the 2006 European Union Directive on energy end-use and energy services, which mandated that member countries submit NEEAP. Mr. Eischen then described the process of creating and making NEEAP operational in the Luxembourg context. He noted the Luxembourg experience in establishing NEEAP was helpful in terms of getting a better overview of energy consumption and efficiency potentials. NEEAP also helped the country identify the measures with the highest potential impact. Mr. Eischen mentioned coordination with other departments was critical for creating a coherent approach and that the NEEAP process created some challenges, including difficulty receiving legislative support for implementation and restructuring the agency (doubling its size).

Building stretch into NEES – matching targets and instruments: Stjohn O'Connor, Representative from Ireland

Mr. O'Connor made a presentation on the current status of Ireland's energy efficiency strategy. He presented a snapshot of Ireland's energy situation and suggested the following five elements are crucial in creating a national imperative:

- say it early, say it often
- align with other policy goals
- create a united front
- bring solutions and actions
- report regularly

With respect to targets, Mr. O'Connor said that Ireland has been relatively ambitious. He maintained that targets must take into account the resources available in a country, and be embedded within a national framework. Mr. O'Connor concluded his presentation by describing Ireland's national energy efficiency campaign launch, inter-ministry coordination group and public sector implementation group.

Levels of government in NEES – linking national and regional governments: Yevgeny Zenyutich, Nizhniy Novgorod Investment Centre for Energy Efficiency

Mr. Zenyutich made a presentation on the status of energy efficiency strategies and implementation in Russia. His presentation outlined the many critical challenges facing the Russian Federation including high energy intensity, insufficient re-entry framework, weak organisational structures, insufficient investment flows, poor pricing regimes, and lack of data to support policy development. Mr. Zenyutich outlined several of the national measures that seek to address these challenges and mentioned the government's target to reduce national energy intensity by more than 40% from 2007 levels by 2020. Mr. Zenyutich also discussed the active energy efficiency programmes in several regions

within the Russian Federation, including Saratov and Nizhniy Novgorod. He concluded his presentation by emphasising the importance of energy efficiency strategies for coordinating energy efficiency activities at both the national and regional levels.

Two issues: Importance of public dialogue and sectoral strategies: Mark Friedrichs, Office of Policies and International Affairs, U.S. Department of Energy

Mr. Friedrichs explained that the key steps in the development of effective end-use strategies across the buildings, industry and utilities sectors are understanding:

- the characteristics of each sector involved
- stakeholder motivations
- energy efficiency opportunities

Mr. Friedrichs highlighted four U.S. energy efficiency sectoral strategies during the conference (appliance and equipment efficiency standards, Energy Star product labelling, industrial energy efficiency, and state/utility-focused National Action Plan for Energy Efficiency). Each programme includes a strategy, an outline of key objectives, and a legislative and regulatory plan. Mr. Friedrichs maintained that stakeholder engagement is crucial to developing energy efficiency strategies at the sectoral and national levels.

Energy Efficiency in the Energy Community: the road to realization: Violeta Kogalniceanu, Energy Community Secretariat

Ms. Kogalniceanu explained that energy efficiency institutional and legal frameworks are underdeveloped. Ms. Kogalniceanu outlined the background of the 2005 Energy Community Treaty, the composition, mandate and duration of the Energy Efficiency Task Force and the breadth of the Work Programmes to point out that progress is being made to develop energy efficiency across the European Community. However, according to Kogalniceanu, more coordination is needed to avoid overlap and maximise effects.

Accountability & allocating responsibility for implementing NEES: Robert Tromop, EECA, New Zealand

Mr. Tromop made a presentation on allocating accountability and responsibility for energy efficiency policy implementation within a NEES. He drew on his experience with the New Zealand Energy Efficiency Strategy to highlight that:

- It is difficult for something as pervasive as energy efficiency to be handled by a single agency.
- Energy efficiency accountabilities should be imbedded across:
 - all ministerial portfolios and departments
 - regional government
 - all energy users
- Success factors for allocating accountability include adequate consultation, finite accountability time periods, identifying which agency is best to deliver, monitoring and frequent reporting.

Mr. Tromop noted that there were significant challenges with allocating responsibility, including the need for significant cross-departmental negotiation (especially relating to resource allocation) and the need for political support for cross-agency cooperation.

