

**WORKING PARTY ON ENERGY END-USE  
TECHNOLOGIES**

**STRATEGY PLAN**

**2010 - 2012**

**TABLE OF CONTENTS**

1. THE CONTEXT .....	2
2. EUWP MISSION, VISION AND CERT SUPPORT .....	6
3. EUWP OBJECTIVES AND STRATEGIES 2010-2012 .....	8
4. FUNCTIONS .....	10
5. PERFORMANCE MANAGEMENT .....	11
6. RESOURCES .....	12
Annex A - Mandate of the Working Party on Energy End-Use Technologies.....	13
Annex B - EUWP Implementing Agreements .....	14
Annex C - EUWP Co-ordination Groups .....	15

# EUWP STRATEGY PLAN 2010-2012

## 1. THE CONTEXT

### **Guidance from Ministers and the Governing Board**

Beginning with the Gleneagles G8 Summit in July 2005, the IEA energy technology network has made substantial efforts to accelerate participation of key IEA non-member countries and to develop policy messages and strategies for a clean, clever and competitive energy future.

Messages from the IEA Ministers at their May 2007 meeting are more relevant than ever: “For a sustainable energy future, we need to accelerate the development and deployment of new technologies. We will work urgently to bring this about.”

Ministers further undertook to “encourage the strengthening of our R&D efforts to reduce the costs of new technologies...”, and to “enhance our energy technology collaboration with major emerging economies, bilaterally and through the IEA’s technology network. The G8 Hokkaido-Tokyo summit and associated meetings of energy ministers in June and July 2008 endorsed the IEA findings.

The Agency was asked to undertake further tasks for the G8, notably in the areas of international RD&D co-operation, energy efficiency and clean energy. Support from the IEA was sought in setting up a new international initiative for technology roadmaps on innovative technologies and IEA has been asked to host the Secretariat of the newly created International Partnership for Energy Efficiency Co-operation (IPEEC).

At the G8 summit in Aquila, Italy, leaders agreed that increased investment in energy supply, energy efficiency and low-carbon technology is timely and urgent. The Agency fully supported the strong focus of the G8 on pressing energy issues and is ready to mobilise a global effort.

At the Major Economies Forum, launched in the margins of the Aquila summit, 20 major world economies agreed to collaborate to advance clean energy technologies, to establish a Global Partnership to drive transformational low-carbon technologies, to double investments public RD&D transformational technologies and to spearhead efforts on technologies through the leadership of specific countries.

The focus of the IEA Ministerial meeting in 4-5 October 2009 to which Ministers of India, China and Russia were invited, is devising solutions to energy challenges of public-private partnerships with chief executive officers of leading corporations and ministers from IEA member and non-member countries. Energy security, enhancing the global energy dialogue, sustainable energy and energy technology and the possibility of creating a technology platform are also high on the Ministerial meeting agenda.

### **The CERT Action Plan**

Guided by the goals of the IEA Governing Board (GB) and G8 leaders, the CERT will take action as outlined below. Each of the five numbered sections target corresponding strategic objectives in the Draft Finalised CERT Strategic Plan 2009-2011 [IEA/CERT(2009)8].

References in this document to the CERT’s action imply, where appropriate, implementation by the IEA Secretariat’s team assigned to support the CERT.

- 1) Leadership and dialogue to support the CERT Working Parties, Implementing Agreements and Expert Groups
- 2) Stronger focus on the role of technology policy

- 3) Frequent, effective communication to policy makers
- 4) More fruitful liaison within the IEA family and with the OECD
- 5) More vigorous collaboration with IEA non-member countries

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

### **1) Leadership and dialogue to support the CERT Working Parties, Implementing Agreements and Expert Groups**

The CERT will continue to attach priority importance to its dialogue with all participants in the energy technology network and to supporting their work.

- a) Annual meetings between the chairs of the CERT, its Working Parties (WPs) and Expert Groups (EGs) to update on evolving energy-sector challenges, cross-cutting issues, current IEA goals, initiatives and decisions, and on how the IEA energy technology network's specialist know-how can help provide responses.
- b) Fostering stronger communication between the IAs to avoid duplication of effort.
- c) Extracting and carrying forward technology policy messages from IAs' activities, taking advantage of their periodical end-of term reports at CERT meetings.
- d) Opportunities, at least once per year, for WP and EG chairs to report at CERT meetings.
- e) Opportunities for CERT/WP Liaison Officers to speak at CERT meetings on an ad hoc basis.
- f) Opportunities for CERT Delegates to provide one-page written reports at CERT meetings on new policy developments in their countries, for Secretariat analysis and an oral Secretariat report to generate discussion on common features and cross-cutting issues.
- g) Prompt conveying of CERT decisions to WPs, EGs and concerned IAs, who should also be informed of decisions taken by their overseeing WPs.
- h) Encouraging IAs, WPs and EGs to provide the Secretariat with input of substantive value for policy makers, notably for periodical publications such as *Energy Technology Perspectives - Scenarios & Strategies to 2050*.

