IEA Implementing Agreement
Demand-Side Management
Technologies and Programmes

FORTY SECOND EXECUTIVE COMMITTEE MEETING

PRE–MEETING DOCUMENT (PMD)
Part 1

16 – 18 October
Lucerne/Rigi, Switzerland

Forty Second Executive Committee Meeting

16 – 18 October, 2013 – Lucerne/Rigi, Switzerland

MATTERS FOR THE EXECUTIVE COMMITTEE

EXTENSIONS OF WORK AND NEW WORK

The delegates are URGED to prepare their responses to these presentations carefully and primarily by contacting the possible stakeholders before the meeting. The format for these proposed New Tasks will be a brief presentation that focuses on the:

- **Motivation** for the proposed work (what issues does it tackle?) what is it trying to achieve? Who is the target audience?;
- **Objectives**;
- **Approach** to accomplishing the proposed work;
- **Deliverables** – (what will be delivered? What will you do with it to get it adopted?)
- **Dissemination plan** – what will need to be done to get the results adopted? Who will do it?
- **Required resources**

The proposed New Tasks discussion will aim at one of the following decisions:

1. Decide to **initiate the new Task** based on work done to date.
2. Decide to initiate the **Task Definition** for a new Task. Interested countries must be prepared to assign the appropriate expert(s) to participate in that process.
3. Decide that additional work is needed on the **concept paper**. Interested countries must be prepared themselves, or to assign the appropriate Experts to help further develop the concept.
4. Decide to pursue the subject in co-operation with other parties within the IEA or elsewhere
5. Rejection (or moth-balling)

SEE APPENDIX TO THE AGENDA

Agenda item 1b. ExCo approval of the Agenda

The Agenda is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the Agenda

Agenda item 1c. ExCo approval of the 41st ExCo meeting Minutes

This item is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the Minutes

Agenda item 1f. Project Preparatory Committee

This PPC Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the PPC Status Report

Agenda item 5a. Task 16 – Phase 3 – Energy Efficiency and Demand Response Services

This Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the Task 16 Task Status Report

Agenda item 3a. Development of a DSM University

This Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to: Distributed separately

- Approve the Status of the DSM University

Agenda item 3b. Extension Task 17 - Integration of DSM with other Distributed Energy Resources – Phase 3

This Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the Task Status Report

Agenda item 3c. Task 23 – Role of the Demand Side in Delivering Effective Smart Grids - Extension

This Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the Extension Subtask 6: Survey of Consumer Attitudes

Agenda item 3d. Extension - Task 24 – Closing the Loop – Behaviour Change in DSM: From theory to policies and practice

This Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the extension

Agenda item 3e. New Task: Concept Paper on Information Exchange Forum

This Concept Paper is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the Concept Paper and develop further in Task Definition Phase

Agenda item 4a. Task 23 – Role of the Demand Side in Delivering Effective Smart Grids - Task Status Report

This Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

Extension to current work programme
It is currently expected that the main project outputs can be completed by the end of November as originally planned. However, experience suggests that the report review and approval process is generally a time consuming process. Therefore, the ExCo are asked to consider the approval of a short no-cost extension of 3 months to allow for the final production of the project outputs.

New Subtask
As part of the activities of the UK Team[1] it was decided to conduct a survey of domestic energy consumers. The objectives of the survey were as follows:

- To determine peoples' attitudes and current behaviours with regard to the energy usage;
- Their views and attitudes towards Demand Side Management;
- The level of rewards necessary for them to take part in a DSM programme; and
- Specific actions which they could undertake.

This survey is being undertaken by a specialist market research company. The survey being undertaken by the UK team was described at the third International Expert's Meeting for Task 23 (held in Steinkjer, Norway, 4th-5th July 2013). The comments and feedback provided during that meeting indicated a level of interest that merited the development of a proposal to extend the survey to other countries. Therefore, the ExCo are asked to consider the proposed extension to Task 23 – the proposal is presented in a separate document.

In summary, the matters for the consideration of the ExCo are as follows

- Approval of the task status report
- Request for a no-cost extension to the project
- Consideration of proposed new extension of the Task (Subtask 6) – proposal is presented in a separate document.

Agenda item 4b. Task 24 – Closing the Loop – behaviour change in DSM: From theory to policies and practice – Task Status Report

This Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the Task 24 Task Status Report

Agenda item 5a. Task 21 – Standardisation of Energy Efficiency Calculations – Task Status Report

This Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the Task Status Report
- To decide on two options:

a. preparations of new subtasks for decision at the ExCo meeting in April 2014 or
b. closure of Task 21

Agenda item 7a: Programme Visibility Report – Status Report

This Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the Visibility Committee Report

Agenda item 8a. Financial Report 2013

This Status Report is submitted to the IEA DSM ExCo meeting in Rigi, Switzerland with a request for the ExCo to:

- Approve the Financial Report 2013

IEA Demand-Side Management Programme Forty Second Executive Committee Meeting
16 – 18 October 2013, Lucerne/Rigi, Switzerland

DOCUMENT A

AGENDA

Wednesday 16 October, 2013

WORKSHOP: Current issues in DSM – at iHomeLab – Hochschule Luzern, Technik & Architektur (Horw) – 08:45 – 17:30

18:30 – 19:30 **Operating Agents Meeting (on the train to Rigi)**
(OA's to report issues to Chairman before the meeting)

Thursday 17 October, 2013

09:00 – 10:00	**1. GENERAL BUSINESS/WELCOME**	
	1a. Welcome – *Rob Kool*	
	1b. **ExCo approval** of the Agenda	DOC A
	1c. **ExCo approval** of the Forty First ExCo meeting Minutes	earlier
	1d. Status of the Implementing Agreement	
	1e. IEA Relations	
	- Secretariat news	ATT A
	- Contacts with possible sponsors/ new participants	
	- IA relations, BCG and ECG	
	1f. Reporting:	
	- Report from the Project Preparatory Committee (PPC) *Rob Kool, Hans Nilsson*	DOC B
	- Report from the workshop – *Markus Bareit*	
	- Operating Agents meeting report – *Rob Kool*	
10:00 – 13:00 (incl. coffee break) *3 hours*	**2. THE WAY FORWARD** The way forward of the DSM IA – Breakout Session, *Rob Kool*	
13.00 – 14:00 *1 hour*	**lunch**	

The proposed New Tasks discussion will aim at one of the following decisions:

1. Decide to **initiate the new Task** based on work done to date.
2. Decide to initiate the **Task Definition** for a new Task. Interested countries must be prepared to assign the appropriate expert(s) to participate in that process.
3. Decide that additional work is needed on the **concept paper**. Interested countries must be prepared themselves, or to assign the appropriate Experts to help further develop the concept.
4. Decide to pursue the subject in co-operation with other parties within the IEA or elsewhere
5. Rejection (or moth-balling)

14:00 – 14:45	Report from Break out Session	
15 mins	5a. Task 16 – Phase 3 – Energy Efficiency and Demand Response Services – Jan W. Bleyl, EnergeticSolutions, Austria	ATT C
(Jan has to leave in the afternoon)		

	3. NEW WORK	
15:00 - 15:15	3a. Development of a DSM University - *Hans Nilsson*	DOC C
15:15 – 15:30	Coffee break	
15:30 – 16:00	3b. Extension Task 17 – Integration of DSM with other Distributed Energy Resources – Phase 3 *Matthias Stifter & Réne Kamphuis*	DOC D
16:00 – 16:30	3c. Extension Task 23 – Role of the Demand Side in Delivering Effective Smart Grids *Linda Hull, EA Technology*	DOC E
16:30 – 17:00	3d. Extension Task 24 – Closing the Loop - Behaviour Change in DSM *Sea Rotmann & Ruth Mourik*	DOC F
17:00 – 17:30	3e. New Task: Concept Paper on Information Exchange Forum – *Linda Hull, EA Technology*	DOC G
17:30 – 18.30	**4. CURRENT TASKS – LOAD SHAPE CLUSTER**	
15 mins	4a. Task 23 - Role of the Demand Side in Delivering Effective Smart Grids – Task Status Report *Linda Hull, EA Technology, United Kingdom*	DOC H
15 mins	4b. Task 24 Closing the loop – Behavior change in DSM: From theory to policies and practice *Sea Rotmann, EECA, New Zealand* *Ruth Mourik, DuneWorks, The Netherlands*	DOC I
	5. CURRENT TASKS – LOAD LEVEL CLUSTER	
15 mins	5a. Task 21 – Standardisation of Energy Efficiency Calculations -Task Status Report *– Harry Vreuls, NL Agency, Netherlands*	DOC J
18:15 – 18:30	Election of Chairman and Vice Chairmen	DOC K
Adjourn	Hosted dinner 19:00	
Friday 18 October, 2013		
8:30 – 13:00 (incl. coffee break)	**6. FUTURE OF THE DSM PROGRAMME – Special Session** 6a. Presentations by ExCo members regarding DSM priorities in their country – (part of Annual Report Theme) 6b. The way forward - Conclusions	
13:00 – 14:00	**Lunch**	
14:00 – 16:00	**7. PROGRAMME VISIBILITY** 7a. Programme Visibility Report, *Sea Rotmann*	DOC L

Website statistics ATT D

8. ADMINISTRATIVE MATTERS

8a. Financial Report 2013, Part 3
Accountax Status Report
8b. Status of Common Fund payments
8c. **ExCo approval** of Forty Third ExCo meeting in Wellington, New Zealand

APPENDIX TO THE AGENDA "Issues for the decisions and the process to reach decisions"

The delegates are URGED to prepare their responses to presentations carefully and primarily by contacting possible stakeholders before the meeting. The format for these proposed New Tasks will be a brief presentation that focuses on the:

• **Motivation** for the proposed work (what issues does it tackle?) what is it trying to achieve? Who is the target
audience?;
• **Objectives**;
• **Approach** to accomplishing the proposed work;
• **Expectations/Results and Deliverables**
• **Dissemination plan** – what will need to be done to get the results adopted? Who will do it?
• **Required resources**

Concept and Task Definition Papers (Process and phases)

Before a new Task is starting the concept has to be defined and presented in order to attain the interest of possible participants.

PHASE 1: IDENTIFY NEW ACTIVITIES
Resulting in a CONCEPT PAPER (2-5 pages) containing

- Motivation
- Objectives
- Approach
- Expectations/Results

PHASE 2: DEFINE NEW ACTIVITIES
Requiring an EXPERTS MEETING to propose

- Task Work Plan Resource needs: Task or cost sharing
- Dissemination, Task Information Plan

CONTENTS OF PROPOSALS FOR NEW WORK.

The document that will propose the new work to the ExCo could be organized and have the Following contents:

1. Background and motivation
2. Objectives
3. Issues for the new work (scope)
4. Structure (sub-tasks)
5. Management (responsibilities of the Operating Agent, Sub-task leaders and Experts)
6. Deliverables (for whom, target groups)
7. Time Schedule and milestones
8. Funding and Commitments (Resources needed)
9. Meetings plan
10. Information activities
11. Co-operation with other IA's, the Secretariat and other interested parties
12. Country contributions to funding and tasks

Annexes: Detailed description of sub-task

APPENDIX 1

Participant	**In force**						**Proposed Task**		
	16 ext.	**17**	**20**	**21**	**23**	**24**	**17 ext.**		**25**
	Competitive Energy Services Phase III – Energy Efficiency and Demand Response Services	**Integration of DSM, Distributed generation,**	**Branding of Energy Efficiency**	**Energy Standards**	**DSM in delivering smart grids**	**Closing the Loop: DSM From Theory to practice**	**Integration of DSM, Distributed Generation Phase III**	**DSM University**	**Market Characterisation and Potential of Home Energy Management (HEM) Technology**
Australia									
Austria	X	X				◆	◆	◆	
Belgium	X					X			
Finland		X				◆	◆	◆	
France		X	X	X					
Greece									
India	X		X						
Italy						X			
Korea	X			X	X		◆	◆	
Netherlands	X	X		X	X	X	◆	◆	
New Zealand						X			
Norway	◆			X	X	X	◆	◆	
Saudi Arabia						◆		◆	
South Africa				◆					
Thailand									
Spain	X	X	X	X					
Sweden	X				X	X	◆	◆	
Switzerland	X			X		X	◆		
United Kingdom,					X	◆		◆	
United States			X	X					
RAP *						◆		◆	
European Copper Institute*		◆						◆	
OPERATING AGENT (OA)	**Jan W. Bleyl-Androschin**	**Seppo Kärkkäinen**	**Balawant Joshi**	**Harry Vreuls**	**Linda Hull**	**Sea Rotmann – Ruth Mourik**	**Matthias Stifter René Kamphuis**	**Hans Nilsson Hans de Keulenaer**	**Sea Rotmann and Beth Karlin**