Resourcing NEES processes: Alexandre Fernandes, ADENE, Portugal

Mr. Fernandes outlined his country's energy efficiency strategy and quantified the costs of development. Portugal's long-term national energy intensity goal is to reach the 2005 European average. He explained that the country would accomplish this with a two-pronged strategic approach, targeting equipment and behaviour. In particular, the strategy includes energy efficiency targets in the transport, residential services and industry sectors, and tax and financial incentives to promote implementation (efficiency credit, efficiency cheque, bonuses for appliance replacement with A+ or A++ equipment). It also seeks improvements in the public sector. The development of the strategy cost EUR 200,000 per year for two years and the implementation costs are around EUR 30 million per year, with an estimated seven-year payback.

Policy Learning and Innovation in EU National Energy Efficiency Plans: Stefan Thomas, Wuppertal Institute, Germany

Dr. Thomas discussed the requirements of European Union Directive 2006/32/EC (ESD) on energy end-use efficiency and energy services and the Directive's strengths and weaknesses. Of note, he stated there are few formal requirements for NEEAP, no mention of additionality and no incentives for facilitating measures with a short lifetime. However, he found that ESD includes an impressive collection of measures that enables international mutual learning, innovation and a change in thinking about energy efficiency from isolated measures to coherent policy packages.

Dr. Thomas concluded that member states need to move energy efficiency improvements from the planning stage to the implementation, monitoring and refinement stages. He also maintains that more should be done to harmonise calculations (see www.evaluate-energy-savings.eu for more information), create more dynamic standards (and performance-based standards that measure real savings), and strengthen labelling and marketing approaches. Finally, Dr. Thomas advised that it is time to move from national plans to a more holistic European strategy. He pointed to the autumn 2008 EU Energy Review that requires the inclusion of energy efficiency as a condition for energy security.