### **2) Stronger focus on the role of technology policy**

To inform the policy-making process through analysis weighing relative values of different energy technology approaches, the CERT develops authoritative energy technology policy advice, building on findings from the IEA energy technology collaborative network. It has established – and will continue to support – a strong R&D programme featuring energy technology scenarios, energy indicators data and analysis, technology roadmapping and collaboration within IEA on global energy efficiency and clean energy trends and prospects. In many of these areas, CERT's commitment to tasks assigned by G8 leaders and energy ministers – and judicious use of outputs from these tasks – will contribute to effectiveness.

In addition to fostering effective government policy approaches, generating policy messages is a two-phase process. Messages should be built upon the following.

- a) Synthesised findings from the WPs, IAs and other authoritative sources, including industry.
- b) Secretariat analysis incorporating energy indicators data and scenario modelling.
- c) Best-practice guidance from the CERT network on effective policies to accelerate technology deployment, including advice on which policies may fail, and why.

### **3) Frequent, effective communication to policy makers**

As governments increase their efforts to develop advanced clean energy technologies, the expertise and diverse scope of the IEA energy technology network will likely generate even greater benefits over coming years. Carrying concise, policy-oriented messages to the IEA GB and its meetings at ministerial level is a key goal. Now in a new phase of “fast-track” reporting to the GB, the CERT regularly provides briefs and presentations for GB meetings offering accessible, neutral practical information on how existing and emerging technologies for energy supply, conversion, distribution and end-use are relevant to today’s challenges. This and the following products and practices will remain at the forefront of priorities for giving visibility to IEA Secretariat and technology network findings.

### **4) More fruitful liaison within the IEA family and with the OECD**

The CERT will remain pro-active in its “hot-line” communication with GB members through GB meetings and contact in national capitals. Specific steps include the following.

- a) Joint CERT Cabinet/SLT Bureau meetings to review interrelated activities and harmonise output.
- b) Continued CERT and SLT co-operation on mobilising IEA resources in support of member countries’ goals and on appropriately articulating IEA energy technology messages.
- c) Joint CERT/SLT sessions; joint workshops focusing on issues of common involvement.
- d) Networking among GB, CERT, WP, EG and IA participants in national capitals to discuss ongoing IEA-relevant activities and convey policy messages generated by the IEA energy technology network.
- e) Frequent systematic exchanges between the IEA energy technology teams and other IEA units, also other members of the OECD family (in particular the NEA), on consistency of messages in IEA publications, papers and other literature, and on material relating to workshops and other events.

### **5) More vigorous collaboration with IEA non-member countries**

The CERT will remain active in support, oversight and the quest for resources in the following areas.

- a) In response to the G8 Gleneagles Plan of Action, efforts of the “NEET Initiative” (Networks of Expertise in Energy Technology), bringing together the CERT, Secretariat, WPs and IAs on engagement with the Plus Five countries, Russia and other countries, to foster greater participation of these non-IEA countries in IEA’s energy technology network.
- b) Where appropriate, widest possible non-member country involvement in the activities of WPs. When non-IEA countries participate in meetings of IEA bodies, meeting agendas should, where consistent with the body’s overall mission, feature topics of special interest to such non-IEA countries, especially topics where international technology collaboration would be useful; agendas should accommodate these countries’ own contributions to the body of knowledge.
- c) Ongoing Secretariat work with non-IEA countries such as the project on rural energisation and decentralised energy systems, initiated with a Paris workshop in May 2008 and now the subject of follow-up reporting.
- d) Encouraging IAs to develop the programmes of existing or new Annexes to meet requirements of newly participating non-IEA countries. If, however, such issues do not fit

within the missions of existing IAs, the CERT does not rule out encouraging member countries to promote new IAs specifically tailored to address Plus Five country issues.

- e) Invitations to non-IEA countries to IEA-organised workshops and events, whose programmes should take these countries' interests into account where possible.
- f) Encouraging non-IEA partner countries to establish national co-ordination of participation in IEA activities and bodies, along the lines currently planned by China, including own-language websites. In regions of largely non-IEA countries, the idea of the "champion of the region" might be developed, where one country acts as the locomotive for drawing neighbouring countries into the IEA collaborative community.
- g) Continued encouragement for reporting of outreach progress on the IEA public website's G8 and NEET pages; continued support for the IEA OPEN Energy Technology Bulletin's work on stimulating non-IEA countries' interest in IEA's collaborative activities.