Participates = X **Interested** = ◆ **Sponsor** = *

ACTION ITEMS RESULTING FROM THE FORTY SECOND EXECUTIVE COMMITTEE MEETING OF THE DSM PROGRAMME

25-26 April, 2013 – Utrecht, the Netherlands

WHO	**ACTION**	*WHEN*
Outstanding countries	Pay Common Fund invoice for 2013	ASAP
Rob Kool	Maintain contacts with Saudi Arabia, South Africa, Kuwait, Thailand, UAE, Eurelectric, Edison Electric Institute.	NOT DONE
Rob Kool	Contact Schneider Electric and confirm their intent to become Sponsors	NOT DONE
Hans Nilsson Hans de Keulenaer	Move forward with the DSM University as proposed	DONE
Matthias Stifter René Kamphuis	Continue the development of Task 17 Phase III – and present at the next ExCo meeting	DONE
Beth Karlin Sea Rotmann	Develop a concept proposal on proposed Task 25: Market Characterisation and Potential of Home Energy Management (HEM) Technology, and present at the next ExCo meeting	ON HOLD
Sea Rotmann Ruth Mourik	Develop the Task 24 extension proposal further – and revise the budget structure, present at next ExCo meeting	DONE
Harry Vreuls	Prepare a new Subtask when the time is right	ON HOLD
Rob Kool	Contact ACEEE and eceee and CCEEE about joint conferences. Also contact organisers of Renewable Conference and other relevant conferences in the planning stages. Look into arranging a DSM conference every second year	NOT DONE
Rob Kool Hans Nilsson	Continue work on the End of Term Report and Strategy	DONE
Hans Nilsson Sea Rotmann	Develop a plan on how the DSM Visibility Committee and the DSM University can collaborate	NOT DONE
Visibility Committee	Draft a web site definition and develop tender	NOT DONE
Operating Agent	Update a more clear definition in legal Annex text of their Task	ONGOING
Solstice	Provide web statistics every six months	DONE
ExCo members	Seek funding for the Task 17 extension	ONGOING
Seppo Kärkkäinen	Write two articles for the Spotlight Newsletter highlighting the results of Task 17 Phase II, and write a column for the DSM website	On-going with Spotlight, no column yet…
Anne Bengtson	Keep reminding those who have outstanding payments to the Common Fund	Not done in past 6 months
Balawant Joshi	Produce final report by next Executive Committee meeting	NOT DONE
Operating Agents	Include 1-2 slides in the presentation, highlighting the main findings to date in their respective Task(s).	Present at next ExCo meeting
Harry Vreuls	Further develop the proposal for a potential new Task 21 extension – Subtask 5. Follow up interest for the extension.	If the time is right…
Sea Rotmann	Develop a communications strategy for the DSM programme. Support development of individual communications and dissemination plans for all Tasks	NOT DONE
ExCo members	Review website regularly and suggest further developments	On-going

Cont. Action Items

ExCo members	Suggest topics for the Spotlight Newsletter and provide input for those articles	ONGOING
Pam Murphy	Distribute issues of the DSM Spotlight Newsletter	DONE
Anne Bengtson Markus Bareit	Prepare administrative details for the Forty Second Executive Committee Meeting in Lucerne, Switzerland	DONE
Hans Nilsson Hans de Keulenaer	Prepare status report on the development of the DSM University and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD)	Friday 13 September 2013
Matthias Stifter René Kamphuis	Prepare Task 17 Status report on Task Definition Phase III and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD)	DONE
Sea Rotmann Beth Karlin	Prepare concept proposal Task 25: Market Characterisation and Potential of Home Energy Management (HEM) Technology, and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD)	On Hold
Jan Bleyl-Androschin	Prepare a Task Status Report for Task 16 Phase 3 and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD)	DONE
Rob Kool	Prepare PPC progress report and send to Anne Bengtson for inclusion in the Pre-meeting Document (PMD)	DONE
Harry Vreuls	Prepare a Task Status Report on Task 21 and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD)	DONE
Balawant Joshi	Prepare a Final Task Report on Task 20 “Branding of Energy Efficiency” and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD)	NOT DONE
Linda Hull	Prepare Task Status Report Task 23 and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD)	DONE
Sea Rotmann Ruth Mourik	Prepare Task Status Report Task 24 and send to Anne Bengtson for includion in the Pre-Meeting Document (PMD)	DONE
Sea Rotmann Ruth Mourik	Send proposed Task 24 extension and revised budget to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD)	DONE
Hyeong-Jung Kim	Prepare Financial report and send to Anne Bengtson for inclusion in the Pre-Meeting Document	DONE
Anne Bengtson	Prepare Visibility Committee Report for inclusion in the Pre-Meeting Document	DONE
Operating Agents	Prepare Task Information Plans and include in each Task Status Report.	On-going
Solstice	Provide statistics for every Task every six months, send to Anne Bengtson for inclusion in the Pre Meeting Document	DONE
Anne Bengtson	E-mail pdf file of Pre-meeting Document for the Forty Second ExCo meeting to the Executive Committee members and Operating Agents.	Sunday 29 September 2013

AGENDA 1f. (42nd meeting of the IEA DSM Programme)

Document B

Report from the Project Preparatory Committee

October 2013

Prepared by Rob Kool

This Project Preparatory Committee report is submitted to the IEA DSM IA EXCO meeting in Rigi, Switzerland, with a request for the EXCO to: - Approve the Project Preparatory Committee Status Report

PPC Report – September 2013

1. **General Remarks**

   The PPC was not able to meet with all members and the Desk Officer in teleconferences since the last EXCO. This was partly caused by the different time zones, and partly by changing obligations of some members.
   All members (and the Desk Officer) did participate in the work since the last EXCO. Vice chair HJ Kim got another position in KEMCO. We are grateful for the work he has done on the finances of the Implementing Agreement, and we regret to see him go, but wish him a good future in this new job.

2. **Next Term**

   The Executive Secretary prepared the statistical section of the End of Term report according to the documents received by the IEA. The Chair and advisor prepared the End of Term Report and Strategy and asked for advice from the IEA Secretariat. The chair of the visibility committee made valuable contributions

   The direction and choices in the documents are based on the outcome of the last EXCO meeting. The PCC was surprised by the time EUWP needed to handle the documents. This led to a very short time to ask for advice and approval from the EXCO.

   Based on the feedback from the EUWP chair, the Desk Officer and the Chair of the Electricity Coordination Group additional paragraphs were added to the documents. This final document will be added to the PMD. Remarks from the EUWP secretariat were received a week prior to the EUWP meeting, informing the DSM IA that CERT requirements were not met, and could therefore not be evaluated.

   A ballot on the documents resulted in two conditional approvals, and 11 received approvals

3. **New work**

   a. The PPC encouraged further development of Tasks 16, 17 and 24. This resulted in a number of workshops and proposals for the next ExCo.
   b. The operating agent of Task 23 sent a list with ideas, which will be used as input for a debate at the next ExCo.
   c. The ideas for Task “25”, as presented at the last ExCo have been put on hold.
   d. A possible new Task on the structured use of behavioural knowledge to implement change to energy behaviour as part of supplier obligation is under consideration.
   e. DSM University: first online course is in preparation. Hans Nilsson will make the general introduction, hopefully before the ExCo. The IEA secretariat is interested and will try to link to this initiative (the definition of “link” yet to be discussed)

4. **Next EXCO**
    a. Organisational matters (Markus) and Preparation (Anne) have been discussed.
5. **Communication**

   This is a topic for the visibility committee. But the web site is being debated with the PPC. Agency NL is helping to prepare a call for tender for a new web site.

6. **New members.**
    a. There is clearly interest in the Middle East, but no concrete actions.
    b. South Africa didn't follow up yet.
    c. Thailand will attend the ExCo
    d. The Chinese division of the Copper Foundation has shown interest and will attend the next ExCo.

AGENDA 5a. (42nd meeting of the IEA DSM Programme)

ATTACHMENT C

Competitive Energy Services Phase 3 – Energy Efficiency and Demand Response Services

Task Status Report

Jan W. Bleyl

See attachment C

The Task Status Report for Task 16 is submitted to the IEA DSM ExCo meeting with a request for the ExCo to:

- Approve the Task 16 Status Report

Agenda 3a.

DOCUMENT C

Disributed after PMD production

IEA DSM Programme Dissemination (The DSM University)

Hans Nilsson, Four Fact AB, Sweden
Hans de Keulenaer, European Copper Association

This report is submitted to the IEA DSM IA EXCO meeting in Utrecht, The Netherlands with a request for the EXCO to:

- Approve the Staus Report
- Decide to proceed with the DSM University

Agenda 3b. (42nd meeting of the IEA DSM Programme)

Document D

Phase 3

Extension - Task 17 – Integration of Demand Side Management, Distributed Generation, Renewable Energy Sources and Energy Storages

Matthias Stifter (AIT)
René Kamphuis (TNO)

The Task Status Report for an extension of Task 17 is submitted to the IEA DSM ExCo meeting with a request for the ExCo to:

- Approve the Task Status Report of the preparations for an extension of Task 17 Phase 3.

Status Report on IEA-DSM Task 17 – Phase 3
ExCo Meeting Luzern – 17/18 October 2013

Definition process

Call for participation

Invitation was send out to

- IEA DSM Task 17 country experts
- IEA DSM ExCos
- IEA ISGAN ExCos and Network
- IEA PVPS Task 14 – (High penetration of PV)
- IEA SHC
- IEEE
- OpenADR LBNL
- Germany via D-A-CH Cooperation

Definition Workshop in Delft (NL) - 12/13 September 2013

Summary: (further details see workshop minutes)

- Workshop was scheduled on shortterm (three weeks in advance)
- Few participants, but constructive meeting involving all participants into discussion
- Task content has been discussed and detailed
- It was agreed to focus the Task, since resources are limited
- Countries committed to Task: NL, A, CH, CA (Copper Alliance), (Finland)
- At least two more countries need to commit

Collaborations / Presentations

- IEA DSM Spotlight: Article about Task 17.
- IEEE Workshop on the Convergence of Home and Building Management Architectures (26/27 September in Toulouse): Presentation of Task 17 at the conference and workshop
- IC-CSHBA: Contribute to "Implementation Guide" white paper - invite other Tasks as well?
- ISGAN Workshop and ExCo Meeting: Presentation of Task 17 Phase 3 (7-11 October)

Next Steps

- ✓ Meeting minutes
- ➔ Update the Task definition document
- ➔ Participants agree on the Task definition
- ➔ Sort out the possibility for non IA-DSM participants (e.g.: France, Germany)
- ➔ Presentation at the IEEE Workshop (Representative from NTP SG Austria)
- ➔ Presentation at ISGAN Workshop (Rob Kool or Helfried Brunner (AIT))
- ➔ Presentation at the IEA-DSM Workshop prior to the ExCo Meeting
- ➔ Task status presentation at the ExCo Meeting
- ➔ Attract more countries / commitment from the countries
- ➔ Schedule KickOff Meeting

MINUTES **IEA-DSM Task** 17.3 Definition Workshop 12-13/9/**2013**

Location: TNO, Delft

Participants:

- Matthias Galus
- Arno von Zwam
- Jussi Ikäheimo (via web conference)
- Pekko Koponen (via web conference)
- Hans de Keulenaer (via web conference)
- René Kamphuis
- Matthias Stifter

Introduction

Participants

Arno van Zwam (NL) Mastervolt

- Components (Inverters)
- Interested in Storage at Customer side

Matthias Galus: Ministry of Energy, Switzerland

- SG Roadmap
- PV Integration
- WG on SM requirements

Matthias Stifter (AIT)

- Integration of renewable and distributed generation,
- Voltage control / Smart Meters / Electric vehicles

Jussi Ikäheimo (VTT)

- Energy Markets

Pekka Koponen (VTT)

- Smart Grid and Energy Market Project.
- ADDRES Project
- Represents Finland in IEA-DSM ExCo and ISGAN ExCo

Rene Kamphuis (TNO)

- Involved in SG Project for several years
- Prof. at Eindhoven University

Hans de Keulenaer (CA Copper Alliance / european branch)

- Copper industry
- Sustainable energy program – linkage between cooper and sustainable technology
- Interested in the task – work program on smart homes, integration of renewables
- Alignment with CA tasks
- About 200 people work within the CA

Results of Phase 2

Subtask 5
PV: Higher penetration as expected – increasing problem
Smart Meter: Key for SG, new methods and tools for increasing network efficiency
Heat pumps: Cooling and heating, good for controlling demand

Comment (MG): increase in number of Heat pumps

- Aggregator of HP for balancing services, secondary and tertiary control in Switzerland
- Telecom Company. Estimate energy level of the HP/house
- network state not considered
- driver for SM is efficiency

Micro-CHP: high investment costs
EV: Charging infrastructure, standardization efforts, controlled charging

Subtask 6
Case studies and best practices

Subtask 7
Stakeholder involved and effects on them
Requirements for new regulations

Subtask 8
Quantitative effects on the power system

Participation of countries / overview

- IEA DSM is one of the programs (implementing agreement) of the IEA.
- Five countries have been involved in the phase 2
- E.g. Dutch stakeholders; DSO, TNO, Energy traders/retailers

Comment (RK): Ecogrid / Hoogkerk local market concepts taking community constraints into account

Content of Phase 3

Overview

What are the benefits for stakeholders to provide flexibility?

