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International Energy Agency  
Demand Side Management Programme  
*'Promoting Energy Efficiency and Demand-Side  
Management for global sustainable development  
and for business opportunities'*  
<http://dsm.iea.org>



# **STRATEGIC PLAN FOR THE IEA DEMAND-SIDE MANAGEMENT PROGRAMME 2004-2009**

**August 2004**

# STRATEGIC PLAN FOR THE IEA DEMAND-SIDE MANAGEMENT PROGRAMME 2004-2009

## Introduction

*The IEA Demand-side Management (DSM) Programme is responsive to the energy policies, programs and market needs of the participating countries, and as they continue to change, so must the Programme change. DSM was once an instrument for governments to use to require utilities to move towards a least-cost energy system and to enhance overall use of resources. Since the DSM Programme began in the early 1990s, the energy sector has changed dramatically in many participating countries but the vast potential for improvement on the demand side remains largely untapped. The IEA DSM Programme is neutral to the structure of the energy sector and remains prepared to deliver the research requested to suit the needs and interests of participants in the energy sector. To do this the Programme must closely follow the developments in the energy sector from both a government and business perspective as well as track the changing stakeholder situation.*

*Energy is no longer the only market or policy driver that it was when the DSM Programme began. Environmental concerns, global climate change and grid reliability and security have become important market and policy issues and are expected to grow in importance in the next five years. In many countries there is a recurring and growing concern over the role of supply side parties in the establishment of a more balanced and more reliable electricity system. Working on the demand side is as important as ever but there is a definite need to consider with whom and how.*

## VISION

In many countries today there are two pressing energy sector issues to address. One is the ability to get a “demand response” to shortages in the supply capacity and the other is to make full use of the demand side in achieving environmental targets notably the climate targets that are codified in the Kyoto Agreement. The DSM toolbox holds the necessary tools for both.

DSM tools can:

- **Reduce the demand peaks**, especially when utilisation of power comes close to its limits of availability
- **Shift the loads** between times of day or even seasons
- **Fill the demand valleys** to better utilise existing power resources
- **Reduce overall demand (strategic saving)** in the context of delivering the required energy services by use of less energy (and not a reduction in services).
- **Provide strategic growth** especially to shift between one type of supply to another with more favourable characteristics, for example, in terms of the environment

With few exceptions all countries participating in the DSM Programme state that there are two main issues to focus on:

1. **Security of supply**
2. **Reduction of green house gas emissions** from generation and especially related to the commitments made by setting of the “Kyoto targets”.

For security of supply, almost all give priority to measures to reduce peaks and/or level loads over a time period. Some also mention demand reducing energy efficiency measures as a means to diversify supply since it is easier to find alternative supply for a lower level of demand being less dependent on large distribution systems. Even distributed generation could thus be a solution to a “demand side problem” and should be considered in achieving the goals of a Least-Cost system.

Accordingly, the vision of the IEA DSM Programme during the period 2004-2009 is that:

***Demand side activities should be active elements and the first choice in all energy policy decisions designed to create more reliable and more sustainable energy systems<sup>1</sup>.***

## **MISSION**

Most participating countries are in the process of liberalising their energy, notably their electricity, markets. This process is different in terms of speed, organisation and proportion for all the countries concerned. The traditional actor, the electric utility, does not have the same role and interest as it used to have. The regulators have, in some cases, shown an interest in making use of DSM as a tool and to task the utilities with some responsibility for its execution. Market and actors are nowadays more fragmented, where no one takes responsibility for the complex whole, hence, the execution of DSM-activities in the future must involve new actors. In many countries there is an expression of will to make use of DSM in more commercial terms and to ensure that delivery of services can be developed.

Closely linked to the issue of how DSM should be used and by whom is the more overriding question: “Can DSM deliver substantial amounts of improvements necessary for fulfilment of policy goals?” Whether these goals are those of security of supply or commitments made as regards environment and climate.

