

ANNEX XIII

DEMAND RESPONSE RESOURCES

1. Introduction and Definitions

(a) Project Description

To produce a number of key products, methodologies, tools and other intellectual property to enable participating/member countries to rapidly implement demand response into their market structures.

(b) Definitions

DRR	Demand Response Resources are defined as load response called for by others and price response managed by end-use customers for the purpose of mitigating market prices and improving system reliability.
Load response	Managing market demand through the process of performing direct load control, such as control of residential air conditioners; partial or curtailable load reductions, and complete load interruptions.
Price response	Managing market prices through the use of real-time pricing, dynamic pricing, coincident peak pricing, time-of-use rates, and demand bidding or buyback programs.
Task Experts	The Task Experts are designated by each Participant. The Task Experts are expected to contribute their knowledge to the progress of the Task. Each Participant may nominate one or more Task Experts with different knowledge. One Task Expert should be designated as national co-ordinator.

2. Objectives

The primary objectives of this Task can be defined as follows:

1. Identify and develop the country-specific information needed to establish the potential for demand response.
2. Perform the market and institutional assessment needed to set realistic goals for the contribution of DRR to sector objectives.
3. Mobilize technical and analytic resources needed to support the implementation of DRR programs and track their performance.

3. Means

The Objectives shall be achieved by the participants in the following Subtasks

SUBTASK 1 --Finalize Global and County-Specific Objectives:

This Subtask will define the basic principles on which the project would proceed and involve three steps:

- 1.) Develop global objectives based upon IEA principles.
- 2.) Develop country-specific objectives, with each participating country customizing their own objectives within the global objectives.
- 3.) Finalize the deliverables that would be produced by this Annex including how they would be applicable to each participating country.

SUBTASK 2 -- Define the DR Resource Base and Market Characterization:

This Subtask will involve a market characterization of demand response products, services and enabling technologies. It will identify the market actors involved and the decisions that need to be made by market actors to effectively deploy DRR.

SUBTASK 3 – Market Potential of DRR

This Subtask will examine those factors that make DRR economic with specific application to participating countries. This effort will build on the results of Subtask 2 and a best practices database to determine how much DRR would be economic within different markets and under different market conditions

SUBTASK 4 – Demand Response Valuation

This Subtask will develop the methods and procedures required to establish the value of DR and to administer them in each country to create a valuation framework to guide development initiatives. This value of DRR can be compared to the market potential developed in Subtask 3 to set initial targets for DRR within regions and countries

SUBTASK 5 – Role and Value of Enabling Technologies

The focus of this Subtask will be to develop a catalogue that describes the technologies and systems that are available for use in DR programs both from the perspective of the system operator and the participating customer. The value of technologies and systems of different applications will also be addressed.

SUBTASK 6 – Characterize Priorities and Barriers, and develop Solutions and Recommendations

This Subtask will be to establish channels for communicating with each country's key decision makers, thought leaders and DR program administrators and implementers and utilize them to promote the development of DR resources.

SUBTASK 7 – Develop DRR Network of Methods, Tools and Applications

This Subtask will involve creating a web portal that will be a virtual center of excellence concerning DRR methods, technologies, and applications. This will include processes and procedures for estimating DRR market potential, and public and private values of DRR. It will also include information on best practices for implementing DRR and the role of enabling technologies and systems.

SUBTASK 8 – Deliver Products and IP to IEA DSM Programme and Project Participants

This Subtask will focus on the delivery of the intellectual property created in the DRR Project to the IEA DSM Programme and the participating countries.

4. Information and Intellectual Property

In addition to the intellectual property provisions contained in Article 9 of the Agreement, the following provisions shall apply to this Annex. In the case of a conflict, the following rules still prevail: inventions made or conceived in the course of or under activities referred to in paragraph 3 above shall be owned in all countries by the inventing Participant. Information regarding inventions on which patent protection is to be obtained by the Participant shall not be publicly disclosed by the other Participants until a patent application has been filed, however, this restriction on publication or disclosure shall not extend beyond six months from the date of receipt of such information.

It shall be the responsibility of the inventing Participant to appropriately mark reports, which disclose inventions that have not been appropriately protected by filing a patent application. Each Participant agrees to license all arising inventions and all pre-existing inventions necessary for and used in the activities under paragraph 3 above to the other Participants, their Governments and the nationals of their respective countries designated by them, on reasonable terms and conditions for use in all countries.

The Participants shall extend the same principles to all entities (persons, companies and organizations) involved in procurement activities.

5. Results

Subtask 1 Deliverable – The deliverables from this Subtask will include a report detailing the consensus objectives, project deliverables on a task-by-task basis, and a section for each country summarizing country-specific objectives.

Subtask 2 Deliverable – The deliverable from this Subtask will include a review of existing studies and reports on DRR, a classification of DRR by product and delivery features, a characterization of the methods by which DRR can be integrated into markets, and, most importantly, a best practices database of DR activity.

Subtask 3 Deliverable – The deliverable from this Subtask is an estimate of the magnitude of DRR that can be integrated into region and country-specific markets given attributes of those markets.

Subtask 4 Deliverable – While Subtask 3 assessed the market potential of DRR, Subtask 4 will address the public and private value associated with different levels of DRR that can be combined with the market potential estimates to produce initial target levels of DRR by region and country.