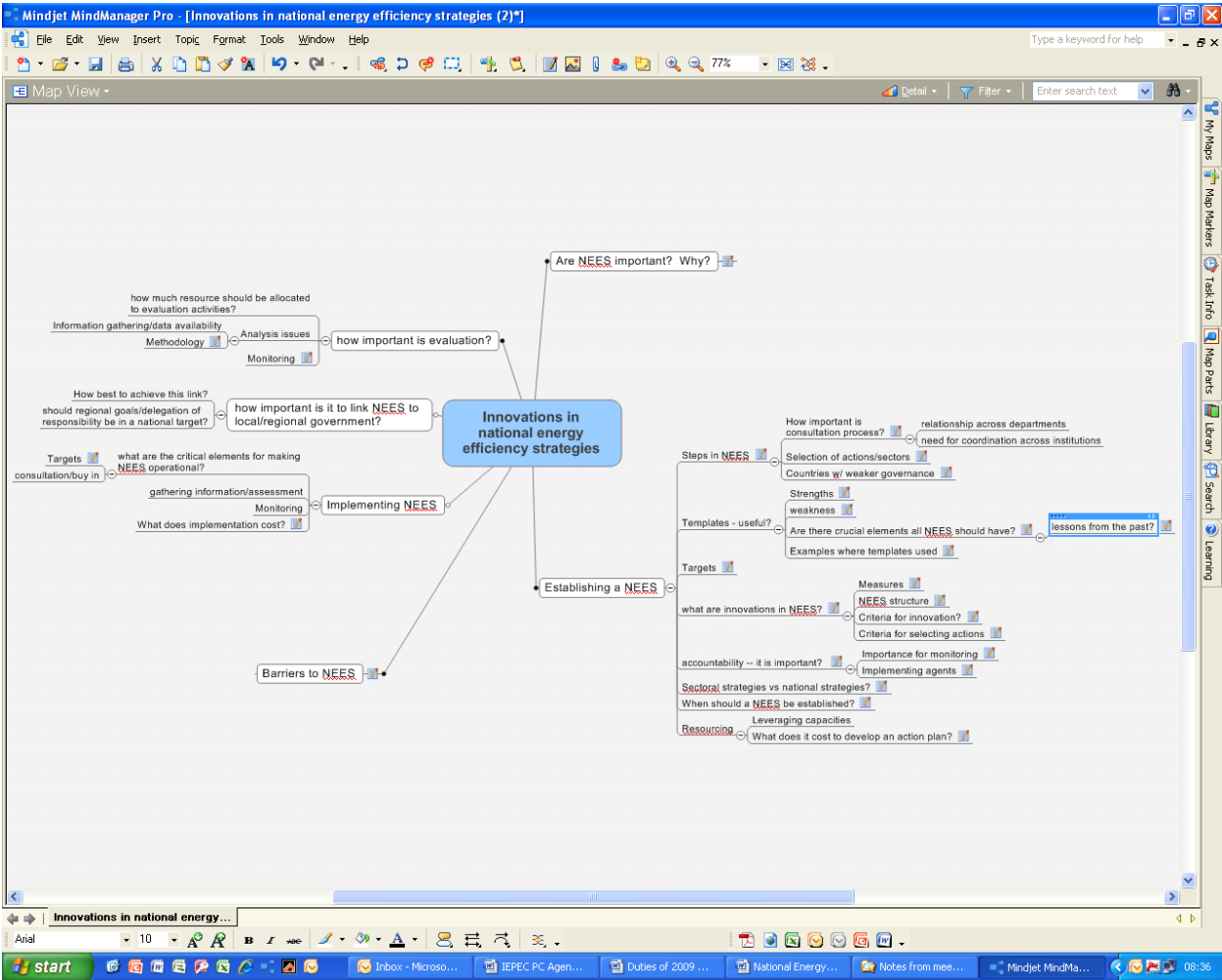
APPENDIX 1: Workshop Agenda

Session 1: Welcome and introduction		
9:00	Meeting opens	Meeting Chair: Tudor Constantinescu, E ⁿ R ¹
9:05	Welcome	Ambassador. Richard Jones, Deputy Executive
9:15	Overview – Purpose of the day	Director, IEA
9:30	Making energy efficiency happen in Europe: the role of national energy efficiency action plans	Rick Bradley/Nigel Jollands, IEA Fabrizio Barbaso, Deputy Director General,
10:00	<i>Coffee break</i>	Directorate-General for Energy and Transport, European Commission
<hr/>		
Session 2: A critical look at current practice		Session Chair – Tudor Constantinescu, E ⁿ R
<i>This session will focus on innovations & challenges in the NEES process from inception to design from selected experts:</i>		
<i>(Presentations 20 minutes, 10 minutes discussion)</i>		
10:30	a) From design to delivery – making a NEES operational	Tom Eischen, Commissaire du Gouvernement à l'Energie, Luxembourg
11:00	b) Building stretch into NEES – matching targets and instruments	Stjohn O'Connor - Representative from Ireland
11:30	c) Levels of government in NEES – linking national and regional governments	Yevgeny Zenyutich, Russia

¹ European Energy Network (EⁿR)

12:00	<i>Session summary and discussion</i>	
12:30	<i>Lunch</i>	Session Chair
Session 2 (cont'd):		Session Chair – Nigel Jollands, IEA
13:30	d) Two issues: Importance of public dialogue and sectoral strategies.	Mark Friedrichs, USA
14:00	e) Energy Efficiency in the Energy Community: the road to realization	Violeta Kogalniceanu, Energy Community
14:30	f) Accountability & allocating responsibility for implement NEES	Robert Tromop, EECA, New Zealand
15:00	<i>Coffee break</i>	
15:30	g) Resourcing NEES processes	Alexandre Fernandes, ADENE, Portugal
16:00	Policy Learning and Innovation in National Energy Efficiency Plans	Stefan Thomas, Wuppertal Institute, Germany
16:30	<i>Session summary and discussion</i>	Session Chair
17:00	Session 3: Facilitated round-table discussion <i>This session will focus on drawing out the key lessons from the day's proceedings:</i>	Session Chair – Nigel Jollands, IEA
18:00	Session summary	Facilitator
18:30	Meeting Close	Meeting chair