- Customer: Optimize the efficiency at the customer side
- DNO: Actively manage the assets in low voltage

Comment (MS): Objectives of the task: recommendation energy policy to increase the efficiency
Comment (AZ): Comfort perspective: Impact on the commodity / comfort of the customer
Comment (MG): Optimization utility function: Do people really react?

➔ Identify objective potentials. Findings about SM acceptance are important.

Flexibility
Technical vs. market

Smart Grid Connection Point
Energy Management system / impact and increase in efficiency
Example of SG Energy Markets - > best practice

Subtask 10
Inventory of projects / strength and weaknesses

Comment (MG): Situation in Germany: SM connection to PV Systems: measurement system act: "Verordnung Messsystem": SM should replace ripple-control and can control DG and load.

Subtask 11
EU Directives for liberalize energy markets: example of more efficient system: increase interconnection capacity.

Comment (MS): Grid impact: stability of Transmission to Distribution: state estimation: how the implementation of CEMS changes the planning and operating of the system.
Comment (PK): Gap between transmission and market operations, but distribution network its research rather than practice
Distribution network problem: regulation against DSM in Finland, DSO has problem in the network has to take the option according to the regulation: more copper, more transformers.

➔ Include in the work: bad practice good practice for regulation

Subtask 12
Organize Workshop to exchange Information.
Dutch Smart City Project
Scalability of projects
Bad practices and solutions
CMM capability maturity level (ISGAN); defining the processes for SG maturity model
TRL – technical readiness level

Country specific requirements

Finland: Need to have a project to align with task 17 activity.
Project SG and Energy Markets:

- HEMS
- Natonal project ends 2014. WP4 has same content
- Enable flexibility of 50MV: Number of customers connected is 2500. Total power of 50MW (20kW average direct electric heating – storing heat) used to be time of use tariff (night time) – now is dynamic (during night time) but will also be available during day (contract).
- Not much network issues so far since it was designed for ToU tariff

- Retailer can control loads dynamically – aggregator in-between: messaging service between retailer and DSO; Implemented via SM system no immediate response.
- Other field test of control (direct) – 7000 – rural area. Also development of a HEMS based approach – similar but not communicating with DSO, but with retailers: But on a much smaller scale.
- SGEM language in English

Aggregator has to communicate with the DSO if needed – probably the concept.
1h profile possible to opt out (???); resolution of one hour for energy related processes in Finland – stay within this resolution;

Comment (RK):15 min period in the market would be better

Comment (PK): Messaging between the actors need harmonization: common set of requirements of messaging – standardization is one step behind.

Austria
How to enable the potential of boilers and other ripple controlled loads.

Swiss:
Ripple control replaced by intelligent signals or utilize for energy markets
Different objectives
HEMS:

- what should they do?
- What should be in the Smart Meter?
- Where is the interface, who is in charge: customer? Business and companies are going in that direction.
- Include customers by HEMS
- Someone has to pay the infrastructure – Who pays costs for autonomy and network?

Some regions have renewables: DSO gets slowly into operation : network costs increase.
40% nuclear 60% hydro – next year increase of PV (energy strategy 2050) only minor wind farms (different to e.g. Germany or Dutch)

Dutch:
See slide of presentation 3.
Charts on prices: small customers are more charged

Cooper Alliance
Work plan is well aligned with internal work.

Résumé
Match the interest with the task definition.

Round table

Finland (JI): cover a lot of things not able to cover the whole scope – only detail on specific stakeholder questions.

Comment (MS): not all coverable – backed up by OA work –

Comment (MG): all are valuable but prioritize the questions,

Austria (MS): concern on number of participants – focus

Swiss (MG): Sharpen the focus, very valuable topic

Mastervolt (AZ): very good and like what I have heards

Dutch (RK): very productive discussion, a lot of interest of the ExCo members.
Number of countries involved – still process which has to be decided on ExCo level at the next meeting

Dissemination

Workshops: Allocate a budget for traveling / invitation of external experts?
Align with conference or standardization organizations. Mutual exchange of information

Country expert and operating agent roles

Extension of the task has been supported by many countries at the last ExCo Meeting.

Refinement of the project plan:

Dual stakeholder view of the customer flexibility:

- Intelligent infrastructure which enables both technical and commercial flexibility

Comment (MG): Swiss: System which can control via "SM" DER – Not yet clear what purpose should it have:

- maybe to avoid congestion
- not so much emphasis on the commercial flexibility
- who controls this devices for what purpose?
- Flexibility for market – DSO challenges problems in his network can use it
- German utility associations pushes this forward
- Swiss is starting to think about this
- How to commercial and technical objectives interact

Comment (MS): Is it possible to reflect the technical challenges in a market?
TSO need ancillary service for running the system.
DSO maybe can provide a market where others can bid.

Comment (MG): If we can sharpen this topic or analyze it that would be very valuable.
HEMS: what they should do and are there standards?

➔ Standardization is work going on. Analyze ongoing standardization work.

Comment (PK): Collect information of what has been done in standardization and practice regarding this flexibility.

- Project ADRES: market concept not practicable, not completed

- Project Peninsula Project: Regulator said no

Status in Finland: Network ready for ToU tariffs.

No solution how to compensate the retailer – only for the trial.

Should be market based so that the playing field is the same for all the market.

Comment (RK): Flexibility service provider.

Interfacing the customer, aggregates and handles technical and market requests

For EV some projects have been done:

- Enexis introduction of EV in the Netherlands

DSO wants to switch off / control resources directly in case of emergency without the flexibility operator.

➔ Topic of the Task: enable the flexibility of the customer

Work plan

Discussions

- detailing and focusing the content of the work plan
- title of subtask 10 – controllability, service providers, barriers

Roles

(See slides)

Operating Agent: prepare and collect material according to the work plan so that the questions can be answered and discussed

Country Experts: support workshop, contribute material (information on projects, country situation, field tests

Workshops:

➔ common workshop with other Tasks/focus on SG

Website / Spotlight: improve, manage

Collaboration

IEA

ISGAN

- Contact via ISGAN-Chair
- Present at the workshop in October

IEA PVPS

- Exchange with Task 14: Integration High Penetration of PV

IEEE

Convergence of Smart Home and Building Architectures.

- Field device layer / microelectronic / architecture
- Collaborate?
- Artemis / Microelectronic Association maybe can participate

SG Expert Group

SG Mandate / EG on Integration

➔ Contact André Postma regarding collaboration

Other initiatives

- NIST PAP – priority action plan
- Project ADDRES: Finished / Deliverable 6.2 / 6.3 interesting
- INTEGRAL
- THINK
- ADVANCE
- SEDC – Smart Energy Demand Coalition

➔ Apply for a new EU Project starting from the IEA-DSM Task 17 project.

Summary

➔ Flexibility of demand needed to integrate renewables, distributed generation (e.g. Germany)

Introduce a flexibility service provider to aggregate and handle and exchange, process the required communication and control.

- Role and potentials of flexible consumers / prosumers (DER)
- Changes and impact on stakeholders (grid, market, consumer, regulator, legislation)
- Sharing experiences / best and worst practices / no "one size fits all" / lessons learned
- Conclusions and recommendations

Role and tasks of OA / CE

Comment (HK):

- going into grid → CA more involved on the automation side
- cost effectiveness --> assesses existing studies, not carry it out ourselves
- project to couple wind energy to process, do the same at household level – store it in heat storage
- concerned about separation of market for electricity and heat (like for cooking and heating)
- dissemination of reports

Next steps

- ✓ Meeting minutes and agreement
- ✓ Update the task definition document
- ✓ Participants agree on the definition
- ✓ Sort out the possibility for non IA-DSM participants (e.g.: France, Germany)
- ✓ Presentation at the IEEE Workshop
- ✓ Presentation at ISGAN Workshop

- ✓ Presentation at the IEA-DSM Workshop prior to the ExCo Meeting
- ✓ Task status presentation at the ExCo Meeting
- ✓ Commitment from the countries
- ✓ Schedule KickOff Meeting

Concluding remarks

Finland: has to contact companies --> Matthias provide ABB contact
Austria: good progress
Copper Alliance: nothing to add
Swiss: Shorten the proposal
Dutch: Thanks

Agenda 3c. (42nd meeting of the IEA DSM Programme)

Document E

Task 23
Role of the Demand Side in Delivering Effective Smart Grids

Extension
October 2013

Linda Hull
EA Technology, United Kingdom

The Extension of Task 23 is submitted to the IEA DSM ExCo meeting with a request for the ExCo to:

- Approve the Task 23 Extension - Subtask 6: Survey of Consumer Attitudes

IEA Implementing Agreement
on Demand Side Management
Technologies and Programmes

New Sub-Task Proposal

Role of the Demand Side in Delivering Effective Smart Grids

Sub-Task 6: Survey of Consumer Attitudes

Operating Agent (to be approved by ExCo):-

EA Technology

Capenhurst Technology Park

Capenhurst

Chester CH1 6ES

United Kingdom

Issue 1

September 2013

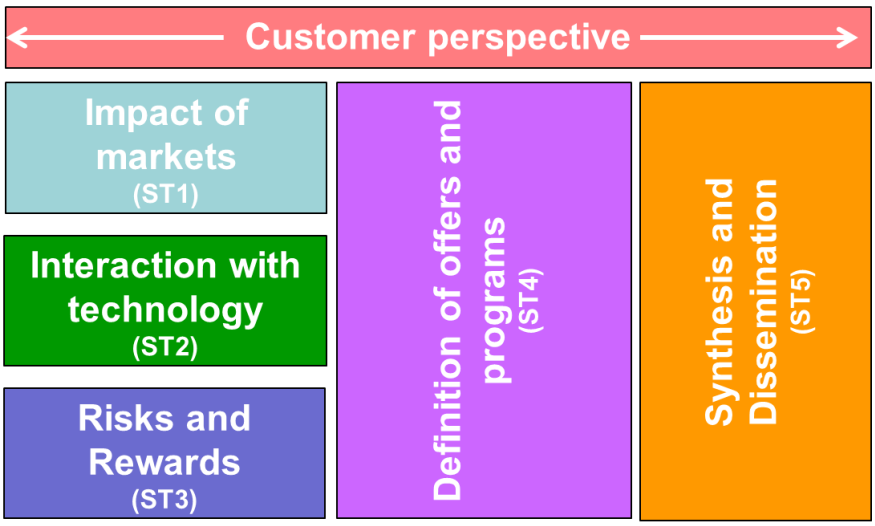
1 Introduction

Task 23 of the IEA DSM Implementing Agreement was defined in order to investigate the role of the customer in Smart Grids. It began in June 2012 and is due to end in November 2013. Netherlands, Norway, Sweden, the Republic of Korea and the United Kingdom are participating in the Task.