The Programme reviewed the opportunities and barriers that the Programme would face during

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<sup>1</sup> Explanatory note: *Demand side options have to be expressed in terms, and made available, as equal to supply side options in order to facilitate a comparison. An energy system with a low demand requires less energy and hence allows for expanded use of renewable energy. The lower demand and the use of renewable resources should be promoted as a way to arrive at sustainable supply.*

the 2004-2009 period and examined its current strengths and weaknesses. Appendix 1 summarizes the highest ranked findings.

Some of the issues to be covered in the new strategy are then:

- **Impact. The capacity for DSM measures to deliver** what they promise.
- **Actors and actor relations.** Who are the new actors and what are their roles, including utilities, municipalities, agencies, regulators, ESCOs and of traditional companies working with installations and buildings.
- **Marketability of DSM.** Can DSM measures be a commodity? Would certificates for energy efficiency be a useful instrument?
- **Customer response. How to** design attractive incentives.
- **Portfolios of measures.** What measures, such as standards, labels, tariffs, fiscal measures, information, and audits should be used, when and in what combinations.
- **Technologies.** How suitable are DSM technologies and how do they apply in different situations.
- Other forms of energy. Is DSM applicable for **energy supplies** other than electricity? Should distributed generation be covered as a DSM measure?
- **Endurance of DSM measures.** Will DSM measures last and will the market change towards use of more efficient technology.

Therefore, it is the Mission of the DSM Programme to:

***Deliver to its stakeholders, materials that are readily applicable for them in crafting and implementing policies and measures. The Programme should also deliver technology and applications that either facilitate operations of energy systems or facilitate necessary market transformations.***

## Objectives

*The Programme has two major objectives directed at its two major stakeholder groups. The Programme will provide to:*

- (a) the **governments** of the participating countries, increased capabilities to develop policies and programs for more effective use of DSM and energy efficient products<sup>2</sup> and to*
- (b) **energy businesses**, the information and tools necessary to create new cost-effective products and services in response to domestic and global opportunities.<sup>3</sup>*

## ORGANISATION OF THE PROGRAMME

To promote synergy and increase impact, the Programme will structure its activities into two clusters, depending on the potential or desired impact on the load curve of the energy system (see also Appendix 2 for further details and views on the cluster organisation).

<sup>2</sup> Government includes administrations, authorities, regulators etc and their associations.

<sup>3</sup> Energy businesses include system operators, transmission and distribution companies, brokers, wholesalers, utilities and their associations. Suppliers of “enabling hardware and software technologies” are included in this category.

- **Load Shape Cluster**

This cluster will include Tasks that seek to impact the shape of the load curve over very short (minutes-hours-day) to longer (days-week-season) time periods. Work within this cluster primarily increases the reliability of systems. See Appendix 2.

- **Load Level Cluster**

This cluster will include Tasks that seek to shift the load curve to lower demand levels or shift between loads from one energy system to another. Work within this cluster primarily targets the reduction of emissions. See Appendix 2.

The Tasks in each of the clusters will be managed by the Programme's Executive Committee as a group. Tasks within each cluster will be closely coordinated to build upon the relationships in their results and in addressing similar target groups. It will also be possible for the EXCO to concentrate its management attention on each cluster at subsequent ExCo meetings.

It should also be possible to handle financing for new work more rationally with the better overview provided by this clustering and with the synergies between the Tasks in each cluster made clear.

The completed, current and planned Tasks are shown in Appendix 3.

## **PROGRAMME PRODUCTS**

With the aim that the Programme should deliver more readily available products to be used and implemented, it is necessary to develop a range of products that could suit several categories of users and that could be developed and delivered in sequence during the work of a Task. The Programme's products will include:

- Reports from the ongoing work (Minutes from Experts meetings, compilations of presentations, questionnaires, etc)
- Publications of results (analysis, overviews and conclusions that might be accompanied by background material, etc.)
- Articles for professional journals
- Workshops and presentations at workshops and conferences
- Forums for dissemination and/or discussion with possible users, customers, decision-makers, etc.
- Growing pool of individuals and organisations in each country that develops new expertise in DSM issues and solutions
- Databases
- Software for calculations, simulations, etc.
- Training seminars and courses
- Award of Excellence to be delivered once a year to a company or a product that facilitates DSM

Each of the Tasks must carefully plan how their work can be made available to their stakeholders by use of several of these products and also by continuously reviewing how dissemination can be improved. The Operating Agents should explicitly state what products they intend to deliver and preferably do so in a special Dissemination subtask that will be an integral part of their work.

