

## MEMORANDUM

To: IEA DSM Task XIII Participants  
 From: Pete Scarpelli, Task XIII OA Team  
 Date: July 5, 2006  
 RE: June 14-15, 2006 Amsterdam Experts Meeting Minutes

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The sixth Experts Meeting was held in Amsterdam, Netherlands on June 14-15, 2006. The meeting was sponsored by Energy Research Centre of the Netherlands (<http://www.ecn.nl/en/>). As we have stated a number of times, these meetings would not be possible without the generous support of the local sponsor. Therefore, we are extremely grateful to René Kamphuis for planning the local logistics as well as planning the joint meeting on Friday, June 16 with the Netherlands stakeholders.

All meeting materials can be located on the project portal ([www.demandresponseresources.com](http://www.demandresponseresources.com)).

### **Tuesday Evening**

On the evening before the meeting, attendees that were not too jet lagged from their long journey met for a pre-meeting dinner. This gave us a chance to rest from our journey and catch up with our friends in person.

### **Day 1**

Pete Scarpelli called the meeting to order at 9:45 AM Wednesday, June 14, 2006. This was a slightly later start than anticipated due to some travel and initial security screening requirements. The following people were present (at some point during the two day meeting)\*:

<b>Experts &amp; Guests</b>	
	<b>COUNTRY EXPERTS</b>
1	Terry Jones (Australia)
2	Peter Fraser (Canada)
3	Casper Kofod (Denmark)
4	Seppo Kärkkäinen (Finland)

5	Jan Griffioen (Netherlands)
6	Dr. René (I.G) Kamphuis (Netherlands)
7	Ove S. Grande (Norway)
8	Carmen Rodriguez-Villagarcia (Spain)
9	Peter Fritz (Sweden)
10	Mats Soderstrom (Sweden)
	<b>OA TEAM</b>
11	Pete Scarpelli (OA Team – USA)

\* Representatives from Korea, Italy, and the USA were unable to join us.

Scarpelli opened the meeting by thanking everyone for traveling from his or her respective homes to participate in the Experts Meeting. Scarpelli then thanked Kamphuis for his help in planning the meeting. After which, Scarpelli informed everyone that Ross Malme sent his apologies for not being able to attend the meeting. He was detained in the USA to deal with several significant business issues. Scarpelli further noted that the Korea, Italy, and the USA were all unable to send representatives for a variety of reasons.

Scarpelli also noted that Magnus Hindsberger has accepted a new position at the New Zealand TSO and will not be able to join us any more. However, he was going to try and get the New Zealand to join the IEA DSM in the future.

Kamphuis then proceeded to welcome everyone to Amsterdam and gave an introduction to the Energy Research Centre of the Netherlands. He noted that ECN is the national research laboratory for the Netherlands and it is engaged in research studies that span the spectrum of energy issues. Kamphuis also said that he is currently engaged in on a multi-organization project that is working on developing micro-CHP. By redesigning residential home heating systems, they are able to improve the efficiency of the entire power grid by reducing the amount of central station reserves.

Our first order of business focused on a project deliverable review from Pete Scarpelli (see Task XIII Project Status Overview\_Scarpelli\_June 06.PPT).

A few key highlights from the presentation are as follows:

- **Project Participation:** By now everyone knows who is participating in the project. However, we were pleased to learn from Seppo that he believes that Tokyo Electric has agreed to join the IEA DSM on behalf of Japan. Therefore, we should confirm this information and then contact them regarding Task XIII.
- **Project Plan:** A project plan spreadsheet was provided to all Experts. The spreadsheet includes the steps involved with each subtask. It also notes input from each country for each work step (see IEA DSM Task XIII Detailed Project Plan June 2006 v1.0.xls)
  - The spreadsheet shows that the project is behind its original schedule, but that is due to the fact that the group made the decision to delay

activities for Subtasks 5 & 6 to allow all country experts time to provide additional input.