Subtask 5 Deliverable – The deliverable from this Subtask will be a catalogue of existing, new and potential technologies and systems that will be updated and maintained.

Subtask 6 Deliverable – The deliverables from this Subtask will be a document and report on barriers to meeting target levels of DRR, and create and maintain an information repository that tracks the identification and resolution of barriers.

Subtask 7 Deliverable – The deliverables from this Subtask will be a website and portal that provides access to DRR information, tools, and best practices developed through this work effort. A DRR Newsletter from the Operating Agent. Country-specific centers of excellence can be developed at each country's discretion.

Subtask 8 Deliverable – The deliverable from this Subtask will be to transfer DRR Project Portal operation, maintenance and training to the IEA DSM Programme IT team and conduct four regional workshops with Country Experts and Stakeholder teams. Complete a DRR Project final report and submit it to the Executive Committee.

6. Time Schedule

This Annex shall remain in force until 1st June 2006. Within the limits of the term of the Agreement, this Annex may be extended by two or more Participants, acting in the Executive Committee, and shall thereafter apply only to those Participants.

7. Specific Obligations and Responsibilities of the Participants

In addition to the obligations enumerated in Article 7 of the Agreement:

- (a) Each Participant shall provide the necessary resources and shall perform the functions defined in each of the Subtasks.
- (b) Each Participant shall provide the Operating Agent with detailed reports on the results of the work carried out for each Subtask.
- (c) Each Participant shall participate in the editing and reviewing of draft reports of the Task and Subtasks as necessary.

8. Specific Obligations and Responsibilities of the Operating Agent

In addition to the obligations enumerated in Article 5 of the Agreement, the Operating Agent shall:

- (a) In consultation with the National Experts and other Participants, prepare a Programme of Work defining the overall project objectives and the basic principals of the project and generate the basis for each participating country to begin the analysis of country specific objectives and deliverables

- (b) Provide overall project management of all Subtasks and deliverables to the Participants and Executive Committee.
- (c) Manage, market and disseminate the intellectual property obtained as a result of the Subtasks to raise and maintain interest and understanding.
- (d) Provide semi-annual reports to the Executive Committee on the progress and results of the work performed under the Programme of Work.
- (e) Provide to the Executive Committee within one month after completion of all work under the Task, a Final Management Report for its approval.
- (f) Coordinate the work of the Subtasks and the different National Experts, and in co-ordination with the Participants, use its best efforts to avoid duplication with activities of other related programmes and projects implemented by, or under the auspices of the Agency or by other bodies.

9. Meetings

There will be Experts Meetings of the Task at intervals of approximately 6 months. When appropriate, these Experts Meetings will be combined with Workshops. Attendance at the Experts Meetings will be mandatory.

10. Funding

(a) Common Fund

A Steering Committee shall be established by the Operating Agent and the US Department of Energy to manage all funding of this project. Funding status shall be included in the annual Programme of Work and Budget for the purpose of supporting the obligations of the Operating Agent under this Annex.

(b) Task Costs

The Budget of the Operating Agent for carrying out the management of this Annex is approximately US \$600,000. This amount will be covered by the US Department of Energy and the private sector in the United States.

The total allowable expenditures under this subcontract with the IEA, including all travel, administrative and operational expenses shall not exceed US \$1,950,630 Over the 30 month duration of this project.

(c) Sharing of Task Costs

The budget shall be funded by the participants through a standard contribution of the overall project budget. The cost of the participating resources is shared between the participating countries in what is referred to as a “Cost Shared” basis. The funding required by each participating country shall be US \$30,000 annually over the three year life of the project.

The work of the project will require direct involvement by technical, operational, environmental, business, regulatory or policymaking resources locally in each country. The provision of these resources to support the project are typically the direct responsibility of the participating countries and are provided “in kind” from the participating countries to the Project.

(d) Payment terms

The Operating Agent shall send invoices to the Participants at the beginning of each financial year of the Task. Payments from each Participant must be received by the Operating Agent no later than 30 days after the participant's receipt of the Operating Agent's invoice.

(d) Changes in Numbers of Participants

If the number of Participants changes, the shares of contributions to the costs will be adjusted accordingly by the Executive Committee, acting by unanimity of the Participants. New Participants shall pay the full share of the costs beginning with the project year in which they become Participants.

(e) Individual Financial Obligations

In addition to the contributions described in sub paragraph (c) above, each Participant shall bear the all the costs it incurs in carrying out its obligations under the Annex.

(f) Task Sharing Requirements

The level of effort to perform the work specified in this Annex is estimated for each participant to be 1300 man-hours over the duration of the project.

11. Operating Agent

The Operating Agent for the project is Ross Malme, President and CEO of RETX and Chairman of the Peak Load Management Alliance, a trade association for the North American demand response industry.

12. Participants in the Task

The contracting parties in this Task are the following:

The Energy Research and Development Corporation (ERDC), Australia

The Ministry of Energy, Danish Energy Authority, Denmark

The National Technology Development Center (TEKES), Finland

CESI, Italy

Heat Pump & Thermal Storage Technology Center of Japan

The Ministry of Commerce, Industry and Energy, Korea

SenterNovem, Netherlands

Enova, Norway

The Ministry of Industry and Energy, Spain

Swedish National Energy Administration (STEM), Sweden

Department of Energy, United States