Appendix 4 highlights the accomplishments of the Programme.

## **NATIONAL BASE AND DISSEMINATION OF PRODUCTS**

The new business structure that has emerged in the energy sectors in the participating countries makes it more difficult to formulate priorities and to target results. Many actors in the energy arena today have a new organization, new objectives and new structure. It is therefore highly recommended that each participating country form a **DSM-user group** and involve them in the work of the IEA DSM Programme. Who actually should participate and in what form is highly dependent on each country's specific situation.

The following stakeholders could participate in these national groups:

- Utilities
- Regulators
- National, Local and Regional Administrations and Agencies
- Industry and Trade Associations
- System Operators
- Customer Organisations and larger Customers
- Universities
- Research Bodies
- Journalists

The DSM-user groups should be used to provide input during the Task definition phase, to review work in progress and to disseminate the Task results. These groups could also provide their priorities to the ExCo when new Strategic Plans are developed. They could also assist in providing experts and possibly providing or finding funding or sponsorship. They could also propose nominations to the Award of Excellence.

EXCO members and their national experts in each country are asked to form such a user group and consult with it on a regular basis in preparation for EXCO meetings.

## **FINANCIAL STRUCTURE**

As before, the work to be done in this Programme must be financed by the participating countries. There is still a need for common funding of activities for preparation of ExCo meetings, administration of the Programme, and for the dissemination of Task results. Over the years, this administrative burden has grown since the IEA Secretariat requires more and more

products (strategies, reports, etc) and delivers less and less support (such as legal advice, desk-officer support etc). The common fund increasingly has to be directed to operations rather than adding value to the programme itself.

**Sponsors:** Trade associations and companies from both participating and non-participating countries should, if appropriate, be encouraged to become sponsors in the Programme based on the new IEA-principles for Sponsoring Organizations. These sponsors will be expected to participate in the Tasks of the Programme. The sponsors should have an equal right to define the Task work plan, to assess the progress and to review and approve Task reports. It is proposed that the common fund payment for a sponsor should be the same as that of a participating country. Sponsors will also be expected to provide cost sharing funds and task sharing experts the same as any participating country. It is also proposed that if sponsors so wish and it is within the capacity of the Task work, they should have the right to special presentations e.g. for their staff or any other group that they want to target, provided they cover the associated costs.

## OTHER RESOURCES

**Co-operation on basis of recognition:** If the benefits justify the effort and mutual interest exists, specific co-operation with other interested parties, based on Memorandum of Understanding (MOU) and in-kind contributions will be encouraged. This could add to the networking and dissemination capacity of the Programme.

**Co-operation within the IEA:** There will also be a need to develop a closer co-operation with the IEA Building Related Programmes gathered within the Buildings Coordination Group (BCG) as well as with other relevant Programmes. It is also important to improve co-operation with the IEA secretariat. The Programme can thereby bring its expertise together with the convening power and dissemination capacity of the Secretariat. This co-operation should be based upon the following principles:

- The Programme has access to experts in the DSM area that could, if desired, make recommendations to the Secretariat on technology development and policy action matters.
- The Secretariat has dissemination capacity to government policy levels both on a regular basis and at certain specific occasions as well as a dissemination capability for products. This can be accessed for mutual interest of the Programme and the Secretariat to highlight important issues.
- The IEA as a body has a “convening power” in its status and its name that can be used to gather parties from different communities to discuss solutions to special problems.

## MANAGEMENT AND RESOURCES

The Programme’s work will continue to be based on traditional approaches where resources are provided by cost-sharing and/or task-sharing.

## APPENDIX 1

During the development of this new Strategic Plan, the Programme reviewed and updated the lists of Market Opportunities and Barriers that should impact the new plan. The Programme also reviewed and updated the list of the Programme's strengths and weaknesses that impacted how the new plan is to be implemented. These revised lists are shown below.

