

INTERNATIONAL ENERGY AGENCY

WORKING PARTY ON ENERGY END-USE TECHNOLOGIES

STRATEGIC PLAN AND MANDATE 2007-2009

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1. The context

Guidance from Ministers and the Governing Board

The May 2005 IEA Ministerial meeting called upon the Agency to “help to develop strategies aiming at a clean, clever, and competitive energy future”, “in order to bridge the gap between what is happening and what needs to be done”.

The June 2005 IEA Governing Board brainstorming called for:

- better energy technology information, linked to policy development, to inform investment decisions;
- focus on the capabilities and effects of new technologies entering the market;
- investigation into new ways of delivering energy services;
- priority highlighting of long-term benefits of RD&D;
- new products to help communicate the Agency’s analysis and maximise the usefulness of the IEA’s rich store of data.

The July 2005 gathering of G8 leaders in Gleneagles (United Kingdom) echoed IEA Ministers in their request that the IEA, “advise on alternative energy scenarios and strategies. G8 leaders made specific calls on energy technology expertise of the IEA. The Agency as a whole is now engaged in a full programme of work to meet the G8’s requests.

The CERT response

In response to this strategic guidance, CERT adopted in 2006 an Action Plan intended to deliver the following:

- 1) **Stronger focus on the role of policy** in developing cleaner, more efficient energy technologies, and in deploying them.
- 2) **More frequent, more effective communication to policy makers** of findings and messages stemming from the IEA RD&D network, notably from the Implementing Agreements, and from associated private-sector players and financial institutions.
- 3) **More fruitful liaison within the IEA family.**
- 4) **More vigorous outreach to non-IEA countries.**

The actions envisioned with particular relevance for the End-Use Working Party include:

1) **Stronger focus on the role of policy**

CERT will give high priority to gathering and disseminating policy messages through a two-phase process. EUWP can contribute with its expertise on end-use technologies in:

- a) *Drawing, digesting and distilling the relevant policy implications from the research and analysis of the energy technology R&D and policy community.* To achieve this the CERT is taking steps to ensure a more productive dialogue with the Working Parties and Implementing Agreements
- b) *Developing and delivering concisely presented policy messages for senior policy makers.* CERT will base these messages on.
 - i) Synthesised findings from the network of Working Parties and Implementing Agreements.
 - ii) Secretariat analysis incorporating energy indicators data and scenario modelling.
 - iii) Guidance on effective policies for accelerating technology deployment.

2) More frequent, more effective communication to policy makers

CERT will target these technology and policy messages to the highest level of national policy-making, more particularly through the IEA Governing Board and its meetings at ministerial level. EUWP could provide valuable contributions on end-use technologies and policies to CERT's:

- a) Regular status reports on the broad picture regarding current energy technology opportunities.
- b) Regular two-page briefs for Governing Board meetings, providing accessible, practical advice on how specific technologies can contribute to meeting current concerns.
- c) Regular CERT Chair and Secretariat presentations to the Governing Board.

3) More fruitful liaison within the IEA family

To enrich its output CERT will ensure good communication with the IEA family and working parties through:

- Annual meetings between the CERT Chair and the Chairs of the Working Parties within CERT's purview.
- Liaison officers will be assigned to consolidate day-to-day liaison between the CERT and its Working Parties.

4) More vigorous outreach to non-IEA countries

CERT encourage the Working Parties and Implementing Agreements to seek, where appropriate, the widest possible non-member country involvement in their activities.

EUWP Strategy Development Background

The EUWP established a Strategy Development Working Group who held a Strategy Development Workshop at Senter-Novem in Utrecht, 15 June 2006. The results from the workshop (Attachment 1), the EUWP Mandate (Attachment 2) and the CERT 2006 Action Plan has been point of departure for the development of the present EUWP Strategy 2007-2009.

The EUWP Strategy describes mission, vision, objectives, activities and functions for the work 2007-2009.