## **EUWP Strategy Development**

The EUWP Strategy 2010-2012 incorporates lessons learned from the EUWP Achievements and Activity Report 2007-2009. The CERT Strategy 2007-2011 and CERT Action Plan 2009-2011 have also served as the guidance for the development of the EUWP Strategy Plan 2010-2012.

## 2. EUWP MISSION, VISION AND CERT SUPPORT

The Working Party on Energy End-Use Technologies<sup>1</sup>, often referred to as the End-Use Working Party (EUWP), has served since 1981 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 also serves as a reference body for end-use technology issues within the IEA Secretariat.

The EUWP oversees, supports, and adds value to the RD&D efforts of 17 end-use Implementing Agreements<sup>2</sup> - the largest number of agreements assigned to a CERT Working Party. Due to the large number and diversity of the Implementing Agreements under its purview, the EUWP has divided agreements into four sectors – buildings, electricity networks, industry, and transport. Vice Chairs for each sector are responsible for maintaining close contact with the Agreements. This involves frequent participation in Executive Committee meetings, leading Co-ordination Groups<sup>3</sup> and providing biannual progress reports of IA activities to the EUWP.

The EUWP strives to narrow the gaps and remove overlaps on cross-cutting issues by inviting Implementing Agreements from other working parties to attend Co-ordination Group meetings and holding joint meetings with the Energy Efficiency Working Party (EEWP) and conducts workshops on selected priority issues.

IEA non-member countries Brazil, China, India, Russia and South Africa already participate in end-use Implementing Agreements. In accordance with the IEA Outreach Strategy approved by the Governing Board in 2006, the EUWP will consider inviting experts from China, India and Russia to attend EUWP meetings as Regular Observers and will seek Governing Board approval. In addition, the EUWP may be considering inviting experts from Brazil and South Africa to participate as Special Observers to EUWP meetings on an ad-hoc basis and, should they indeed attend, will inform the Governing Board accordingly.

### **Mission**

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

- supporting the leadership efforts of the IEA Secretariat, Committees, Working Parties and Expert Groups;
- supporting CERT to provide international leadership on end-use technology and policy issues;
- supporting and adding value to Implementing Agreements;
- sharing experience of energy end-use science and technology policy (research, development, demonstration, and technology deployment);
- vetting best-practice and guidance on policies that accelerate technology deployment; and
- collaborating with other public institutions, the private sector, and multilateral organisations in IEA member and non-member countries.

### **Vision**

The continued development, application and deployment of energy efficient end-use technologies has the potential to significantly reduce energy consumption and greenhouse gases in the buildings, electricity generation, industry, and transport sectors.

---

<sup>1</sup> Refer to the EUWP Mandate, attached herewith as Annex 1.

<sup>2</sup> Refer to Annex 2.

<sup>3</sup> Refer to Annex 3.

## **Resources available to CERT**

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

- 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 and technology co-operation.
- End-use technology policy implications: Ability to comment on policy implication of technology with recommendations on end-use technology policy and to provide advice to the CERT.
- Capacity to guide international collaboration: Ability to empower the Implementing Agreements in carrying out their activities and to identify process-oriented, inter-relational gaps as well as management issue gaps in end-use RD&D within the network and to communicate these to the CERT.
- Close contact with the network: Access to a strong and stable end-use RD&D network represented by the Implementing Agreements under the remit of the EUWP as well as other Working Parties through Co-ordination Groups, other working party activities and the IEA Secretariat.
- Close contact with IEA member countries: Access to end-use technology RD&D expertise, policies and strategies in IEA member countries.
- Outreach to IEA non-member countries: Ability to communicate with IEA non-member countries and to encourage them to participate in activities of the Implementing Agreements and the EUWP.

### 3. EUWP OBJECTIVES AND STRATEGIES 2010-2012

In order to carry out the EUWP mission effectively, four principal objectives and several associated activities have been agreed:

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

Continue to strengthen its role as the source of international analysis and information on end-use technologies for CERT, IEA Secretariat and IEA 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 demand-side roadmaps.