### Market Opportunities

Need to meet Kyoto targets
Growing focus on market-based mechanisms
Liberalised markets create new players, new services and new opportunities
The ESCO market is growing
DSM and EE in line with local environmental concerns and goals
Energy demand must be reduced in many countries
Price risks are increasing thus emphasising real-time pricing and load responses
The planned new EU directive on Demand management and energy services
Grid security requires demand response

### Market Barriers

Link between EE/DSM and liberalised energy markets is unclear
Market and actors are fragmented and no one takes responsibility for the complex whole
Falling electricity prices are low and are expected to continue, reducing opportunities for EE and DSM
Insulation of customers from location and time of use cost signals
Energy market reform (liberalisation) and abrogation of government responsibility for supply and efficient use of resources
Reluctance of governments to regulate energy markets and reliance on self-regulation models with subsequent supply-side focus
Little interest by utilities and regulators in DSM
Customer driven DSM/EE programs are minimal

### Programme Strengths

Excellent potential to share what works and what does not
Ability to conduct collaborative and/or innovative studies
Capability to contribute to or influence policies in participating countries
Ability to assemble excellent study teams
ExCo and Experts have intellectual capability to use tools developed in Tasks
ExCo members are committed to work collaboratively
Strong network of Experts
Programme addresses the key issues of interest in the participating countries

### Programme Weaknesses

Program funding is limited and getting harder to secure
Significant effort is required to fund each new Task
Difficult to involve and fund Experts with necessary time and skills
Difficult to ensure commitment from Experts
Countries unable or unwilling to cover their OAs costs
Tasks take too long to complete
ExCo members do not seem to consult with their Experts and organisations prior to the meetings
Considerable time required to start new Task and process is complicated



## **APPENDIX 2**

During a series of discussions, the EXCO noted the priority areas in the current Strategic Plan and addressed proposed new work to be considered.

### **Load Level Cluster**

- (1) Based on the potential of EE and DSM, estimate the contribution that EE and DSM could make to future GHG emission reductions.
- (2) Develop new tools for international comparison of the impact of different tariff systems and energy labels on GHG emission reduction.
- (3) Study how economies can reduce electricity growth by 10 or 20 percent in 10 years by energy efficiency and DSM measures.
- (4) Study the cost-effectiveness of energy efficiency programs and measures to reduce GHG emissions.
- (5) Analyse the economic benefits of the greater use of energy efficiency and DSM.
- (6) Conduct a comprehensive assessment to determine how to make energy efficiency work in market-based economies with falling energy prices and less regulation.
- (7) Study the current benefits to electricity supply businesses of DSM and energy efficiency in dynamic electricity markets.

### **Load Shape Cluster**

- (1) Perform a comprehensive analysis of various economic incentives and fiscal measures, including pricing systems, tariffs and levies.
- (2) Study how energy systems respond to crisis - What happens during a crisis; what do users actually do, do they do load levelling and what impact does this have on reliability and security.
- (3) Address a wider aspect of local responses to energy system problems aside from demand side activities, energy and end use activities
- (4) Regulatory matters related to energy efficiency - What areas of energy efficiency is best regulated and what should be purely market-based
- (5) Study smart technologies to advance DSM/EE, including communication technologies.
- (6) Assess the impact of groups of EE and DSM measures, including labelling, on load and GHG emissions reductions
- (7) Determine the value of detailed demand monitoring in domestic premises.

Consider a coordinated load levelling activity with the Energy Storage Programme.

A further clarification of the two views are given below:

## The load shape<sup>4</sup>

This cluster will include Tasks that seek to impact the shape of the load curve over very short (minutes-hours-day) to longer (days-week-season) time periods

The interest in load shaping activities should be most important to:

1. **Policy makers and regulator**, since it will increase the system security, improve economic efficiency and possibly also have positive impacts on the environment,
2. **Market operators**, because of effects on market prices (with a clear customer benefit) and the reduction of the influence (power) of the big actors,
3. **System operators**, because of system balancing and the handling of disturbances in generation and transmission. It could also have the potential of preventing blackouts and certainly the restoration of systems after a blackout. Bottlenecks in transmission will be easier to deal with and there will be a better use of existing generation and transmission capacity,
4. **Distribution network operator** who will find a tool to handle bottlenecks under peak periods and to utilise network capacity better. They will find it easier to handle distributed generation capacities and to increase the quality of supply,
5. **Traders/suppliers /retailers** for their risk management and also to find new businesses e.g. acting as “aggregators” of demand response, and to
6. **Customers** who will have an economic benefit with the ability to react to prices and even trading of loads. And certainly from an improved reliability of the system.