2. EUWP Mission, Vision and CERT support

The Working Party

The International Energy Agency (IEA) Working Party on Energy End-Use Technologies¹, often referred to as the End-Use Working Party (EUWP), has served since 1982, as the principal advisory body to the IEA Committee on Energy Research and Technology (CERT) on all matters relating to energy end-use technologies. The EUWP oversees supports and adds value to the RD&D efforts of fifteen end-use Implementing Agreements² - thereby supporting the largest number of agreements amongst the IEA Working Parties. It also serves as a reference body for end-use technology issues within the IEA and represents the IEA to outside parties on these issues.

Due to the large number and diversity of the implementing agreements under its purview, the EUWP divides agreements into four sectors - buildings, industry, transport and electricity. Vice Chairs are designated to each sector with the responsibility to maintain close contact and liaise with the agreements. This remarkable work effort involves frequent participation in Executive Committee meetings and providing biannual status reports to the EUWP on work progress and activities³.

The considerable level of diversity of the agreements requires high expertise on technologies across several sectors.

Mission

The mission of EUWP is to ensure the availability of the scientific and technological knowledge base to help achieve, in a professional and effective manner, steady and significant increases in end-use efficiency:

- supporting the leadership efforts of the IEA, its Committees and other Working Parties.
- supporting CERT to provide international leadership on end-use technology and policy issues
- supporting and adding value to the End-Use Implementing Agreements;
- sharing experience amongst members in energy end-use science and technology policy (research, development, demonstration, and technology deployment)
- advice on policy directions for energy use from a technology perspective
- collaborating with other public, private, and multilateral organisations;

Vision

Over the next several decades, the continued development and application of new energy efficient end-use technologies will reduce the energy consumption in buildings, industry, transport, and electricity significantly compared to a present-policies-baseline-scenario, and be a major contributor to reducing greenhouse gases.

This is in line with the most favourable assumptions of the IEA long term scenarios.

Resources available to CERT

The EUWP provides within its possibilities end-use technology expertise and access to networks – resources which CERT can draw upon to achieve its objectives:

¹ EUWP Mandate in Annex A

² These include: Advanced Fuel Cells, Advanced Motor Fuels, Adv Materials Transportation, Hybrid and Electric Vehicles, Demand-Side Management, ECBCS, District Heating and Cooling, Energy Storage, ETDE, Heat Pumping Technologies, Combustion, Industrial Energy Technologies & Systems, Superconductivity ETSAP and EEEE.

³ See Annex B

- End-Use Technology Expertise: Ability to synthesize technical information from the wide range of RD&D fields related to energy efficiency and to identify gaps in Science & Technology Cooperation under the IEA. To advise the CERT on technology implications of policy.
- End-Use Policy Advise: Ability to comment on policy implication of technology with recommendations on end-use technology policy.
- Close contact to network: Access to a strong and stable RD&D network represented by the End Use Implementing Agreements
- Capacity to guide international collaboration on end-use RD&D: Ability to identify process oriented and inter-relational gaps and gaps in management issues, and to communicate these to CERT, and to empower the IAs to do their work.
- Close contact to member countries: Access to knowledge, policies and strategies for end-use technology in member countries.
- Non-Member Countries: Ability to communicate with NMCs and to help them participate in the IEA's technological activities.

3. EUWP Objectives and Strategies 2007-2009

Four principal objectives and several associated activities have been identified to carry out the EUWP mission:

Objective 1: Strategic guidance on end-use technology RD&D

Continue to strengthen the role as a source of international analysis and information on end-use technologies for CERT, IEA Secretariat and Member Countries.

- Activity 1(a): Identify those end-use technologies that are expected to respond most efficiently and effectively in the short and longer term to energy security concerns, and environmental and economic goals of Member countries, e.g. for communication to the Governing Board
- Activity 1(b): Identify and characterise RD&D priorities for end-use technologies, and the innovations that will likely lead to new and growing markets.
- Activity 1(c); Provide input and be involved in the review process of key analysis of the Agency such as the Energy Technology Perspectives and the Energy Technology Handbook.