Task 23 was formulated in order to address a perceived gap in existing Smart Grid activities, namely the extent to which consumers would be willing to embrace Smart Grid related technologies and initiatives. It was identified that there was a large amount of activity focusing on the technological aspects of delivering Smart Grids; for example, through the development of new technologies and initiatives to enable the demand side to become active participants in the market. However, little was understood of consumer behaviour and their interaction with Smart Grids. This presented a risk that if customers were not willing to adopt new approaches to the way that they consume electricity, Smart Grids would not be able to achieve their full potential. The aim of Task 23 is therefore:

> *"To identify and where possible quantify the risks and rewards associated with Smart Meters and Smart Grids from the perspective of the customer, both now and in the future"*

The current Task involves five Sub-Tasks, with the following structure:



This document presents a proposal for the extension of Task 23 with an additional Sub-Task (ST6). ST6 would involve the completion of a consumer survey across a number of countries within the IEA DSM Implementing Agreement. A survey of this nature is already underway by the UK team as part of Task 23. The Sub-Task is open to all members of the IEA DSM Implementing Agreement.

2 Background

In order to understand the interaction of customers and Smart Grid technologies (and other initiatives such as tariffs or the provision of information) Task 23 has reviewed a wide range of existing case studies and consumer surveys under Sub-Task 2. These have included surveys and case studies from both the participating countries and elsewhere in the world. The aim of this review is to inform the development of 'offers and programs' (ST4) which best address the needs of consumers.

Sub-Task 2 has shown that there is a large amount of activity within this area and a wealth of information available, however information relating specifically to consumer attitudes to Smart Grids is often poorly reported within the project results. The outcomes of Sub-Task 2 have shown that carrying out a comparative consumer survey across a number of countries could offer the following benefits:

- Many trial deployments of Smart Grid interventions have involved a relatively small group of 'early adopters' who have chosen to take part in a trial. The behaviour and attitudes of these consumers do not necessarily accurately reflect the general population. A survey would include a cross-section of customers and so capture the attitudes of a wider group of participants than many of the available case studies.
- The case studies have a tendency to concentrate on technical aspects (use of particular technologies etc.) rather than consumer attitudes. A survey could be used to reveal further information on consumer attitudes.
- Existing surveys do not focus on what specific actions consumers might be prepared to take, or the level of rewards necessary for them to do this. ST6 would address this gap.
- The surveys already reporting in ST2 focus on the United Kingdom and Ireland, and do not present a consistent set of questions across different countries.
- Existing consumer surveys have tended to focus on a single country and so do not a comparison of attitudes between countries.

A consumer survey could be used to address these gaps in knowledge, and also to increase the level of understanding of consumer attitudes and preferences. This knowledge can then be used to further refine the development of 'offers and proposals' which will be of interest to consumers. In addition, the survey results could form a useful standalone resource for other projects undertaken by the IEA DSM Implementing Agreement.

As part of the activities of the UK Team[2] it was decided to conduct a survey of domestic energy consumers. The objectives of the survey were as follows:

- To determine peoples' attitudes and current behaviours with regard to the energy usage;
- Their views and attitudes towards Demand Side Management;
- The level of rewards necessary for them to take part in a DSM programme; and
- Specific actions which they could undertake.

This survey is being undertaken by a specialist market research company, with significant experience in the energy sector, DH Research. The survey in the UK is being completed via an online system, whereby participants are drawn from a panel of consumers who have indicated a willingness to take part in such surveys. This is now the standard method used in this type of consumer research and panels are available which are representative of national populations in terms of gender, age and socio-economic groups.

The survey being undertaken by the UK team was described at the third International Expert's Meeting for Task 23 (held in Steinkjer, Norway, 4th-5th July 2013). The comments and feedback provided during the meeting indicated a level of interest that merited the development of this proposal.

[2] A consortium made up of Distribution Network Operators (DNOs), an Energy Supplier, the Transmission System Operator (TSO) and regional Government.

3 Aim and Objectives

The aim of this additional Sub-Task would be to design, carry out and analyse a consistent survey across all the Participating Countries. The survey would provide information on a number of areas, including:

- Household demographics;
- Current energy consumption behaviours and knowledge of the industry;
- Attitudes to energy efficiency, motivations and any activities already undertaken;
- Reactions to the concept of Demand Side Response (DSR);
- Reaction to specific changes in behaviour (e.g. to the notion of control of appliances); and
- Incentives and rewards required.

The structure described above was developed by the UK Team in order to meet both the objectives of Task 23 and their interests. The new Sub-Task would allow for some alterations to the survey in each country, whilst still maintaining a core of standard questions to allow different countries to be compared.

The results from each country would then be compared in order to determine differing attitudes to energy efficiency, Smart Grids and DSM. This comparison can then be used to re-visit the conclusions of Task 23 in light of the detailed information on consumer attitudes. The results of the research will show the levels of consumer willingness to take part in DSM (e.g. what percentage of respondents would be "very interested" or "fairly interested" in taking part), their reaction to specific propositions (e.g. control of washing machines) and their motivations for taking part. This information would be broken down by different demographics, enabling specific propositions to be more effectively targeted, or to influence the policy messages sent to different groups.

Specific objectives of the new Sub-Task, therefore, are to:-

- Produce a tailored questionnaire for each country participating in the Sub-Task
- Carry out an online questionnaire in each country, obtaining circa. 1000 responses in each.
- Analyse the results, compare attitudes between countries and use this information to create guidance for policy-makers and those considering running DSM schemes, in either a trial or business-as-usual environment.

3.1 Scope

The scope of the project will be limited to domestic customers in each Participating Country. Respondents would be limited to those over the age of 18, but the survey could either be undertaken by the person responsible for paying the bill, or another adult within the household.

4 Benefits

Participation in the new sub-task will enable Task Participants to:-

- Compare attitudes towards Smart Grid related activities in different countries.
- The survey will include a limited scope to be tailored to meet the particular interests of their country or organisation, whilst also covering a 'core' set of questions.
- Gain an insight into consumer attitudes in both their own, and other, countries in a directly comparable survey.
- Use the results of this survey to influence the development of DSM schemes and policy, based on the attitudes expressed by consumers.

The outputs of the proposed sub-task would be of benefit to all organisations that have an interest in understanding the factors that influence the way that customers may interact with Smart Grids both now and in the future, including:-

- **Energy Companies:** Energy Suppliers and Energy Network Companies who have interest in developing DSM schemes have an opportunity to gain an insight into the receptiveness of their customers to Smart Grid related initiatives, their motivations for taking part, and the types of incentives which would be required. This information could then be used to shape either trials or business as usual activity, with a higher chance of success due to the early consideration of customer attitudes. DSM activity could also be targeted at those customers with the highest levels of interest or flexibility, based on the breakdown of the survey results by demographic groups (e.g. type of housing, location within the country etc.) The survey results could also be used to gauge whether a DSM scheme is the most appropriate solution to be used in a particular situation- for example showing the level of investment (price of flexibility from customers) required to obtain a demand response, which could then be compared to other solutions.
- **Regulators:** The proposed sub-task would provide an understanding of the attitudes of consumers to the existing electricity market in each country, and their response to the concept of DSM. This would inform the regulator on the type of regulation that may be accepted by customers, and the level of rewards they would expect to receive from participating bodies for taking part.
- **Policy makers/ Governments:** Policy in relation to Smart Grids and DSM has the potential to impact customers, and the way they use energy. By understanding the attitudes of customers through this proposed new sub-task, policy makers and governments can shape policy around Smart Grids and DSM in a way that will be acceptable to customers and so allows the maximum benefits to be gained from any measures which are put in place.
- **Equipment Developers/ Suppliers:** The survey content can be tailored to include questions to determine consumer attitudes to a list of specific DSM interventions (e.g. control of specific appliances). This list could be adapted to take account of the interests of an equipment developer/ supplier taking part in the sub-task. This would provide valuable feedback for the development of propositions.
- **Additional Service Providers:** In a future Smart Grid, a number of other service providers could enter the market providing services which will interact with consumers. By taking part in the proposed new sub-task, additional service providers

could use the survey to determine which services would be of interest to consumers in various countries, and the motivations of customers for taking part in DSM schemes.

- **Customers / Small Business Organisations:** The output of the Task would provide a better understanding of the Smart Grid concept and the potential benefits to the customer.

In essence, this sub-task is likely to be of interest to a wide range of organisations with an interest in developing Smart Grid or DSM propositions with consumers.

5 Programme of Work

Activity 1: Development of Survey

The purpose of this activity would be to develop a consistent survey to be used in each participating country. A survey design has been developed for use in the UK, with following structure:

- Background (home ownership, type of home, location, number of people in the household etc.)
- Electricity and gas usage (sources of energy used, any micro-generation, amount of energy used)
- Energy Efficiency (attitudes to energy efficiency and motivating factors for any actions)
- Reaction to DSR concept (any prior knowledge, attitude to the concept, motivating factors for taking part in DSR, any perceived barriers)
- Feasibility of specific actions (attitudes to specific actions and the amount of notice required)
- Incentives and rewards (what type of rewards are of interest, and what level of reward is expected)

In order to enable comparison of attitudes in different countries, a similar structure and 'core' set of questions would be used in each of the participating countries. However, this activity would allow some shaping of the survey design based on the particular interests of the participating countries and the regulatory/ commercial environments in each. Screening criteria (e.g. age of respondents, specific areas of the country etc.) could also be tailored to each participating country.

The research company (DH Research) would use this briefing to establish:

- Confirmation of the specific research objectives and methodology to be used
- The target respondents and any 'screening' criteria in each country
- The interview content and questionnaire coverage
- The nature and format of the reporting and deliverables required
- The project timetable

The survey design will be completed in English, and the final agreed version will be translated to the relevant languages for completion by participants in each country. All reporting of results will be in English.

Table 5.1 Activity 1

Element	Element undertaken by:	Funding
Kick Off and Survey Definition Meeting (Capenhurst, UK)	Organised by Operating Agent(i), attended by all Participants and the research company	Cost Share and Task Share
Selection of online panels in each country	Research company	Cost Share

(i) hosted by Operating Agent

Outputs to include:

- Completed survey design to be used for each country

Activity 2: Completion of Survey

The survey will be completed online. This method was chosen by the UK team, based on a number of factors:

- Representativeness- widespread Internet access and use of computers amongst the population, together with the growth of large scale web panels of 'opted-in' research respondents means that online research is now a feasible and representative tool for researchers to use.
- Budget- this method is relatively cheaper compared to a telephone alternative.
- Ability of respondents to assimilate information- in order to gauge respondents attitudes towards DSR in general, and specific actions which they may undertake, a description will need to be presented to them. Using an online survey means this description can include bullet points, and visual elements (if necessary) and can be re-read by participants. This makes it easier for the respondents to assimilate the information presented to them and gives them an opportunity to re-read the information if necessary, which is advantageous when compared to the telephone method.
- Timescales- the fieldwork period for an online survey is much shorter than with telephone interviews.

Following completion of the survey design (Activity 1) the survey would be translated into the relevant languages and programmed ready for self-completion by participants online. A test version of the survey would be provided to the International Experts in each country prior to the survey 'going live'.

The survey programme would begin with a 'soft start' or pilot phase, whereby the fieldwork would be paused after the completion of a small number of surveys (circa 25 responses) to validate the research method, questionnaire coverage and question wording, response quality etc. Any amendments to the questionnaire can be made at this point, before progressing with the main body of interviews.

The remaining interviews would then be completed by the respondents.

Table 5.2 Activity 2

Element	Element undertaken by:	Funding
Programming of completed survey	Research company	Cost share
Testing of survey in each country	Participants	Task share
Completion of survey	Organised by research company	Cost share

Outputs to include:

- Test version of survey to be trialled by each Participant
- Feedback from 'soft start' of survey
- Survey results obtained by the research company (ready for analysis)

Activity 3: Analysis of Survey Results

Following completion of the survey the research company would provide the following outputs for each country:

- Powerpoint presentation of the research findings
- Data tables showing an overview of the results, including a breakdown of the responses by different sub-groups (e.g. by age, gender or socio-economic group)
- Datafile of the results (in Excel)

These outputs would be made available to the Participants.

The Operating Agent would then complete a more in-depth analysis the results in order to compare the results across countries. Conclusions would be drawn as to the wider implications of the results in relation to both the specific objectives of Task 23, and also the wider area of Smart Grids and DSM. Two deliverables would be produced from this work:

- A detailed report showing the questionnaire, results and drawing conclusions regarding the similarities and differences between Participating Countries, and the wider implications of the results. This report will also re-visit and, if necessary, further refine the conclusions from the previous five sub-tasks of Task 23, in light of the conclusions from the surveys.
- A shorter report detailing the main conclusions of relevance for policy makers.