#### ***Objective 2: A well-functioning 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, sharing 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<sup>4</sup>.
- **Activity 2 (c):** Support and encourage Implementing Agreements in delivering policy recommendations.
- **Activity 2(d):** Enhance communication and co-ordination amongst Implementing Agreements and with the EUWP through regular joint meetings, Co-ordination Group meetings, Vice Chair activities, and the autumn workshop; and by encouraging Delegates to attend Executive Committee and Annex meetings where possible.
- **Activity 2(e):** Encourage linkages and co-ordination of work between the IEA Secretariat, the EUWP and Implementing Agreements by inviting Desk Officers to attend EUWP and Co-ordination Group meetings, and encouraging Desk Officers to participate in and report on Executive Committee meetings.
- **Activity 2(f):** Encourage enhanced interaction of the EUWP and Implementing Agreements with industry, the private sector and IEA non-member countries as a means of strengthening RD&D and market acceleration efforts.

---

<sup>4</sup> For further information please refer to Annex 4.

### **Objective 3: Good communication with CERT and IEA 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 high-quality input to the CERT through the Annual Report and the Implementing Agreement End-of-Term recommendations.
- **Activity 3(c):** Encourage WP and IAs to provide the IEA Secretariat with input of substantive value for policymakers, notably for periodical publications.
- **Activity 3(d):** Utilise publications, conferences, seminars, workshops, media, *Energy Technologies at the Cutting Edge*, the *OPEN Bulletin* and other outreach mechanisms to communicate to all stakeholders the values of end-use energy technologies.
- **Activity 3(e):** Encourage IEA member countries to develop national energy technology network communication strategies.

### **Objective 4: Strengthened relations with IEA non-member countries**

Develop and help implement recommendations for accelerated collaboration of end-use technology RD&D in IEA non-member countries.

- **Activity 4(a):** Encourage experts from IEA non-member countries to participate in Executive Committee meetings and events and encourage IAs to raise awareness of the EUWP to IEA non-member country experts.
- **Activity 4(b):** Support outreach activities<sup>5</sup> dedicated to raising awareness of technology potentials within Brazil, China, India, Russia and South Africa and others countries in accordance with the IEA Governing Board Outreach Strategy.
- **Activity 4(c):** Encourage strategic partnerships with multilateral organisations to ensure co-ordination in efforts to accelerate end-use technology development in IEA non-member countries.

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

---

<sup>5</sup> Network of Experts in Energy Technology Initiative (NEET).

## 4. FUNCTIONS

Below is an overview of the regular and topical activities of the EUWP, the functions of EUWP elected officers, delegates and IEA secretary.<sup>6</sup>

### Regular Meetings

The EUWP holds two regular meetings each year: spring and autumn. At least one meeting is held in an IEA Member country in order to stimulate dialogue with national policymakers, R&D stakeholders and technology experts. It also provides an opportunity to engage directly with Implementing Agreement participants.

### Workshops

In addition to the bi-annual regular meetings, the EUWP organises topical workshops and conferences in the margins of the autumn regular meeting which focuses on end-use technology recent developments, current priorities or foresight in the buildings, electricity networks, industrial or transport sectors. The EUWP also organises meetings on cross-cutting issues with the Energy Efficiency Working Party.

### Reports

The EUWP provides the CERT and other Working Parties with reports on EUWP workshops and Implementing Agreement activities, an Annual Report to the CERT 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 EUWP delegates, is responsible for delivering an annual report to the CERT and for meeting the Working Party objectives.

### Vice Chairs

Vice Chairs play an important role in the EUWP as they closely follow developments and support the work of Implementing Agreements assigned to their sector. They prepare bi-annual progress reports of IA activities for each EUWP meeting that are included in the annual EUWP report to the CERT. In addition, Vice Chairs organise annual Co-ordination Meetings for their sector where end-use other Working Party Implementing Agreements meet to learn of developments within their individual programmes, to share experiences, avoid overlap, and reinforce communication. Vice Chairs may also be called on to replace the EUWP Chair in his or her absence.

### Delegates

EUWP delegates report on national end-use technology activities, RD&D programmes, government policies and related events. They facilitate and encourage national Implementing Agreement activities. EUWP delegates actively support the Chair and Vice Chairs in meeting agreed-upon objectives.

### IEA Secretary

The IEA Secretary to the EUWP assists the Chair, Vice Chairs and delegates in responding to IEA member country priorities.

---

<sup>6</sup> A more detailed description is outlined in the EUWP Standard Procedures is attached herewith as Annex 5.

## **5. PERFORMANCE MANAGEMENT**

The EUWP is committed to carrying out an annual performance evaluation which compares outcomes of the past year's activities to the objectives set forth in the EUWP Strategy Plan. The results are reported to the CERT each year.