There are several ways to influence the load shape:

- a) Tariffs and pricing, which could be undertaken by network pricing and/or retail pricing but will probably need more innovative metering and communication systems to reach full effect,
- b) Direct load control after agreement between the parties and mostly applicable to standard type of loads such as air-condition and heating,
- c) Marketing of demand side bidding (see Task VIII) and by
- d) Information-feedback.

## The load level<sup>5</sup>

This cluster will include Tasks that seek to shift the load curve to lower demand levels or shift loads from one energy system to another.

Liberalised markets have made it more difficult to find actors that reach out and promote demand side actions and energy efficiency in the eyes of the customers is still too unknown/insecure or insignificant to get their attention. There is still a need to find supportive policy instruments to release the energy efficiency potential. New actors have however emerged and may be animated

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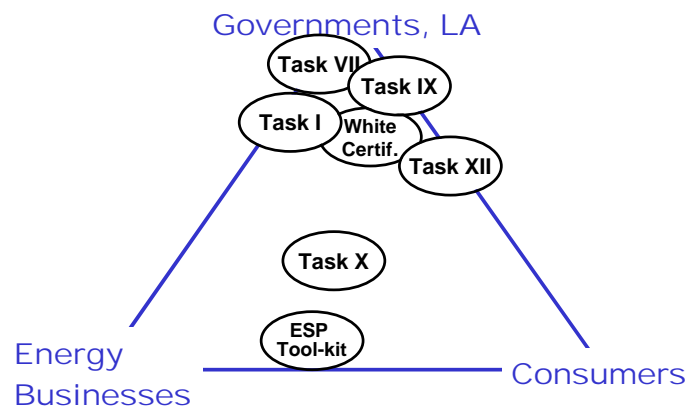
<sup>4</sup> Presentation made by the Finnish representative, Seppo Kärkkäinen during the 22<sup>nd</sup> ExCo meeting

<sup>5</sup> Presentation made by the Austrian representative, Boris Papousek during the 22<sup>nd</sup> ExCo meeting

to a more profound role - energy agencies, ESCOs, regulators etc. Energy efficiency and demand management is important not only “per se” or for electricity systems, but for all fuels and as instruments to get fuel switching in systems with combined power-heat-cold and distributed generation.

Mapping out the relations between governments, business and consumers shows (1) the stakeholders’ interest:

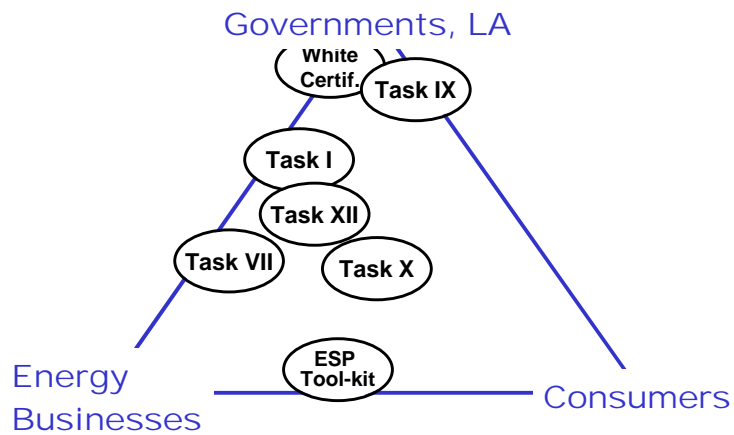
## Stakeholders (whose interest?)