Table 5.3 Activity 3

Element	Element undertaken by:	Funding
Analysis of results for each country	Research company	Cost share
Comparison of country results and determining the wider implications of the results	Operating Agent	Cost share
Production of a detailed report and conclusions for policy makers	Operating Agent	Cost share
Meeting to present findings	Operating Agent, Participants and Research Company	Cost share and task share

Outputs to include:

- Survey results as provided by the research company (Power point presentation of findings, data tabulations with a detailed breakdown of the results, Excel datafile)
- Detailed report comparing the results between Participating Countries
- Conclusions for policy makers document

Deliverables

The principal deliverables associated with the new Task are two reports and the survey results. The first report will provide:

- A detailed analysis of the survey results for each country;
- Comparisons between participating countries; and
- The implication of the survey results for the role of the demand side within Smart Grids.

A second, shorter report will provide the main conclusions of relevance for policy makers.

In addition, each participating country will receive the survey results from their country (as provided by the research company). These will include:

- A Powerpoint presentation of the research findings
- Data tables showing an overview of the results
- A data file containing the full survey results from all respondents.

It is anticipated that the new Task will require 6 months to complete.

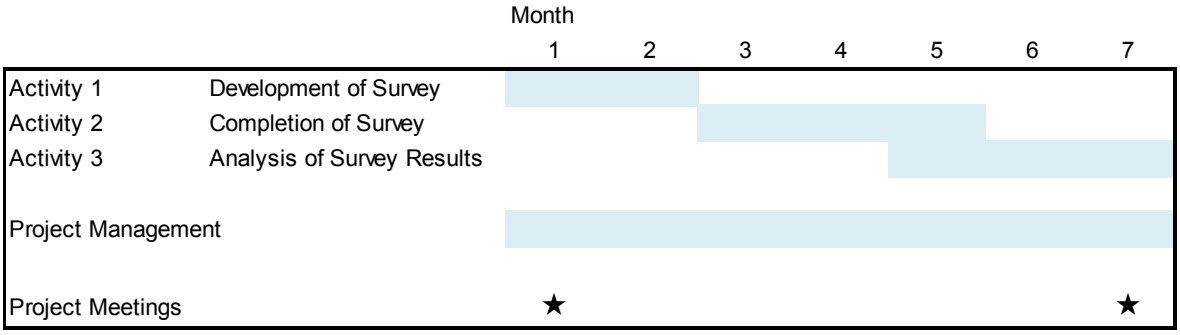
The project will also include two face-to-face meetings as follows:

- Kick off meeting, to be held at Capenhurst, Chester. The aim of the meeting will be to confirm the specific research objectives, target respondents and finalise the survey design in each of the participating countries.
- Final meeting, date/location to be agreed. The aim of this meeting will be to review the final results.

6 Work Schedule

The Task will be implemented over a 6 month time period, commencing at such time as two participants are able to commit to the Task[3].

The programme-of-work, activities and meetings within the sub-task shall be performed in accordance with the Gantt chart shown below.



It is envisaged that the project could commence in January 2014, provided that a minimum of two countries have confirmed their participation.

[3] Refer to Section 9 for further information on participant base and budgetary implications.

7 Rights and Obligations

The principal results and outputs from the new Task will remain confidential to the Participants for a period of not less than 12 months after the completion of the Task, unless all the Participants agree to an earlier release of information. After this time, the reports will be made freely available via the IEA DSM web-site.

The Sub-Task will also be required to produce an executive overview report of its activities, not containing any sensitive information or data, and which is suitable for publication in the public domain.

Although the programme-of-work, as described herein, is not anticipated to lead to the development of any new Intellectual Property (IP), the ownership and commercial exploitation of any IP which may be produced shall be established by the unanimous vote of the DSM Executive Committee, consistent with the IEA DSM Implementing Agreement.

Obligations on the Operating Agent

The Task Operating Agent will be responsible for the overall management and delivery of the work programme and will work closely with the individual Participants, such as to ensure the effective and expedient delivery of its objectives. It will discharge its duties via the organisation and delivery of a programme of Experts' Meetings and via specific further activities, as may be required. The Operating Agent will submit regular six monthly reports to the DSM ExCo and will implement the decisions of the DSM ExCo.

The Operating Agent will be specifically responsible for:-

- Ensuring an agreed survey design for each participating country is supplied to the research company based on the feedback from National Experts.
- actively engaging with the network of National Experts, by means of the programme of Experts' Meetings described above and via supplementary one to one dialogue, in order to elicit the necessary information required for the satisfactory completion of the Task; and
- the production of the Task deliverables, as described in section 6 above.

Obligations on the Participating Countries

Each participating country within the Task shall be required to nominate a National Expert (or otherwise known as "Expert"). Experts will be expected to have a good working knowledge of Smart Grids, Smart Meters, Demand Side Management and customer behaviours.

Each National Expert will be required to:-

- Provide the Operating Agent with a National Participation Letter, indicating their commitment to the Task. The collective set of National Participation Letters will represent the National Participation Plan;
- Attend and participate in the programme of Experts' Meetings, to be organised by the Operating Agent in the discharge of its obligations;
- Support the Operating Agent in the discharge of its obligations via the timely and appropriate provision of information, data and other material, as may reasonably be required to service the requirements of the programme-of-work, as described in Section 5 above; and
- Take the lead responsibility on an individual national basis for the dissemination of the outputs from the Task.

8 Budgets

The performance of the new Task will require a combination of financial and in-kind contributions, as described below.

8.1 Operating Agent and Research Costs (GBP, £)

The project will be completed by the Operating Agent, and the research company (acting as a sub-contractor to the Operating Agent). The breakdown of the Operating Agent's budget is as shown in Table 8.1 below. These costs are based on four participating countries.

Table 8.1: Operating Agent Budgetary Breakdown (based on four participating countries)

Activity		***Completed by***	***Manpower (£)***	***T&S(£)***	***Sub-Contractor Fees (£)***	***Totals(£)***
1	*Development of Survey*	*Operating Agent*	*8,190*	*570*	*---*	*8,760*
2	*Completion of Survey*	*Research Company (sub-contracted to Operating Agent)*	*---*	*---*	*58,995*	*58,995*
3	*Analysis of Survey Results*	*Operating Agent*	*30,287*	*1,723*	*---*	*32,010*
4	*Project Management and ExCo Meetings*	*Operating Agent*	*12,146*	*4,035*	*---*	*16,181*
	Totals:		***50,623***	***6,328***	***58,995***	***115,946***

The budget outlined above assumes participation in the sub-task by four countries. In the event that a different number of countries join the sub-task, then elements of the work would be scaled accordingly (e.g. a reduced amount of work in analysing a smaller volume of data from fewer countries), whilst others will remain the same (e.g. a fixed 'per country' fee for completing the survey).

The cost on a per participant basis, for differing numbers of participating countries is shown in Table 8.2 below.

Table 8.2: Cost per Participant

Number of Participating Countries	**Total Cost (including sub-contractor fees) (£)**	**Cost per Participant**
Two	£75,798	£37,899
Three	£95,213	£31,738
Four	£115,946	£28,967
Five	£137,189	£27,438

N.B. The UK has already completed a survey. Therefore, the number of participating countries indicates those undertaking a survey in addition to that already completed in the UK. As such, it is envisaged that the UK would join the extension on a Task Share basis (subject to the approval of the ExCo).

If a Participant decides to join the Task once work has commenced, the Operating Agent reserves the right to revisit the costing shown above. If necessary, the total costing will be adjusted to reflect any additional administrative or project management costs associated with incorporating the additional Participant. These revised costs will be agreed with existing Participants.

The values shown in Table 8.2 are based on indicative costs for conducting surveys within the countries currently participating in Task 23. The extension is open to any country within the IEA DSM Implementing Agreement. Therefore, the Operating Agent reserves the right to revisit the costing if, due to unforeseen circumstances, the survey costs vary considerably to those envisaged.

8.2 Task Participants

The Task Participants will be expected to support National Expert participation at a minimum level of 2 person-weeks per participating country, over the 7 months of the Task. Multiple Experts may be assigned, as appropriate.

All Participants will be required to provide National Expert representation and contribution to the Experts' meetings, to be held at the start and end of the project. Travel and subsistence costs for these meetings shall be the responsibility of the Task Participants.

8.3 Budgetary Overview

Table 8.3 below provides a budgetary overview of the contributions required from the Task Participants, for the delivery of the new sub-task, based on four participating countries. In the event of a differing number of Participants, the financial contribution will change according to Table 8.2, whilst the National Expert Contribution will remain the same. The sub-task requires a minimum of two countries to commence.

Table 8.3: Summary of Financial and National Expert Contributions Required per Task Participant (based on four countries participating)

Role/Activity	Financial/manpower provision
Operating Agency	**£28,967**
National Expert Contribution	**2 person weeks**

9 Operating Agent and Research Company

Operating Agent

EA Technology is well placed to undertake the role of Operating Agent for this new Task. EA Technology has been actively involved within the IEA Implementing Agreement on Demand Side Technologies and Programmes since its inception in 1993. During this time, EA Technology has successfully managed and delivered four major programmes of work within the agreement.

- Task II: Communications Technologies for Demand Side Management
- Task VIII: Demand Side Bidding in a Competitive Electricity Market
- Task XI: Time of Use Pricing and Energy End Use for Demand Management Delivering
- Task XIX: Micro Demand Response and Energy Saving

It is proposed that the role of Operating Agent be fulfilled by Linda Hull, a Senior Consultant at EA Technology. Linda brings to the project substantial management experience, complemented by her respected and wide ranging knowledge of Demand Side Management, electricity markets, regulation, techno-economic evaluation, electricity trading arrangements, smart metering applications and the role of smart appliances. Linda Hull has previously fulfilled the role of Operating Agent for Task VIII and Task XIX.

Linda Hull will pro-actively manage and co-ordinate the EA Technology project team, both internally and with the Task Experts, and act as the primary contact point for the IEA DSM Executive Committee. The Project Manager's responsibilities are principally to achieve the project objectives and deliver the project outputs, to a high level of client satisfaction, within the timeframe allocated and within the agreed budget. In addition, a Project Direct will be assigned to the project. The role of the Project Director is to manage a portfolio of projects within EA Technology, of which this will be one. Issues which cannot be dealt with within the Project by the Project Manager, such as the impact of external factors or unexpected resourcing issues will be escalated to the Project Director.

Research Company

DH Research Ltd was established in 2000 as a market research agency specialising in industrial and commercial markets. They are a small company, with the focus on providing expert advice and innovative research in order to produce effective information this is relevant to their clients' specific needs. They have specific experience of managing research projects in the Utilities sector, both within the UK and internationally, having previously worked with energy suppliers such as GDF SUEZ, International Power, E.ON, EDF Energy; and also UK water supply companies including Thames Water, United Utilities and Yorkshire Water.

10 Risk Register

The early identification and management of potential risks is one essential element of EA Technology's Project Management system. As such, the possible risks to the successful completion of this project have been assessed and mitigation approaches identified as shown below.