The evaluation includes quantitative measures of progress such as Implementing Agreement activity and specific Working Party tasks. In addition, the views of EUWP delegates are solicited in order to verify whether the Working Party continues to provide an effective forum for highlighting energy technology issues and suggesting solutions.

Following the internal review and report to the CERT, the Working Party may amend the work programme, practices, structure, and functions as appropriate and where necessary, adjust the Strategic Plan and make recommendations for changes to the Mandate.

## 6. RESOURCES

In addition to highlighting the resources available to the CERT and Implementing Agreements, the EUWP has identified several resource limitations. While these do not as yet represent the situation for a high proportion of EUWP members, substantial resource limitations have the potential of adversely affecting the implementation of the EUWP strategy and are therefore worth underlining. They include:

- Limited time to carry out duties:
  - Chair
  - Vice Chairs
  - Delegates
  - IEA Secretariat
- Limited travel funds
- Excessive fluctuation in delegates
- Delegates with limited interest, expertise or active involvement
- Lack of Working Party stamina
- Mandate may limit ambitions

# **Annex A - Mandate of the Working Party on Energy End-Use Technologies**

## **1. Objective**

The Working Party on Energy End-Use Technologies (EUWP)<sup>7</sup> 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 Shared Goals of energy security, environmental sustainability and economic growth, it shall also support and facilitate co-operation among IEA member countries in research, development, demonstration and deployment of energy end-use technologies and, as appropriate, shall seek to expand collaboration with IEA 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.

---

<sup>7</sup> The Working Party on Energy End-Use Technologies was established 1 April 1981 [IEA/CRD(81)13].

## **Annex B - EUWP Implementing Agreements**

The EUWP is responsible for reviewing the requests for extension and making a recommendation to the CERT for the Implementing Agreements listed below. In order to follow the progress of the Agreements within each of the four sectors more effectively (buildings, electricity networks, industry and transport), the EUWP requests Implementing Agreements to provide bi-annual progress reports to the relevant vice chair and encourages them to take part in annual Co-ordination Groups with the other Agreements assigned to their sector (see Annex 3).

### **BUILDINGS**

- Buildings And Community Systems
- District Heating And Cooling
- Energy Storage
- Energy Efficient Electrical Equipment
- Heat Pumping Technologies

### **ELECTRICITY NETWORKS**

- Demand Side Management
- Electricity Networks, Analysis and R&D
- High-Temperature Superconductivity
- Energy Technology Systems Analysis Programme (modelling)

### **INDUSTRY**

- Industrial Energy Technologies & Systems
- Emissions Reduction in Combustion
- Energy Technology Data Exchange (bibliographic database)

### **TRANSPORT**

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

## **Annex C - EUWP Co-ordination Groups**

Under the lead of the Vice Chair for the relevant sector, the annual End-Use Working Party Co-ordination Groups provide an opportunity for Implementing Agreements to learn of developments within their individual programmes, to share experiences, avoid overlap, and reinforce communication between the Implementing Agreements and the IEA Secretariat. Implementing Agreements from other Working Parties are also invited to attend. The first Building Co-ordination Group, which was based on the principles of the Future Buildings Forum, followed by a Transport Co-ordination Group and an Electricity Co-ordination Group.

The Co-ordination Groups also play a pivotal role by bringing together analysts within the IEA Secretariat with experts from the Implementing Agreements.

### **BUILDINGS**

- Buildings And Community Systems
- Demand Side Management
- District Heating And Cooling
- Energy Storage
- Energy Efficient Electrical Equipment
- Heat Pumping Technologies

The following Implementing Agreements also provide bi-annual progress reports to the EUWP vice chairs and participate in the Buildings Co-ordination Group meetings.

- Photovoltaic Power Systems
- SHC - Solar Heating and Cooling

### **ELECTRICITY NETWORKS**

- Demand Side Management
- Electricity Networks, Analysis and R&D
- High-Temperature Superconductivity
- Energy Technology Systems Analysis Programme (modelling)

In addition, the following Agreements participated in the Electricity Networks Co-ordination Group meeting.

- Energy Storage
- Ocean Energy Systems
- Wind Power Systems

### **INDUSTRY**

- Industrial Energy Technologies & Systems
- Emissions Reduction in Combustion
- Energy Technology Data Exchange (bibliographic database)

### **TRANSPORT**

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

In addition, the following Agreements provide bi-annual progress reports to the Vice chair for Transport and participate in the Transport Co-ordination Group meetings.

- Emissions Reduction from Combustion
- Bioenergy
- Hydrogen