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(2) the acting possibilities

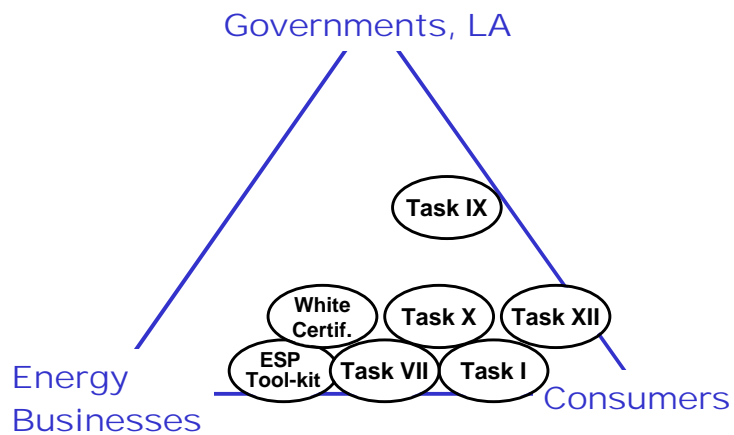
## Actors (who should act?)



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(3) Where changes can take place

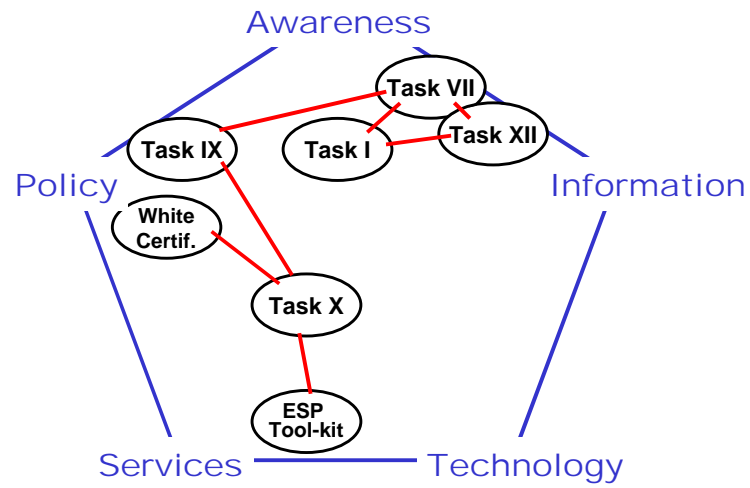
## Target Groups (changes where?)



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And finally (4) What instruments can be used to reach these results..

## Impact on Load Level through:



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## APPENDIX 3

### Completed, Current and Planned Tasks

Completed work is shown with grey shade in the table below

Annex		CLUSTER		Crosscutting General aspect
		Load Shape	Load Level	
I	International Database on DSM Technologies and Programmes		X	X
II	Communication Technologies for DSM	X		
III	Cooperative Procurement of Innovative Technologies for DSM		X	X
IV	Development of Improved Methods for Integrating Demand-Side Options into Resource Planning			X
V	Techniques for Implementation of DSM-Technology in the Marketplace		X	X
VI	DSM and Energy Efficiency in Changing Electricity Business Environments		X	X
VII	International Collaboration on Market Transformation		X	X
VIII	Demand-Side Bidding in a Competitive Electricity Market	X		
IX	The Role of Municipalities in a Liberalised System		X	X
X	Performance Contracting		X	X
XI	Time of Use Pricing and Energy Use for Demand Management Delivery	X		
XII	Energy Standards		X	
XIII	Demand Response Resources	X		
XIV	White Certificates		X	
XV	Network-driven DSM	X		
<b>IN PREPARATION</b>				
Advanced Lighting Programmes			X	

## APPENDIX 4

### HIGHLIGHTS OF DSM ACCOMPLISHMENTS

The IEA DSM Programme's work to clarify and promote opportunities for demand-side management benefits participants and users on both international and national levels. Refer to <http://dsm.iea.org> for details of the work summarised below.

#### Overview

The IEA Demand-Side Management Programme is an international collaboration with 17 IEA Member countries and the European Commission, working to clarify and promote opportunities for demand-side management (DSM). For the purposes of this Programme, DSM is defined to include a variety of purposes such as load management, energy efficiency, strategic conservation and related activities. DSM thus forms a “tool-box” for utilities and governments in their work to make energy systems more suited to their purpose. Further, the Programme is developed to cover such activities under different regulatory regimes and market structures since the basic need to ensure an optimal function of the energy system is common throughout the world. There have been many changes in the organisation of the energy markets in the world and the DSM Programme has been adjusted accordingly to serve the actual and changing circumstances. The Programme and its Experts have thus achieved profound knowledge and insight in the management of Energy Efficiency in modern contexts.