Risk	Likelihood of Occurrence	Impact	Risk Category	Risk Mitigation Measure(s)	Risk Category, post Mitigation
Lack of full range of requisite expertise, with which to deliver the required services	Low	High	Medium	Composition and make-up of Task Experts; Access to wider range of specialists and support staff within all the Project Participants; Knowledge of and access to range of key stakeholders, within the wider industry.	Low
Failure of research company to deliver survey results	Low	High	Medium	Previous work with proposed research company by the UK Team. Regular dialogue with the research company to monitor progress. Established 'panels' are to be used to recruit survey participants. Soft-start to the survey to determine any problems with the design prior to full start.	Low
Inability of Operating Agent and Task Experts to work together	Low	High	Medium	Prior working relationships and interactions; Regular reporting to the Executive Committee of any issues arising.	Low
Sudden unavailability or withdrawal of Task Experts	Medium	High	High	Participants aware of level of commitment required, and decision to participate in project indicates that sufficient resources will be made available;. Relatively short duration of the project	Medium, in short term, reducing to low, in the medium term.
Sudden unavailability of Project Manager, other key staff member(s).	Low	Medium	Medium	Ability of EA Technology to re-allocate staff from wider complementary skill pools	Medium, in very short term. Low, in short to medium term.
Project delivery timescale over-runs	Low	High	Medium	Formal Project Management procedures; Regular reporting to the IEA DSM ExCo. Clearly identified Project Director and escalation procedures.	Low
Cost over-runs	Low	Low	Low	Formalised Project Management and review procedures; Project to be performed on fixed price total contract basis.	Low

Agenda 3d. (42nd meeting of the IEA DSM Programme)

Document F

Task 24
Closing the Loop – Behaviour Change in DSM: From Theory to Practice

Proposed Extension

Dr. Sea Rotmann – New Zealand
Dr. Ruth Mourik - Netherlands

This Task Status Report is submitted to the IEA DSM ExCo with a request to:

- Approve the proposed Extension of Task 24

IEA DSM TASK 24
PROPOSAL FOR EXTENSION

HOW TO CHANGE THE BEHAVIOUR OF THE BEHAVIOUR CHANGERS

Proposed by Operating Agents
Dr Sea Rotmann (SEA - Sustainable Energy Advice, NZ)
Dr Ruth Mourik (DuneWorks, NL)

BACKGROUND

Task 24 was initiated in January 2012 (official start July 2012) and is currently financially supported by 6-9 countries (Netherlands, New Zealand, Sweden, Norway, Switzerland, Belgium and (hopefully soon) Italy, Austria and South Africa). It also has received strong in-kind (expert) support from the UK, Spain, Portugal, UAE, France, Australia and the US. Over 200 behaviour change and DSM experts from over 20 countries are involved to greater or lesser extent in various aspects of this Task and 180 are participating in the Task 24 Expert Platform (www.ieadsmtask24.ning.com), which is our Subtask 5. Ten highly successful expert workshops have been held to date - 3 stakeholder workshops in the Netherlands and one in Austria, and 6 expert workshops discussing Subtasks 1 - 4 (in Brussels, Oxford, Wellington, Trondheim, Stockholm and Luzern). Several webinars between the national experts have also taken place and there are over 90 videos and presentations of these events on the Expert Platform, including a professional 25 min film on the Oxford workshop, which was the largest to date. We have also presented the Task at some very large international conferences, bringing the total audience of people who have heard about the Task into the 1000s.

Over 40 case studies showing the successful (or not so successful) use of diverse models of understanding behaviour in the areas of transport, SMEs, smart meters and building retrofits have been collected to date from 10 countries. They have now been analysed and an interactive 150pp report and Wiki have been developed. Several case studies for Subtask 2 have been collected - in Austria, Norway, Sweden and Switzerland and the Netherlands. Subtask 3 has been workshopped at the Trondheim workshop and the eceee 2013 summer study in an informal session. The Task has also participated in a cross-over informal session at the eceee on helping ESCO facilitators for Task 16. Feedback and publicity of Task 24 has been outstanding - new, highly engaged experts are joining on a weekly basis, enabling us to collect relevant case studies from a truly global perspective. We are also addressing the all-important question of how to best evaluate successful long-term behaviour change outcomes from the perspective of the various 'behaviour changers' (industry, government, intermediaries, research, the third sector) who are our target audience. We propose to create a decisionmaking tool to ensure that these stakeholders will be able to benefit from the recommendations from Subtask 4.

Successful implementation of energy efficiency and DSM can mean: financial savings, job creation, improved load management, reduced need for new generation, security of supply, reduced emissions, reduced pollution, greener products and services, more affordable energy, reduced fuel poverty, increased warmth and comfort, improved health and wellbeing, better social cohesion, individual empowerment, community engagement, corporate responsibility and good PR, changing the social norm not to needlessly waste energy and resources. It is therefore hard to believe that energy efficiency is still regarded as the 'largest market failure of all time'. We believe that a better understanding of the human aspect of energy use, including behavioural drivers and barriers and external and internal contexts, will improve the uptake of energy efficiency and DSM policies and programmes. But for this, we first need to change the behaviour of the behaviour changers, so that better, more successful approaches are used to change end user behaviours.

We have been told again and again, that our Task is very timely, important and asks the right questions from the right audience. From feedback collected in our workshops and from our experts we know that we are very successful in:

* **Translating relevant knowledge from research to policymaking and practitioners**. We are experimenting with different ways of disseminating this research, which works much better than providing only the traditional reports.
* **Bringing together a vast range of highly engaged experts from every sector involved in changing energy-using behaviours ('the behaviour changers')**: research, funders, government (local, regional, national, international), SMEs, utilities, industry,

technology developers, NGOs, energy advisors and consultants, transport specialists, tradespeople, building physicists and architects, DSOs, TSOs, ESCOs, community groups, transition towns etc;

* **Breaking down silos between the different behaviour changers**, introducing them to one another and helping them find ways to collaborate, understand, support and learn from each other; particularly by encouraging them to tell their own (sector's) energy stories;
* **'Matchmaking' behaviour changers from different sectors**, countries and interests - for example, we have had several people from industry invited to give their presentations from our workshops in different fora to spread the word; we have had technology developers join forces after realising they would otherwise duplicate their efforts; we have promoted up-coming businesses whose technology is now being trialled in pilots in other countries; we have had experts from Government visit Universities in other countries to give talks about work that was presented in our workshops; and a consultant from the UK is coming to New Zealand on sabbatical to work on our NZ national expert's research project etc. We have also helped a technology developer improve his new smart phone feedback software based on behavioural findings and from Task 24 and trialled his other technology innovation in our Trondheim workshop;
* **Publicising our Task and the IEA DSM Implementing Agreement**. We are highly engaged in social media and write columns and blogs with a very large, global energy efficiency audience. We have built on our extensive professional networks and expanded them vastly using new media technology and 'old-fashioned' word of mouth and face-to-face workshops. We are known, including in the IEA Secretariat and ISGAN, as the 'go-to' people/Task involved in behaviour change and DSM. In addition, we are very successful in spreading the word in academic settings - we have had two peer-reviewed papers accepted and given Task presentations in some of the largest behaviour change and energy conferences all over the world. We have presented the Task at the 3rd International Sustainability Conference (Basel, August 2012), the BEhavE conference (Helsinki, Sept 2012), the National Energy Research Institute conference (Wellington, 2013); the ECEEE summer study (Hyéres, 2013), the 3rd International Exergy, Lifestyle Assessment and Sustainability Workshop and Symposium (Athens, 2013), a stakeholder workshop in Dubai specifically organised for this Task (2013), the IEEE International Smart Grid conference (Copenhagen, 2013); and the BECC conference in the US (2013). We have also been asked to chair panels on consumer behaviour at the IEEE ISGT conference in October, a Dutch international conference in November and become part of the technical steering committee and panel leader for the BEhavE conference in the UK next fall.
* **Developing creative ways of disseminating our work.** This includes very strong use of social media and social networks, but also a much more visual and creative way of dissemination: videos, Pecha Kuchas, podcasts, graphic stories, infographics, photos and short films combining various elements. Our overarching approach to dissemination of this Task is *storytelling*. We are dealing with a very human issue in this Task, and it needs a very human approach to foster engagement and understanding. We collect each participating country's energy story, as told by its experts; we also collect the energy story of individual behaviour changers from all sectors to showcase various issues that are central to the various models and theories, e.g. the influence of social norms, the interdependency with technological systems, the limited motivational influence of financial incentives etc. We also get behaviour changers from the different sectors to tell their sector's energy stories as ways of defining a specific problem, e.g. how to improve smart meter feedback uptake to actually change energy using behaviours. There is something uniquely powerful about hearing professionals' tell their country's, sector's or personal energy stories, in their own words and with their own 'flavour'. The filmed stories prove more memorable and more emotionally engaging than any scientific reporting ever could. We also force our experts to focus on the most important aspects of each model or case they discuss by developing 'tweetable' (ie 140 characters or less) summaries for each example. Each case study we have collected has its own short story. And each model of behaviour has been explained in a story format from the point of view of the end user. These are good ways to ensuring that we can tell a good story without getting lost in too much detail or inter-disciplinary jargon.

* **Engaging our expert network to support our work in the various Subtasks**. On top of our excellent national experts, who provide the bulk of the information collected for our Task, we are able to draw upon a wide range of experts from other countries that are happy to provide case studies, feedback and support and who come to our workshops at their own cost. UKERC Meeting Place sponsored a highly successful 2-day workshop in Oxford with over €40,000; and the UAE Energy Savers organised a big meeting with 30+ people in Dubai for Task 24;
* **Having a very wide scope, befitting the complexity of the topic.** DSM in our Task is defined as: 'Interventions (top-down and bottom-up policies, programmes and actions) developed and performed by intermediaries (government agencies, utilies, DSM implementers) that seek to influence the ways end users consume *energy at home, at their workplace or whilst travelling*. The changes sought by intermediaries may include the *quantity* of energy consumed for a given service, the *patterns* of energy consumption or the *supply management* and type of energy consumed. The intended outcome of DSM will differ with the aspirations of intermediaries but include energy efficiency, energy conservation, sufficiency, reduced greenhouse gas emissions, financial or social gains or (peak) load management. In the short-term, it may *not always lead to a total reduction in energy consumption* (although this is the medium to long-term goal), but to the most efficient and environmentally friendly use of energy to derive the services that underpin social and economic wellbeing (eg comfort, mobility, entertainment, cleanliness, production etc).' We aim to get insights and learnings into the role of the individual, social context, technology, actors and institutions, behavioural change processes, social change, relevant conditions and factors affecting behaviour change, context particularities and monitoring and evaluation which has been undertaken in real-life examples.

But despite these many successes, there still remains a lot of work to be done. We have only just begun to scratch the surface of this most complex of problems: *Why do people behave the way they do, when it is not rational, costs them money and causes discomfort and even bad health, when they say they are willing to do something but act completely different, and unnecessarily waste energy and resources despite being largely aware of the importance of acting on global concerns such as climate change? And more importantly - why are the people designing behaviour change programmes and policies (the behaviour changers) continually falling into the same traps, using the same models and frameworks which have shown to only have limited success?*

We know all the questions, but still have only few concrete answers. The most important findings that we have from our work to date are that:

- This is one of the most complex problems facing us globally and there is real urgency to finding solutions (the IEA estimates that 2/3 of energy efficiency potential will remain unutilised to 2035 and that we will lock ourselves in to a long-term, catastrophic change of 5.3C)
- There is no simple answer, model or tool that will provide the 'silver bullet' that people hope for - there are only few hero stories, and many more learning stories in this field
- People rarely, if ever, behave in an economically rational matter, because most energy use is habitual and routine
- The behaviour changers' most commonly used models of changing behaviour, namely providing incentives and information (based on neoclassical economics), are thus hardly ever enough to achieve long-term habit changes
- There are complicating factors such as rebound, prebound, spill-over effects, cognitive biases, principal agent and free-rider issues, which still remain to be studied in real-life applications
- We need to enable more context-sensitive segmentation beyond the traditional socio-demographic and psycho-social segmentations
- Every individual's energy use is different depending on the underlying needs for service: e.g. their personal transport will have different drivers and barriers and contexts compared with their hot water or appliance use - tailoring to these needs is imperative
- Individuals or households may not be the right agents for interventions to change energy, we may have to affect systematic changes of energy practices, e.g. such as the practice of line drying, or doing the laundry

- We also need to develop more interventions geared at schools, SMEs, offices etc
- We are slowly seeing that, although economic and psychological approaches are still the most common models of understanding behaviour, sociological approaches are increasingly used to design DSM interventions
- The behaviour changers using these sociological approaches, however, are often not policymakers, but intermediaries designing interventions in a more bottom-up fashion
- We do need to build on national knowledge and sectors and detailed understanding of local conditions, cultures and contexts in order to provide bottom-up support for top-down interventions
- However, we also need to engage strongly with policymakers to enable them to design better DSM interventions based on the most appropriate models and theories
- We will thus need to collaborate and engage across all sectors in order to develop, implement and evaluate actions that will achieve long-lasting changes in practices
- We need many more concerted efforts in action research and piloting different approaches, with ongoing evaluation to iterate them as needed
- For all this, we need a shared learning platform that provides all the best practice and up-to-date knowledge from behaviour changers across borders and sectors.

These are some of the reasons why an extension of Task 24 is necessary and highly pertinent. The behaviour changers engaged in our Task are calling for more support on all these issues. It would be a huge waste to lose the momentum and engagement developed in this Task without bringing it towards further solutions to unraveling the complexity we are dealing with here. We would argue that this issue has been overlooked for too long, seeing what incredible potential for DSM and energy efficiency remains to be unlocked in the behavioural wedge (at least 30% of total energy use). Skip Laitner, formerly from ACEEE, estimated that 86% of all energy used in the US is wasted (ie only 14% of the US energy use being efficient). If one compares the amounts spent on technology research and development (including elusive silver bullets such as the hydrogen economy, nuclear fusion and CCS) with the tiny amounts spent on researching the human aspects of energy use, we get an idea why some of these questions remain unanswered. An extension for this Task will go quite a way towards improving our collective, global knowledge and actively designing, implementing, evaluating and iterating successful interventions in policy, programmes and pilots.