Objective 2: A well functioning End-Use Implementing Agreement Network

Continue strong oversight of and support for the EUWP Implementing Agreements to help ensure the effectiveness of their programmes for developing and deploying efficient end-use technologies.

- Activity 2(a): Interact with the Executive Committees of Implementing Agreements, receiving suggestions on how to improve the programme efficiency, sharing identified opportunities for strategically synergetic action, and providing advice when needed.
- Activity 2(b): Periodically review and assess the effectiveness of Implementing Agreements and other related international collaborative activities with a view to identifying gaps, overlaps and impact of existing coverage, renewing existing programmes and stimulating new collaborative activities, discontinuing or expanding activities, and encouraging closer collaboration with industry. (See End of Term Reports Proceedings in Annex D)
- Activity 2 (c): Identify Implementing Agreements with the capacity to deliver policy recommendations, and encourage them to do so.
- Activity 2(d): Enhance communication and coordination amongst Implementing Agreements, and with the EUWP, through regular joint meetings, through coordination groups, through the Vice Chair activities, through the traditional autumn workshop; and by encouraging Members to attend Executive Committee and Annex meetings.
- Activity 2(e) Encourage linkages and coordination of work between the Secretariat, the EUWP and Implementing Agreements through inviting end-use Desk Officers to EUWP meeting, to coordination group meetings, and encouraging Desk Officers to participate in and report from Executive Committee meetings.
- Activity 2(f): Encourage enhanced interaction of the EUWP and its Implementing Agreements with private sector and Non-Member Country representatives, as a means of strengthening RD&D and market acceleration efforts.

Objective 3: Good communication with CERT and Member Countries

- Activity 3(a) Provide continuous input to CERT by facilitating the role of the CERT Liaison Officer and by periodically attending CERT meetings; utilise the annual Working Party Chairs meeting in order to discuss and facilitate common issues; encourage CERT/EUWP back to back meetings; and invite CERT Delegates to EUWP meetings and workshops.

- Activity 3(b): Provide written inputs to CERT in forms of Annual Reports and Implementing Agreements End of Term recommendations.
- Activity 3(c): Utilise publications, conferences, seminars, workshops, media, the OPEN Bulletin and other outreach mechanisms to communicate to all stakeholders the values of end-use energy technologies.
- Activity 3(d): Encourage Member Countries to develop national IEA communication strategies.

Objective 4: Strengthened relations with NMCs

Help implement recommendations for accelerated collaboration of end-use technology RD&D in non-Member countries.

- Activity 4(a): Encourage experts from Non-Member countries to participate in relevant meetings of Implementing Agreements and encourage Implementing Agreements to invite non-Member countries to attend in the capacity of an observer both in EUWP meetings and workshops.
- Activity 4(b): Support the NEET Initiative⁴ dedicated to raising awareness of technology potential to China, India, Brazil, Mexico, South Africa (the “plus five countries”) and Russia.
- Activity 4(c): Encourage strategic partnerships with multilateral organisations to ensure coordination in efforts to accelerate end-use technology development in Non-Member Countries.

The implementation of the above Objectives will be carried out within the Mandate of the End-Use Working Party, endorsed by the IEA Committee on Energy Research and Technology (CERT).

⁴ Network of Experts in Energy Technology Initiative (NEET) is part of the G8 Gleneagles Plan of Action.

4 Functions

The document on EUWP Standard Procedures gives more details about day to day procedures and guidelines. The document is found in Annex D. The Standard Procedures is revised by the working party on a regular basis. Below are the EUWP functions described:

Meetings

EUWP meetings will be organised for each spring and autumn. At least one meeting should be held in a Member country in a form that invigorates dialogue with the country's authorities and other interested parties as well as with those engaged in the work of Implementing Agreements in that country.

Events

In addition to regular meetings, the EUWP will organise and support workshops and conferences on relevant end-use technology matters, of a technical or policy nature. This include an autumn workshop with implementing agreements usually focussing on either the buildings, industry or transport sector.