The work of the Agreement is carried out through a series of Tasks, and the achievements to date are presented here with respect to each of those Tasks, to the Agreement as a whole, and to the plans for the future.

#### Task I: International Data Base on Demand-Side Management Technologies and Programmes <http://dsm.iea.org/INDEEP>

- Developed INDEEP, a comprehensive *international web-database* of over 220 DSM programs in 15 countries. It is available in 4 languages (Dutch, English, French, and Spanish).
- Developed, tested and improved an efficient *data collection instrument (DCI)* for energy efficiency and DSM programs. Organisations that use this standardised tool, which is available in several languages, benefit from reduced data collection costs.
- Conducted an *international analysis* on groups of programs in the database, including market transformation, lighting and communication. This data is used by countries for program development and evaluation.

#### Task II: Communications Technologies for Demand-Side Management

- Defined *energy related services* for consumers that can be made viable through the

provision of cost effective communications. These services range from the management of micro-generation plant, through load adjustments, to feedback to the customer on end-use energy consumption.

- Developed a *business architecture* that demonstrates the route for ESCOs to deliver such services to customers cost effectively.
- Developed the FlexGate, a *communication gateway* that overcomes many of the difficulties of providing wide-ranging services.
- Defined *field trials* of energy related services, and the next step is to implement these field trials to demonstrate the services and prime the market for wide-scale service delivery.

### **Task III: Cooperative Procurement of Innovative Technologies for Demand-Side Management**

- Developed and published a methodology for the international cooperative procurement of low-energy products which are traded globally.
- Successfully used this approach to stimulate the development and commercialisation of five innovative energy efficient products. All received the IEA DSM Award of Excellence.
  - *German AEG clothes dryer*. This machine uses a heat pump to achieve a 50% reduction in energy use compared to earlier models. The machine also had the distinction of receiving the first EU Energy Class A Label.
  - *ABB High-efficiency electric motors*. The efficiency of the 2 winning motors developed by ABB Motors went beyond expectations. The 5.5kW motor reached an efficiency of 90.5% and the 75kW motor reached a 96% efficiency rate.
  - *Ricoh and Canon Copiers of the future*. In combination with other features, these machines consume around 70% less energy than comparable copiers on the market.

### **Task IV: Development of Improved Methods for Integrating Demand-Side Options into Resource Planning**

- Reviewed and documented utility structures and integrated planning approaches in IEA-member countries.
- Performed comparative assessment of, and published 2 reports on, government and utility power sector planning priorities in IEA-member and non-member countries with a view to their implications for the integration of DSM options into resource planning.
- Developed and published a guidebook describing alternative approaches and summarising examples of how methodologies developed by the Task IV participants have been incorporated.

### **Task V: Investigation of Techniques for Implementation of Demand Side Management Technology in the Marketplace**

- *Nine pilot* programs were initiated to test different DSM marketing strategies. The



programs were implemented by segmenting the target groups into subgroups of customers with similar characteristics and interests. This segmentation allowed getting closer to customer micro-marketing. (The reports are also available in Spanish)

#### **Task VI: Mechanisms for Promoting DSM and Energy Efficiency in Changing Electricity Businesses**

- Developed 25 detailed policy, regulatory and commercial mechanisms for promoting demand-side management and energy efficiency in restructured electricity industries.
- Identified and described 99 mechanisms already in use in the countries participating in the Task.
- Identified the public policy goals and objectives that governments may seek to achieve through the reform and restructuring of the electricity industry.
- Analysed how the effectiveness of mechanisms to promote DSM and energy efficiency is influenced by different structural models for the electricity industry.
- Published an article, “Public Policy Analysis of Energy Efficiency and Load Management in Changing Electrical Businesses” in Volume 31 (January 2003) of the international journal *Energy Policy* based on the work of this Task.
- The work of this Task constitutes a comprehensive catalogue of information on incorporating DSM and energy efficiency into restructured electricity industries. The products are of immediate practical use to government policy makers, industry regulators, electricity business managers and analysts and commentators on the electricity industry.