Session 3: Roundtable results



Appendix 2: Workshop List of Delegates

Nabil	AL-KHOWAITER	Saudi Arabia
Luis	ALONSO	Spain
Zafer	ATES	Turkey
Fabrizio	BARBASO	European Union
Yasam	BASTIMUR	Turkey
Tom	BASTIN	UK
Claire	BENDERSKY	USA
Emmanuel	BERGASSE	France
Bettina	BERGAUER-CULVER	Austria
Evelyne	BISSON	France
Didier	BOSSEBOEUF	France
Rick	BRADLEY	IEA
Kursad	CAPANOGLU	Turkey
Cristina	CARDOSO	Portugal
Aneta	CISZEWSKA	Poland
Tudor	CONSTANTINESCU	Romania
Anita	EIDE	European Union
Tom	EISCHEN	Luxembourg
Alexandre	FERNANDES	Portugal
Rafal	FRAC	Poland
Marijus	FRANCKEVICIUS	Lithuania
Mark	FRIEDRICHS	USA
Victoria	GORBACHEVA	Russia
Suheda	GUMUSDERELIOGLU	Turkey
Lucas	GUTZWILLER	Switzerland
Bence	HUBA	Hungary
Ivan	JAQUES	Chile
Igor	JASUREK	Slovak Republic
Nigel	JOLLANDS	IEA
Violeta	KOGALNICEANU	ECS
Jun	LI	France
Refaat	MAHFOUDHI	Saudi Arabia
Tim	McINTOSH	Canada
Laszlo	MOLNAR	Hungary
Stjohn	O'CONNOR	Ireland
Marie-Vincente	PASDELOUP	France
Astghine	PASOYAN	Armenia
Sara	PASQUIER	IEA
Marcella	PAVAN	Italy
Heinz-Jochem	POREMSKI	Germany
Pentti	PUHAKKA	Finland
Andres	ROMERO	Chile
Yamina	SAHEB	France
Fumihiro	SATO	Japan
Peter	SEVCE	Slovak Republic
Chris	SHORT	Australia
David	SMITH	Australia
Stefan	THOMAS	Germany
Robert	TROMOP	New Zealand
Roderic	VAN VOORST	European Union
Neil	WALKER	Ireland
Evgeny	ZENYUTICH	Russia

References

- Australia. (2009). "National Framework for Energy Efficiency." from http://www.nfee.gov.au/about_nfee.jsp?xcid=66.
- Cyprus Ministry of Commerce Industry and Tourism. (2007). "National Energy Efficiency Action Plan." from http://ec.europa.eu/energy/efficiency/end-use_en.htm.
- Energy Charter Secretariat (2000). Advice on developing an energy efficiency strategy. Brussels, Energy Charter Secretariat.
- Energy Efficiency Watch. (2007). "Screening of National Energy Efficiency Action Plans." from http://www.energy-efficiency-watch.org/fileadmin/eew_documents/Documents/Results/EEW_Screening_final.pdf.
- European Commission (2006). Green Paper - A European Strategy for Sustainable, Competitive and Secure Energy.
- European Commission (2008). Moving Forward Together on Energy Efficiency. Brussels, Commission of the European Communities.
- Foss, N. J. (1997). Resources, Firms, and Strategies: A Reader in the Resource-based Perspective, Oxford University Press.
- French Authorities (2008). Energy Efficiency Action Plan for France.
- G8. (2008). "G8 Hokkaido Toyako Summit Leaders Declaration." from http://www.mofa.go.jp/policy/economy/summit/2008/doc/doc080714_en.html.
- Geller, H. and S. Nadel (1994). "Market Transformation Strategies to Promote End-Use Efficiency " Annual Review of Energy and the Environment **19**: 301-346.
- Gerry Johnson and Kevan Scholes (2008). Exploring Corporate Strategy, Prentice Hall.
- IEA Member Country Ministers. (2007). "Communique. Meeting of the Governing Board at Ministerial Level." from http://www.iea.org/Textbase/press/pressdetail.asp?PRESS_REL_ID=225.
- International Energy Agency, Energy Charter Secretariat, et al. (1998). Energy Efficiency Initiative - Volume 1.
- International Energy Agency (IEA) (2008). Energy efficiency policy recommendations prepared by the IEA for the G8 under the Gleneagles Plan of Action. Paris, OECD/IEA.
- International Energy Agency (IEA) (2008). World Energy Outlook. Paris, OECD/IEA.
- Ireland Department of Communications Energy and Natural Resources (2007). "Ireland - Action Plan under Directive 2006/32/EC."
- Jollands, N. (2008). The use of energy efficiency and related targets in selected IEA member countries, Working Paper, International Energy Agency, Paris.
- Laustsen, J. (2008). Energy efficiency requirements in building codes, energy efficiency policies for new buildings - an information paper. Paris, OECD/IEA.
- Lovins, A. B. (1976). "The energy strategy: the road not taken." Foreign Affairs **October 1976**: 186-218.
- New Zealand Energy Efficiency and Conservation Authority (2007). New Zealand Energy Efficiency and Conservation Strategy, Making It Happen.
- Niven, P. R. (2003). Balanced Score Card: Step-by-Step for Governments and Nonprofits, John Wiley & Sons, Inc.

Swiss Confederation (2008). "Energy Efficiency Action Plan."

United States Department of Energy and Environmental Protection Agency (2009).
"National Action Plan for Energy Efficiency."