Reports

The EUWP will provide the CERT and other Working Parties with reports on EUWP and EUWP Implementing Agreement activity, an Annual Report to the CERT covering the year's activities and evaluating the performance of the EUWP and papers on priority technology issues.

Chair

The role of the Chair is to prepare and manage each EUWP meeting, to be broadly familiar with the work of the Implementing Agreements (e.g. through visits to Executive Committee meetings), to raise the visibility of the EUWP and the activities of its Implementing Agreements at conferences and workshops around the world. The Chair, together with delegates, is responsible for delivering reports to the CERT and for meeting the Working Party objectives.

Vice Chairs

The role of Vice Chairs is to be familiar with, support and report on the work of each sector's Implementing Agreements. This involves the production of Sector reports for each EUWP meeting and an annual review of Implementing Agreement activity for the annual EUWP report to the CERT. The details of this activity are listed under Objective 2. They may also be called on to Chair EUWP meetings in the absence of the Chair.

Delegates

The role of delegates is to report on national end-use technology activities, R&D programmes, government policies and related events; to facilitate local Implementing Agreement activity and to encourage the country's engagement in Implementing Agreements and under the direction of the Chair, to actively work for the Working Party to achieve the agreed objectives.

Secretary

Provided by the IEA Secretariat, the Secretary supports the Chair in the organisation of meetings and documents.

5 Performance Measurement

As with all IEA Working Parties and Committees, the End-Use Working Party is committed to evaluating its performance. The main vehicle for the evaluation will be the annual report of the Working Party to the CERT. This will review the activity of the Working Party against the objectives set out in the Working Party's Strategic Plan. The Chair will summarize this review in his foreword to the Annual Report.

Following this review the Working Party will amend the work programme, working practices, structure and functions as appropriate and when necessary, change the Strategic Plan and make recommendations for changes to the Mandate.

6 Risk Analysis

During the strategy workshop several risks were identified (Annex 1). Most risks involved preconditions for being able to undertake all the activities envisioned. These precondition risks have great influence on the success of the EUWP as they determine whether the activities in the strategy can be implemented.

If the EUWP is unable to undertake all the activities there is a danger that the objectives will not be reached.

Key risks:

- Limited time and resources for:
 - Chair
 - Vice Chairs
 - Members
 - Secretary
- Limited funds
- Too much fluctuation of delegates in the working party
- Delegates with limited interest, limited expertise or limited active involvement
- Not enough stamina from EUWP
- Limited mandate restricting ambitions

Annex A: Workshop on EUWP Strategy Development

A strategy task force was established to develop a draft strategy to be discussed by the EUWP. The task force convened a workshop in Utrecht, the Netherlands. The workshop was kindly sponsored by the Dutch Ministry of Economic Affairs and implemented by SenterNovem. A complete workshop report is available from the protected EUWP website on www.iea.org.

The task force defined the following **underlying goal** for its draft strategic plan:

“To support CERT, Implementing Agreements and Member Countries in a professional and effective manner”.

To carry out its mission, the EUWP identified **results required** to successfully support CERT:

- a) The Member Countries with their relevant bodies are aware of activities, results and requests of IEA and CERT. EUWP-Delegates report to their national constituencies in an effective way.
- b) Relations with NMCs are strong and well positioned for future alliances and participation of the “Plus 5 countries” in major IAs. All relevant End Use IAs have an Annex for NMC involvement.
- c) A well functioning dynamic IA network.
- d) Communication channels with CERT and a fruitful interface with EEWP are in place.
- e) A vision about the promise of technology and the necessary focus on work in the IAs. Gaps where IAs can contribute are identified.
- f) Knowledge about technology and policy gaps, and ideas on how to address them.
- g) The RD&D of IAs is linked to policy trends.
- h) Results from IAs are analysed and available to the CERT.
- i) A properly functioning and equipped, and accountable Secretariat able to support the EUWP and its IAs in their work. A Working Procedure for “Relay-Cooperation” is in place.
- j) An understanding of the mechanisms for disseminating information on and from RD&D projects.

The results required have been essential for developing the list of objectives and activities 2007-2009 in chapter 3.