- We did receive additional input from several parties, but there is still a belief that not all parties have contributed as much as they should. For example, the technology database contains information from almost all countries, but in many instances it only has a couple of case studies. This was deemed to be a deficiency by all participants at the Amsterdam meeting. It was agreed that everyone would make best efforts to provide additional case studies by August 15.
- In order to deliver finalized documents for the October ExCo meeting (documents are must be submitted to the ExCo 30 days in advance of the meeting), it is imperative that all final data input is provided by August 15. This will give us a week to make edits and then a couple weeks to circulate all final documents for last and final reviews.
- **ExCo Meeting Debrief:** At the April ExCo meeting, Malme briefed the ExCo on Task XIII activities since its last meeting. This included the status of each project Subtask, the Melbourne Experts meeting, and the decision to delay a couple subtask reports to provide additional work time for everyone.
  - Malme informed the ExCo that we need to press forward with Subtask 5 & 6 reports if we are going to complete the project on time. Therefore, he requested and received ExCo agreement to proceed with the reports based on the information we have. The reports were issued to the Experts shortly thereafter.
  - At the ExCo meeting, the DSM Chairman agreed to engage REEP and/or CIGRE in co-hosting a DR conference in 4<sup>th</sup> quarter of 2006. Shortly before the Amsterdam Experts meeting, we learned that it is more likely that the event will take place in the first half of 2007. Therefore, we need to identify another venue for a final Task XIII delivery conference in Europe. Discussion on this was deferred to the next day.
  - Shortly before the ExCo meeting, we became aware that one of the project participants is unable to make its full financial commitment to the project. Malme informed the ExCo that RETX will proceed as planned and will invest its own money. However, in order to recoup some of the investment, RETX will consider developing the previously proposed Center of Excellence and make participation available on a subscription basis. We would also consider developing consulting services based on the Task XIII information as well as a continuing educations/professional certification program for demand response.
    - Terry Jones noted that he endorses the idea of the COE because it will help to ensure that the work has future life and does not die at the end of the project. However, he was not entire sure how it would reconcile with their one year protection on project intellectual property. Scarpelli indicated that these are ExCo issues and he should discuss it with his member.

- The ExCo held a project brainstorming session at its last meeting. They asked each ExCo member to seek out potential ideas from their country and bring them to the meeting for consideration. One of the ideas was the investigation of the relationship between AMI & DR. As a result, Malme and David Crossly were asked to draft a proposed scope of work for this. Per the ExCo request, a draft was created and circulated to the ExCo a few weeks before the Experts meeting. The draft was also provided to the Experts for discussion on the following day.
- **Project Deliverables by Subtask:** Given the late hour, we deferred this discussion to the following morning.

After a brief lunch break, we reconvened for the afternoon session. Each country expert gave a brief talk about DR related current events in their country. Highlights of the presentations are as follows:

- Australia (Jones): Jones provided two presentations. The first was an overview of DR issues in Australia (see AU Country Update\_IEADSM Task XIII\_14Jun06\_v3.ppt). In this presentation Jones noted at least 20 new political developments (e.g. a February 2006 policy statement that includes the development of a comprehensive mechanism for including DSR in the energy market) as well as the status of a variety of DSM projects (e.g. Energy Response, an aggregator, has contracted with NEMCO to provide 125 MW or aggregated DR). In his second presentation (see AU\_Deliverable Review\_IEA DSM Task XIII\_15Jun06\_v4.ppt), Jones provided a detailed update on Australia's status for each of the project subtasks.
- Canada (Fraser): Fraser focuses his talk on recent DR activity in Ontario. The Ontario government is keenly interested in developing new DR in order to address their growing capacity requirements. However, he also highlighted some activities from other provinces.
- Denmark (Kofod): Kofod's presentation (see Danish DR Update – Policies – Results – R&D CK June 2006.pdf) informed the group that the Danish regulator continues to believe in DR and is seeking ways to increase the amount of DR in the market as part of its "Energy Strategy 2025" initiative. He also briefed us on five new research projects in which he is engaged (e.g. Demand Response in the mass market & Feedback from frequent metering). These projects will most certainly be of interest to everyone, so we look forward to future insights.
- Finland (Kärkkäinen): Kärkkäinen's presentation (see Finland\_June 2006.ppt) focused on a study designed to create a comparative analysis of the metering, load profiling, and related data systems for national power markets of Finland, Norway, Sweden, and Denmark. The study is designed to provide insights into the possibility and challenges of creating a Common Nordic Retail Electricity Market.

- Netherlands (Kamphuis): Kamphuis focused on new recent regulatory interest in new smart metering solutions and networks (see NL\_Country Update\_20060613.ppt). The Netherlands is planning to require new smart metering networks to be installed over the next couple years. He informed us that a couple of the speakers on Friday would provide greater detail.
- Norway (Grande): Grande's presentation (see Norway\_DR Update Amsterdam.ppt) focused on their recently completed DR Valuation study (see TR A6339 The Value of load Shifting.pdf). This study is another great reference for anyone looking at calculating the value of DR.
- Spain (Rodriguez-Villagarcia): -presented on day 2- Rodriguez's presentation provided a detailed look at the upcoming capacity and delivery problems facing the Spanish power grid (see Spain\_Problems facing the electricity sector in Spain 3.ppt). As a result, DR targeted to specific geographic areas is strongly desired. They initiated a consumer market potential survey to find out how much DR they might be able to acquire and what the customer acceptance rates might look like.
- Sweden (Fritz): The Swedish team was extremely kind in that they translated an excerpt of their Market Design report into English for our meeting. The Swedish team has been thinking about ways to incorporate DR into their energy only market. As a result, they have recommended a few new pricing mechanisms that everyone should review. They will like be incorporated into some of our reports. (see Sweden\_Market Design Overview\_June 2006.ppt for details).
- USA (Delurey): Delurey attempted to deliver a presentation via conference call. Unfortunately, we had a technical problem in the meeting room and were unable to connect him. His presentation is available on the project portal.