#### **VII: International Collaboration on Market Transformation**

- Developed an *international market transformation policy approach* that is leading to shared policy development, initially across the European Union.
- Conducted *international market research* in six countries. The research is the first of its kind in the energy efficiency marketplace, and has provided a tool to engage industry in marketing and promoting energy efficient products.
- Held several *workshops* to promote a new approach to brand and market energy efficiency.

#### **Task VIII: Demand Side Bidding in a Competitive Electricity Market**

- Conducted *two DSB surveys* in participating countries of 1) market participants’ (including customers’) views and opinions on DSB and 2) technology requirements for DSB.
- Significantly *improved the understanding* of demand bidding and its challenges to power pools.
- Contributed to the *consideration of demand side bidding* as an ESCO operation.

#### **Task IX: The Role of Municipalities in a Liberalized System**

- Published two important reports on the impacts of liberalized energy markets (*Liberalization and Its Impact on Municipalities in the Participant Countries and the U.K.*) and on the different energy roles municipalities play (*The Role of Municipalities in the Energy Sphere in the Participant Countries and the U.K.*).

- Promoted the idea of *cooperation* between local authorities in liberalized energy markets and the development of the *market power of the customer*, or “energy will.”

#### **Task X: Performance Contracting**

- Developed *market mechanisms* for use to launch concrete projects for tender.
- Prepared eight *country reports* that identify barriers, good examples and opportunities for EPC, and review government EPC programs and policies.
- Work shows *20-40% energy savings* in completed projects.

#### **Programme-Supported Dissemination Avenues**

- Web site <http://dsm.iea.org>
- Newsletter (Spotlight), published three times per year.
- Annual report.

### **NEW TASKS**

#### **Task XI: Energy Use, Metering and Pricing for Demand Management Delivery**

This will quantify the impact that time of use and end-use metering and pricing can have on customer energy costs, energy savings, and supplier risks if applied on a wide scale.

#### **Task XII: Energy Standards**

This Task will address the problem of disjointed standards for energy using products and systems in different parts of the world, and the fact that in an increasingly global market, coordination – or at least mutual awareness – of the different standards and standard setting procedures is long overdue. The work of the Task is structured to support current work underway to develop a “Strategic Vision and Road Map” for energy standards. The Task will hold meetings, conduct studies and prepare reports on specific issues that emerge from the road map meetings.

#### **Task XIII: Demand Response**

This Task will promote best practice demand response models as tools for simultaneously improving electricity system reliability, reducing system costs, and managing and reducing electricity demand and associated greenhouse gas emissions.

#### **Task XIV: White Certificates**

This Task will reduce primary energy consumption and CO<sub>2</sub> emissions through global market mechanisms connected to Energy Efficiency trading, Renewable Energy Commitment trading and Carbon Trading Schemes (White, Green and Black Certificates).

#### **Task XV: Network-Driven DSM**

This Task will address how to achieve load shape changes to relieve network constraints at particular times of the day or in particular geographical locations.

### **TASKS BEING DEVELOPED**

**Energy Efficient Lighting for DSM** to focus on how DSM-type programs can address issues, such as improving performance, quality and costs of lighting products and their application by utilities or other energy service providers in liberalized and more traditional markets.

## **REASONS TO JOIN THE IMPLEMENTING AGREEMENT**

- It is the only international organization that addresses the management of energy demand, on the demand side of the meter, in a comprehensive manner.
- It comprises a network of people who are active in Energy Efficiency, Demand Side Management and Demand Response and who can link to national networks of key experts and leaders.
- It is able to identify timely and urgent work to perform collaboratively.
- It saves money because each country pays for a portion of the work yet has access to the entire results.
- It saves time because task sharing is more efficient through the additional resources brought to bear on the Task work.
- It enables complex and/or expensive projects to be undertaken.
- It is continually adding new areas of work to reflect the changes in Demand Side Management.