During the strategy workshop several pre-conditionable risks were identified:

PRE-CONDITIONABLE RISKS	EUWP mandate restricts ambitions	Insufficient money	Insufficient time	Fluctuation of DOs and delegates
		Limited resources: secretariat, chair + vice chairs	Need to optimize time and financial resources	Delegates of EUWP with partial know-how and partial interest
		Limited available resources (\$, people)		Not enough stamina from EUWP
				EUWP members (all) active involvement

Annex B: Mandate of the IEA Working Party on Energy End-Use Technologies

1. Objective

The Working Party on Energy End-Use Technologies (EUWP) shall provide advice to the IEA Committee on Energy Research and Technology (CERT) and other IEA bodies on trends and policies relating to energy end-use technologies; guided by the IEA's Shared Goals of energy security, environmental sustainability and economic growth, it shall also support and facilitate co-operation among Member countries in research, development, demonstration and deployment of energy end-use technologies and, as appropriate, shall seek to expand collaboration with non-Member countries.

2. Functions

The functions of the EUWP are to:

- 1) Identify high-priority areas in which to develop or expand international collaboration in research, development, demonstration and deployment;
- 2) Periodically review and assess the effectiveness of such collaboration with a view to identifying gaps and overlaps in existing coverage, renewing existing programmes and stimulating new collaborative activities, discontinuing or expanding activities, and encouraging closer collaboration with industry; and
- 3) Identify those technologies, processes and systems in end-use sectors that can effectively help to achieve energy security, environmental and economic goals of Member countries and, where appropriate, contribute to international collaboration in the development and market deployment of such technologies.

3. Activities and Procedures

To carry out these functions, the EUWP shall work with the Implementing Agreements, facilitate the exchange of information, evaluate Implementing Agreements in accordance with CERT procedure, and provide a programme of work and an annual report to the CERT.

4. Membership and Structure

All IEA Member governments and the European Commission shall be members of the EUWP. Members shall be represented by delegates with expertise in programme and/or project management in energy end-use technologies. Delegates shall report to the Working Party on selected activities in their countries as requested, shall act as a conduit of information from and to the Secretariat, shall provide contacts within their countries in relation to requests for participation or support of Working Party activities, and shall seek to support other activities as requested by the Working Party.

The EUWP is given a mandate of three years by the CERT, which may be renewed.

The EUWP shall select a Chair and Vice-Chairs, each responsible for a sector as decided by the EUWP. The Chair and Vice-Chairs shall be elected for 3-year terms. The Chair can be re-elected only once in succession. The Chair or one of the Vice-Chairs shall report on the activities of the Working Party to the CERT.

Annex C: The End-Use Working Party Implementing Agreements

The End-Use Working Party has divided the Implementing Agreements into four sectors: buildings, industry, transport and electricity. The relevant Vice Chair is maintaining contact with these agreements:

Electricity Network Implementing Agreements.

- Electricity Network Analysis and Research & Development (ENARD)
- Demand Side Management (DSM)
- Superconductivity
- Energy Technology Systems Analysis Programme (ETSAP) ⁵

Industry Implementing Agreements

- Industrial Energy Technologies & Systems
- Energy Conservation And Emissions Reduction In Combustion
- Energy Technology Data Exchange (ETDE) ⁶

Building Implementing Agreements.

- Buildings And Community Systems
- District Heating And Cooling
- Energy Conservation Through Energy Storage
- Heat Pumping Technologies
- Energy Efficient Electric Appliances

Non End-Use Working Party building related Implementing agreements are:

- Photovoltaic Power Systems*
- SHC - Solar Heating and Cooling*

Transport Implementing Agreements.

- Advanced Fuel Cells
- Advanced Motor Fuels
- Advanced Materials for Transportation
- Hybrid And Electric Vehicles

Non End-Use Working Party transport related Implementing agreements are:

- Bioenergy*
- Hydrogen*

⁵ ETSAP (modeling) is a technology cross cutting agreement

⁶ ETDE (bibliographic database) is a technology cross cutting agreement