Day one closed at 17:15.

ECN then kindly sponsored a group dinner where we were also able to watch a couple world cup games.

## **Day 2**

Scarpelli called Day 2 to order at 9:30 AM.

Scarpelli explained that there are three main orders of business for Day 2. They are:

1. Review and discuss project deliverables
2. Discuss final regional conferences
3. Discuss proposed new work

## **Review and Discuss Project Deliverables:**

In order to facilitate discussion on the project deliverables, Scarpelli led the discussion by using a slide presentation (see Working Session\_June 2006.ppt). Key highlights are as follows:

## Online Tools

### Market Potential Calculator

- We've received calculation estimates from the following Country Experts (the samples can be located at: <http://www.demandresponseresources.com/References/ProjectIntellectualProperty/DRRPotentialToolkit/tabid/260/Default.aspx>)
  - Australia
  - Canada
  - Denmark
  - Italy
  - Korea
  - Norway
  - Spain
- Though the tool is fairly simple, it is believed that it provided a reasonable estimate of available DR.
- *Per general consensus, Scarpelli will compile the results in a table that all can use to demonstrate the tool.*

### Product Database

- The product database allows users to search for products using 7 different criteria.
- The database contains information as follows

<u>Country</u>	<u>Quantity</u>
Australia	21
Denmark	3
Italy	2
Norway	3
Spain	5
Sweden	8
<u>USA</u>	<u>64</u>
Total	106

- *All Country Experts were asked to review the products of their country for accuracy, potential updates, and/or possible new products that should be added.*

### Technology Database

- The technology database is designed to contain case studies illustrating how technology is being used for demand response.
- The database contains information from:

<u>Country</u>	<u>Quantity</u>
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Australia	8
Denmark	5
Italy	1
Korea	2
Netherlands	1
Norway	1
<u>USA</u>	<u>11</u>

Total	29
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- Australia noted that this seems like a very low level of contribution. Denmark concurred. Australia requested that everyone review their input and an improved its quantity and quality. If this does not occur, Australia indicated that they will not be able to sign off on this subtask. *After some discussion, it was agreed that all participants will attempt to include additional case studies by August 15, 2006 so they can be included in the final reports.*
- The original plan called for case studies on R&D products as well. However, we have not received any input in this area. After some discussion, people noted that these seem to be extremely difficult to acquire for confidentiality reasons. It seems that those working on R&D products are leery about sharing the information at this time. *Therefore, it was decided that this element would be removed.*
- It was further noted that several of the products in the database are not technologies as much as they are products. It was also noted that some input, particularly from the USA, were not structured as case studies. *Scarpelli will remove input that is not a technology case study.*

#### Reference Library

- The reference library contains reports and links to DR research from all participants.
- Norway noted that they felt that this is the most useful part of Task XIII for them.
- *All participants were asked to provide additional reports and links.*

#### **Guidebook Chapters**

Chapters 1-5 (Introduction through Subtask 4-Valuation)

- All were asked to review these chapters as part of the Deliverable Review Checklist in January. Almost all comments were very minor.
- However, after some discussion, we realized that a few participants have difficulty with the Valuation reports. They felt that these reports were still extremely technical and difficult for people not versed in modeling methods to understand. In light of this, they have had a hard time articulating the information to their stakeholders, let alone requesting that their stakeholders read the reports. Therefore, the group asked that we improve the laymen version. After some thought, Scarpelli suggested that instead of re-writing the laymen document, that it would be easier to use the context of the reports to write a layman chapter for the guidebook. This was agreed to. (NOTE: we also now have examples from Denmark

and Norway that can be included and we may have additional input from Australia in the next couple months).

#### Chapter 6: DR Technologies (subtask 5)

- Per ExCo agreement, we drafted a chapter on DR business issues based on the input we received to date.
- The draft was circulated a month before the Experts meeting and we did not receive any comments on it prior to the expert meeting.
- The discussion centered on the lack of quality and quantity of tech case studies.
- It was recommended that the chapter be reformatted to put the case studies up front and include a table indicating the quantity of case studies in each technology class. These adjustments are easy and will be done.