PROPOSED NEW WORK

Continued: Subtask 0: Task Management

Subtask number	0
Start date or starting event:	Month 1
End date of Subtask	Month 36
Subtask title	**Project coordination, ExCo feedback and reporting**
Activity Type	Management and administration

Objectives

a. Overall project coordination and management, including contact relationship management
b. Attendance of ExCo meetings, conferences and reporting to IEA DSM ExCo
c. Set-up Task Advisory Board (AB) of stakeholders (ExCo, IEA, intermediaries from research, industry, government, community sectors)

This Subtask will focus on overall project management, attending ExCo meetings and report-back to the IEA DSM ExCo members, organising financial and other administrative issues and publicising the Task. It will also involve a series of workshops and webinars to finalise the Task definition and expert input/output.

Outputs include: Overall project organisation and management (OAs); Task Status reports (OAs with inputs of NEs, AB); Annual reports (OAs); End of Term report, if applicable (OAs with inputs from NEs, AB); Participation in IEA DSM ExCo meetings (OAs); Final report and task management report (OAs with inputs of NEs, AB); Task flyers – at the start and at the conclusion of the project (OAs); Communication with related IEA tasks and other projects (OAs).

The Operating Agents (OAs) will ensure project progress according to the timetable, deliverables, milestones and expected results and the professional, result-oriented implementation of the project in close collaboration with the national experts (NEs). The OAs are also responsible for all reporting to the DSM ExCo. The Advisory Board (AB) will provide strategic overview and governance.

Continued: Subtask 5: Expert Platform

Subtask number	5
Start date or starting event:	Month 1
End date of Subtask	Month 36
Subtask title	**Social Media Expert Platform**
Activity Type	Networking, dissemination

Background

Behaviour change is a very social human issue. One of the main drivers/barriers for behaviour change are prevailing social norms. These social norms are strongly affected by our social networks. Social media has become a prevailing, global tool to engage with our social networks. Hence, this Task will utilise the idea of social networks (and social media as a tool to engage them) to disseminate, engage, collaborate and share learnings with the experts and stakeholders from participating or contributing countries.

In addition, as the start of this extension we plan to organise a big international conference, inviting the many different behaviour change experts to come and share and collectively design new research programmes. This conference would be different in that it would explicitly aim at translating knowledge from different realms (policy, research and practice) to create shared learning. This conference could be the first of a tradition to collectively design research lines and report on them annually or bi-annually. in addition this conference would explicitly focus on the four domains we investigate: Smart metering and smart grids, transport, SMEs and households and the built environment.

Objectives

d. Continued running, maintenance and improvement, as necessary, of social media expert platform
e. Organising an international conference as the first conference in a new tradition.

SUBTASK 6 - Who are the behaviour changers?

Subtask number	6
Start date or starting event:	Month 3
End date of Subtask	Month 12
Subtask title	**National DSM Experts and Stakeholder Analysis**
Activity Type	Networking, workshops, empirical analysis

Background

Subtask 5 has collected - and will continue to do so - a large range of behaviour changers from all sectors and stakeholder groups, from over 20 countries. Their short bios, websites and interests can

be found on the Expert Platform (www.ieadsmtask24.ning.com). We will continue the Expert Platform into the Task Extension but also propose to develop national expert platforms for each participating country with more detailed information on the various behaviour changers out there, their affiliations, their past and current work, their sectors and interests and what they are most concerned about regarding DSM and behaviour change. Part of the work for Subtask 6 will be (bi)annual national stakeholder workshops, as currently successfully trialled in the Netherlands and New Zealand, where active matchmaking, shared learning and collaborative support will be fostered and encouraged. This will include identifying the top DSM issues relevant for each country (see Subtask 7), a decisionmaking tool for behaviour changers (Subtask 8), training sessions for behaviour changers (Subtask 9), and (voluntary) efforts to develop, implement, evaluate and iterate pilots, programmes or policies on the countries' top DSM issues (Subtask 10).

Objectives

f. Identify the most important behaviour changers focusing on DSM and/or (energy) behaviour change in each participating country
g. Collect detailed information on their specific interests, organisations, past and current work -including lists of reports and other references which will form a (inter)national repository of most relevant DSM and behaviour change work
h. Develop national stakeholder dialogues in each participating country by holding (bi)annual workshops and/or webinars (1-2 days per country per year, all up maximum of 6 days per country)
i. Foster mutual engagement, collaboration and shared learning amongst behaviour changers from different sectors
j. Collect examples of successful matchmaking stories to illustrate benefits of shared learning and collaboration among all stakeholder sectors

SUBTASK 7 - What do Behaviour Changers most need to change?

Subtask number	7
Start date or starting event:	Month 6
End date of Subtask	Month 18
Subtask title	**Top DSM Issues per Participating Country**
Activity Type	Workshops, empirical analysis

Background

As part of the Subtasks 2 and 4 of the current Task 24, many DSM issues are being identified that lack in-depth understanding and are in need of further research, particularly on the national level, to account for context specificities. Below are a list of issues that have been raised several times already in the different workshops that Task 24 has undertaken so far:

How to address end-user engagement, acceptance and acceptability issues:

* e.g. if part of the control of smart meters is automatic and/or from distance, or generally related to accepting smart metering and not going for the opt-out option, or acceptance of retrofitting by tenants/landlords (principal agent issues) etc
* A key design challenge is to create a smart metering system that keeps engaging with the household members. Changing the messages and feedback in the course of time following energy literacy can be key. Information should thus be dynamic over time. What designs work well for whom?
* Should freeriders (people who would have taken measures also without the subsidy) be welcome too? Can incentives actually motivate towards even better or more comprehensive retrofitting than planned without the incentive?

Segmentation of households and SMEs and mobility/transport segments:

- Little is known about the response diversity of different households to different interventions. Very often the segmentation is not performed or at a very general level. How can we better segment in a meaningful way that is possible on a national level?
- SMEs are a missing link in research on DSM. They are viewed as a homogeneous group, but no understanding is available as to the variety of DSM relevant issues within the SME group. Are restaurants different from retailers? Are small industrial SMEs differing from service sector SMEs? Is there a segmentation necessary for offices and commercial buildings?
- How to differentiate between work and personal transport and mobility? How do the different travel modes affect behaviours?

Specific technology and behaviour issues:

1. There are some lists for the participating countries that highlight the top 20 behaviours that could actually make a significant contribution to load reduction and load shifting. However, a big barrier for many DSM implementers in the participating countries is that the advice on suitable interventions too often remain on the general level of retrofitting, feedback, sustainable mobility and do not apply to specific behaviours or technologies. Insufficient knowledge is available as to what the specific context barriers for very specific behaviours and purchasing or use of DSM technologies are, e.g. changing lights, insulating the house, lowering the thermostat, buying smart appliances?

***Collaboration and shared learning*:**

2. Is involving all relevant stakeholders in the form of diverse partnerships conducive to the creation of a new social norm? Has their interaction, and their often diverging needs and key performance indicators demanded alignment of interests with the potential for social learning?
3. Has social learning through building on previous programmes resulted in more effective programmes? And is this key to successful mainstreaming of retrofitting initiatives?
4. What is the potential of un-orchestrated collective learning? What could be the impact of e.g. seeing your neighbours retrofitting their home with the aid of a financial incentive?

Objectives

k. Building on work from Subtasks 2 and 4, develop lists of top 3 DSM issues per country (with country experts identified in Subtask 6)
l. Review current approaches, nationally and internationally, on these top issues and provide case study examples that could illuminate some of the issues (based on work in Subtask 1 and 2)
m. Feed these cases, and the ones analysed in Subtask 1 and 2 into a broad decisionmaking tool (Subtask 8)
n. Develop a country-specific list, together with country experts, of top 20 efficiency and conservation behaviours and their approximate potential in shifting or decreasing load (similar to what Dietz et al have done in the US)[4]. This will help chose which top DSM issue could be addressed in each country in Subtask 10.

SUBTASK 8 - What tool do Behaviour Changers need?

Subtask number	8
Start date or starting event:	Month 12
End date of subtask	Month 24
Subtask title	**Decisionmaking tool for Behaviour Changers**
Activity Type	Software, online application

[4] Dietz et al (2009). Household actions can provide a behavioral wedge to rapidly reduce US carbon emissions. *PNAS* 146 (44): 18452–18456. http://www.pnas.org/content/106/44/18452.long

Background

As part of Subtasks 3 and 4, an idea was developed that looked at organising the case studies collected so far into a useful tool for recommendations to the different behaviour changer sectors. It was based on a decisionmaking tree, asking specific questions on the desired outcomes of behaviour change, such as:

5. What behaviour do you want to change?
6. Why?
7. Who's the target for the behaviour change?
8. Where do they behave like that normally?
9. How do you think you can change it?
10. Why would you go about it like that?
11. When do you need to get it done by?
12. How do you measure success?
13. How will you get these measurements?
14. How much $ do you have/need?
15. How many people are you hoping to change?
16. How long will the effects of the change last?

It is important to address these questions from the perspective of the particular Behaviour Changers' sector. We break the Behaviour Changers who are our target audience in this Task into 5 sectors: The Decisionmaker (Policy); The Expert (Research); The Salesman (Energy Industry); The Doer (Intermediaries) and The Conscience (The Third Sector). Each one of these behaviour changers has very distinct mandates and restrictions. For example:

As The Decisionmaker your job is to:
17. Keep your Minister happy! (S/he wants to keep voters happy)
18. Analyse & design good policy
19. Design, implement and evaluate local, regional or national programmes
20. Regulate, incentivise and influence
21. Perform a 'public service'
22. 'Make the right decisions for the wrong reasons'

Your restrictions are:
23. You gotta follow the will of the Government/Minister of the Day
24. This may change rather often/be quite unstable
25. Tension between public service/ public good
26. You gotta convince Treasury to get budget for your programmes - this means cost-benefit analysis based on estimates and models, often ignoring the 'soft' costs and benefits
27. Unintended consequences and perverse outcomes

Objectives

o. Build a decisionmaking tree from 100+ cases collected in Subtasks 1, 2 and 7. Following the decisiontree process using similar questions as shown above (probably with a multiple choice option), the tool will remove all case studies that do not pertain to the Behaviour Changers specific sector, needs and type of inqiry and leave only the cases that are relevant to them.

p. We will then aspire to perform a summary of recommendations giving specific examples of dos and don'ts and connect the Behaviour Changer with other Behaviour Changers that have successfully undertaken similar work.

q. This could potentially take the form of an online game or an App.

Subtask 9 - How to change the Behaviour Changers?