#### Chapter 7: DR Business Issues (subtask 6)

- Per ExCo agreement, we drafted a chapter on DR business issues based on the input we received to date.
- The draft was circulated a month before the Experts meeting and most comments received prior to the meeting were minor. However, Magnus Hindsberger offered some suggestions that will improve the understanding of the information, additional analysis, and presentation.
- During the discussion, Norway suggested that we re-label our product categories so that they conform with the US DOE's DR report to congress. Grande also suggested that we create a table in the chapter report indicating the quantity of products in the database for each of the categories and then highlight a few product examples (e.g. Norway's reserve option market & Sweden's market design tariff). All felt that this would improve the chapter. The changes are easy and will be made.

### **Discuss Final Regional Conferences**

The group discussed various ways of structuring the meetings. For example, they could be structured as speeches or they could be structured as workshops. In the end, it was recommended that they be structured as a combination of the two. People will give presentation describing their experiences and then a workshop will be held to demonstrate the project tools.

#### **Europe:**

As noted on Day 1, it appears that the planned joint DR conference with REEP and/or CIGRE will not be able to take place until the first quarter in 2007. Unfortunately, this does not comport with the Task XIII timeline. Therefore, we need to identify an alternative. In light of this, it was suggested that it may be appropriate to hold the meeting in Copenhagen and seek NORDEL to sponsor the event. Kofod has taken responsibility to identify a potential meeting location and Seppo will discuss sponsorship issues with NORDEL. They will both seek to accomplish this by the end of July.

#### **Australia:**

The Aussie team is already working on its conference. They will present their results from each subtask and use that information to develop a DR roadmap for Australia. Their conference will likely take place in November or December. They would like the OA to participate.

**North America:**

The OA will work with the Canada and USA teams to coordinate an event – probably in Toronto in the October time frame.

**Discuss Proposed New Work**

There were two new work ideas included in the meeting materials

1. Investigating the Correlation of Advanced Metering Infrastructure and Demand Response
2. Motivations of Demand Response Market Leaders

The first idea was drafted by RETX by request of the ExCo. Seppo noted that of all the ideas discussed at the most recent ExCo meeting, this idea was deemed the most desirable. However, during the discussion some people suggested that they feared that this was more of a metering issue than a DR issue. They thought that this topic, regardless of its subtasks, would require a different set of stakeholders and experts. As such, we would not be leveraging the infrastructure that we already have in place with Task XIII. Scarpelli said he'd share these thoughts with the DSM Chairman and seek his advice.

The second idea was drafted by Magnus Hindsberger and Randy Gunn. They felt that understanding the business, political, and economic motivations for why leading DR providers spend the time and resources on DR would be a logical extension of current Task XIII efforts. Unfortunately, many participants thought the current scope did not contain enough International focus. However, they did feel that the topic was interesting. Scarpelli will work with Hindsberger and Gunn to modify the concept so that it has a greater International collaborative focus.

After we reviewed these two ideas, Fraser (Canada) offered up two additional ideas for consideration:

1. Metrics for evaluating demand response programs  
How should 'success' with respect to the operation of a demand response program be defined?
2. Energy Efficiency Standards and Demand Response  
Standards encourage product manufacturers to adopt new technology. Over time, these standards are increasing the productivity of energy use by larger numbers of consumers. This productivity can be further enhanced by inclusion of load control technologies. This proposal would be for a Task to examine the feasibility of including load control technologies as a part of energy efficiency standards.

Fraser briefly described his ideas and the group seemed interested in know more. It was also noted that the ExCo has been interested in the concept of “standards” for some time, but they were not sure how to proceed.

Fraser offered to provide a brief write up of each suggestion. Scarpelli will circulate it to the Expert group and to the IEA DSM chairman for advice. If the group likes the idea and a project plan can be developed, it will be offered to the ExCo for consideration at their next meeting.

At the end of this discussion, Scarpelli told the group that many participants have privately told him that they desire to keep the group together provided that reasonable new work ideas can be developed. Therefore, he encouraged people send him other ideas that they may have.

Scarpelli called the meeting to a close at 4:30 PM.

**Action Items:**

	Responsible Party	Issue	Due Date
1	OA Team	Modify chapter 6&7 per suggestions from the Experts meeting.	July 14, 2006
2	OA Team	Draft a more layman version of DR Valuation for the Guidebook	July 20, 2006
3	Country Experts	Collect and submit additional DR Technology case studies ASAP.	August 15, 2006
4	Country Experts	Review current DR product database for accuracy, updates and new products.	August 15, 2006
5	Country Experts	Provide additional reports and/or links for DR reference library	
6	OA Team	Circulate final DR guidebook and related project tools for review by Experts	August 20, 2006
7	Country Experts	Review, comment and approve final Guidebook and related tools	September 10, 2006
8	Europe Experts	Identify venue for final regional workshop. Seppo – coordinates with Nordel Casper – seeks location in Copenhagen	July 31, 2006
9	OA Team	Revise and circulate proposed new work ideas	July 15, 2006
10	Country Experts	Comment on proposed new work ideas	July 31, 2006