Subtask number	9
Start date or starting event:	Month 12
End date of subtask	Month 30
Subtask title	**Training Sessions for Behaviour Changers in Participating Countries**
Activity Type	Training, support

Background

As discussed above, we are already seeing a slow shift from mainly economic and psychological approaches that only focus on the individual as behaviour change agent, to more sociological and systemic approaches that take the wider dependencies and contexts into account. However, this shift is still taking place in silos, mainly from the bottom-up and without large-scale, coordinated national efforts to design interventions that could change energy practices on the wider, societal level. We are proposing to build on the excellent work recently undertaken in the UK (so far, with policymakers only) that is focussing on fostering better understanding and implementation of wider and more systemic disciplinary theories of behaviour and practices[5]:

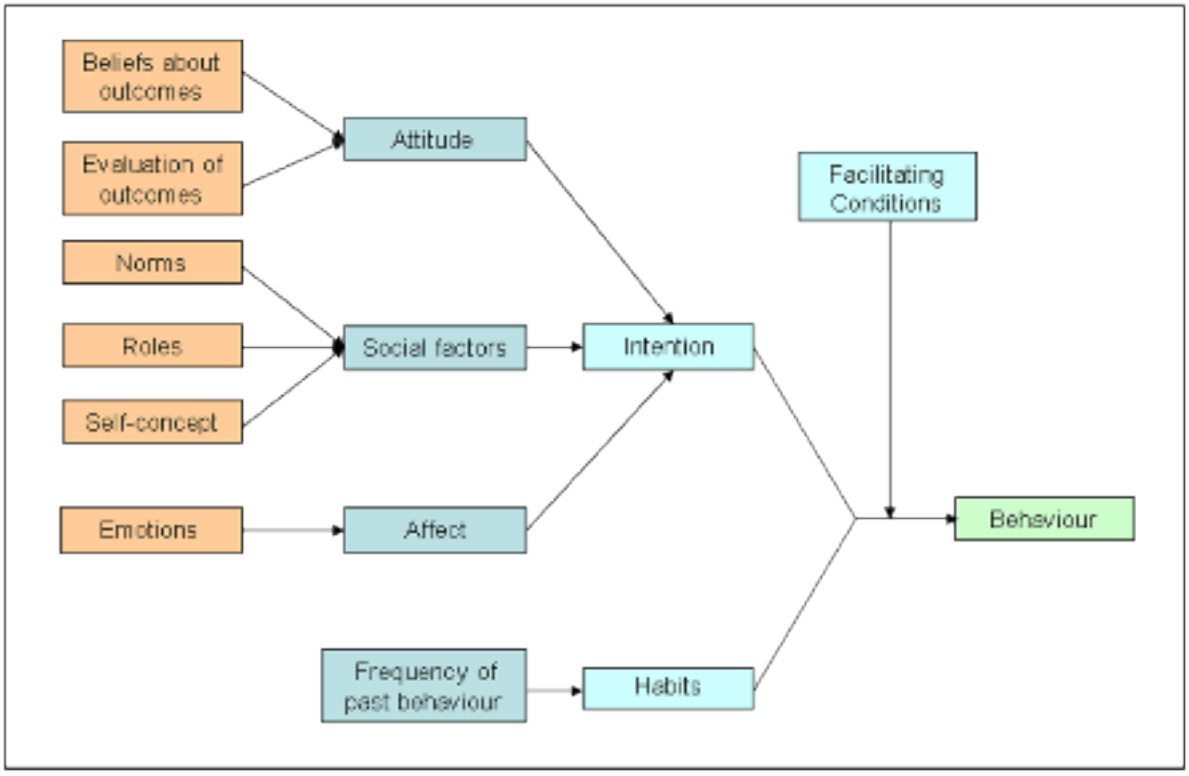
'The literature provides two distinct perspectives on habit, coming from two different academic disciplines: psychology, and sociology. In the former, habit appears as a psychological construct, and a factor influencing behaviour. In the latter, habits appear as routine practices. These differences in describing habits go to the root of the differences between how the two disciplines think about human conduct. Social psychologists talk about „behaviour", which originates in the individual, and is the product of their beliefs, attitudes and other motivational factors. Sociologists on the other hand talk about „practices", which exist as entities out there in the social world, and are reproduced by the individuals who perform them.

Psychology and sociology offer two distinct and sometimes conflicting accounts of habit. Yet to take full advantage of the insights from these two perspectives, it is imperative that practitioners understand both, and do not privilege one over the other. This is because different behaviours will suit different approaches, and different audience groups will respond better to different kinds of intervention. For instance, those who are already motivated to change may need individualised help with „getting started", while the unmotivated may be best addressed through practice-based programmes that do not target individuals directly. Such an interdisciplinary approach is also in keeping with best practice in behaviour change guidance, which observes that "there is no one winning model" – an adage particularly appropriate when tackling complex problems like environmental sustainability.'

There are pros and cons in each approach and neither is more or less right than the other. The positive of individualistic, psychology-inspired approaches is that it provides a framework which establishes all the main drivers, barriers and contexts affecting individual behaviour, and offers a linear (usually from left to right) approach to changing behaviours ('if A + B + C is taken care of = Behaviour Change'). See Figure 1 below.

[5] Darnton, A, Verplanken, B, White, P and Whitmarsh, L (2011). Habits, Routines and Sustainable Lifestyles: *A summary report to the Department for Environment, Food and Rural Affairs.* AD Research & Analysis for Defra, London.
Chatterton (2011). An Introduction to Thinking about 'Energy Behaviour': A multi-model approach. *A paper for the Department of Energy and Climate Change.*
Also the newly created DEMAND center (http://www.demand.ac.uk/) which will focus on Dynamics of Energy, Mobility and Demand (starts May 2013)

Figure 1: Triandis' Theory of Interpersonal Behaviour (TIB), (1977)



From Darnton (2011): The **TIB** has been shown to be a better predictor of behavioural outcomes than other models (including the often-used Theory of Planned Behaviour) in behaviours where there is a significant habitual component – such as daily commuting by car. The implications of the TIB for policymakers and practitioners are numerous, stemming from that clear vision that our behaviour can be simply habitual (ie. completely unintentional). The most obvious lesson is that *rational appeals to individuals, based on persuasion or social norms, with the expressed aim of changing our intentions, may have no impact on behavioural outcome*s, if the behaviour in question is following the habitual path. In many instances, the best predictor of our future behaviour is how we have behaved in the past. Embodied in Triandis' model is the psycholgical thesis that our behaviour can follow two diffferent paths: a deliberative path (via intentions) and an automatic path (via habits) - Kahneman's Dual Process Model of Cognition.

From a policy perspective the potential downsides to these intensive individual-based interventions are as follows: First, **scaleability**: can these programmes be rolled out to enable habit change across the population, and how much resource (in time and money) would that take? Second, **inclusivity**: if pre-motivation of individuals is required, what proportion of the population can be engaged in programmes of this kind? Third, **breadth of spectrum**: what strength of habits and types of behaviour can these self-change techniques work on (eg. good for commuting, less good for frequent flying).

Instead of targeting individuals' motivations, **practice theory** calls for the rearranging of the elements that hold certain practices together. This approach does not depose that based in psychology, but provides a complementary strategy. Together, they enable us to develop an integrated suite of tools which can address habit on a number of levels.

- Social practices are by their very nature routine, or habitual. They arise from the *interaction between people and the structures of the social world* – which are revealed in the practices themselves. The process of interaction between people and society involves feedback, and that looped quality

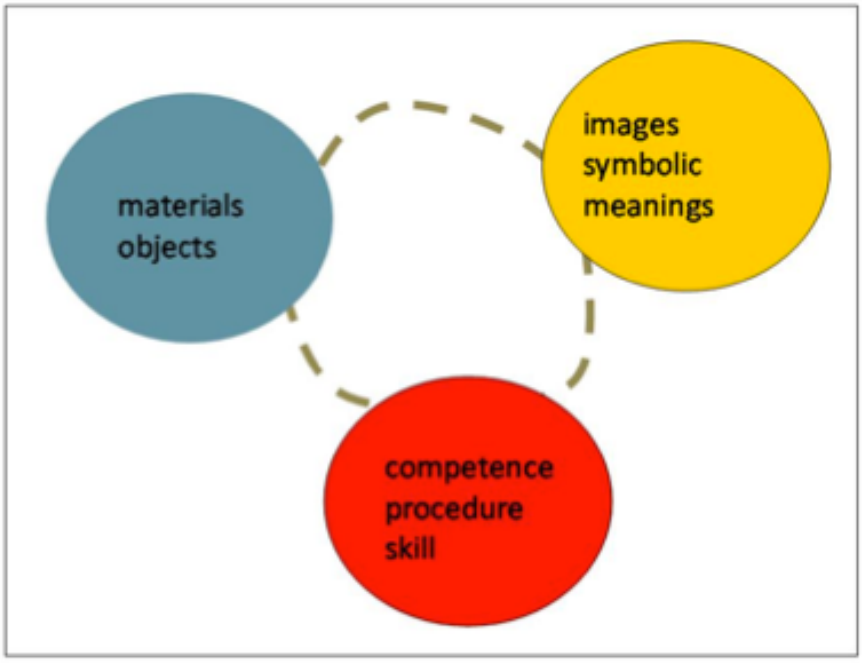
means that all practice tends towards sameness, or put another way, is habitual. Instead of habit being a factor in behaviour, practice theory suggests that *habit is behaviour*.
- People are not the originators of behaviour, but the *carriers of practices* – and the practice goes on after a person has finished carrying it out. As such, people reproduce practices, which are relatively stable and recognisable entities (eg. we all know football when we see it, and hence we can reproduce it in a relatively consistent manner).
- It follows from this that if we wish to change routine practices, we may *not need to target individuals at all* for some habits. Instead we should address the elements in the social world which support a particular practice. But we should remember that these elements are not causal factors („barriers and drivers"); instead they are the emergent properties of the social world, revealed through the practice they sustain.
- Recent work in practice theory has boiled down the strands of a practice into just three elements (see Figure 2):

Materials *(objects, necessary infrastructure)*

Competences *(skills and know-how)*

Images *(also ideas and interpretations)*

Figure 3: The integration of elements in practices as habits (Shove 2008)



The loopedness of the model is a fundamental difference to the linear Triandis' TIB model above. Furthermore, in TIB habits feature as a factor, interacting with other factors to determine the end behaviour. But from the perspective of practice theory, habits are an *outcome of human conduct, not a factor determining behavioural outcomes*. The important implication for behaviour changers is that intervention strategies must seek to address the *whole practice* (where the individual and the social world meet), and not just that facet within individuals' motivation which makes them keep behaving the same. From this perspective, habit change is not about increasing an individual's conscious control over their behaviour. At the same time as habits as practices move into the centre of our enquiries, so individuals move over to one side. This is a positive in terms of the much wider scope for potentially reducing energy use when changing (national or global) practices. It is, however, also

much more complex and difficult to envisage and to design interventions that can affect energy practices.

In order to break the lock-in of routine practices, intervention is not a matter of removing external factors, or simply working upstream of the consumer (eg. by changing aspects of the supply chain). It becomes a matter of *rearranging the parts, the rules and resources which make up the habit as routine*. Whereas in behaviour, a change intervention involves applying different external or internal stimuli (as „drivers") to bring about different outcomes, in the realm of practice, where practices are emergent arrangements of elements which the actor is already implicated in sustaining, the shape of the intervention and the role of the intervenor are more ambiguous. First there is the **practical problem** of knowing how to catch hold of the moving elements, and with what force to work on them. Second there is the **conceptual problem** of the emergent nature of the practice, which means we cannot say that reconfiguring the elements will result in particular practices taking hold; we can only say that it will speed the rate of change, and bring about the conditions necessary to support particular practices. These are reasons for why a practice-based approach may seem daunting and too difficult to achieve to intermediaries, especially if they have to design interventions in silos.

Objectives

r. Building on the national expert groups identified in Subtask 6, develop training sessions (6 days per country, 3 initial training days with 3 days set aside for assistence during design, implementation and evaluation of new approaches - Subtask 10) focusing on interdisciplinary understanding of different models of understanding behaviour, particularly an individually-focused psychological approach vs a practice-focused sociological approach

s. Showcase the use of the decisionmaking tool (Subtask 8) and apply it to specific needs and current problems of the national Behaviour Changers

t. Building on the top national needs established in Subtask 7, work with Behaviour Changers to develop policies, programmes or pilots based on their improved understanding

(Voluntary) Subtask 10: Implementation, Evaluation, Iteration

Subtask number	10
Start date or starting event:	Month 18
End date of Subtask	Month 36
Subtask title	**Implementation, Evaluation, Iteration of Pilots, Programmes or Policies designed in Subtask 8**
Activity Type	Support, empirical analysis

Background

We hope that after identifying the most relevant Behaviour Changers in each participating country (Subtask 6), identifying the top Behaviour Change issues in each participating country (Subtask 7), creating a decisionmaking tool for Behaviour Changers (Subtask 8); undertaking training with the Behaviour Changers and assisting them in designing better pilots, policies or programmes (Subtask 9), we will have several pilots, policies or programmes designed that can be implemented, evaluated and iterated (if necessary). This Subtask will focus on assisting stakeholders with the design (also part of Subtasks 8 & 9), evaluation (based on Subtasks 3 and 8) and iteration of better DSM policies, programmes or pilots. This Subtask is voluntary and each country can decide to join it within 12 months of joining the Task 24 extension. The decision to join will be based on feedback from the country's Behaviour Changers and their perceptions of Task 24 and its usefulness to their specific contexts.

Objectives

u. Provide continual assistance during implementation and evaluation of these policies, programmes or pilots in order to iterate them, if necessary
v. Report-back outcomes from each country's intervention and develop a shared learning platform.

Task sharing overview

In addition to the cost sharing to the OA budget, each country will be required to:

Provide expert time of approximately 1.5 person-months a year (up to a total 4.5 months per national expert if we get 8+ countries - 5 months total if Subtask 10 is joined). This includes:

- Undertaking part of the research and/or writing work for selected parts of Subtasks 6 to 9
- Attending up to six meetings/workshops of the Task and preparing for them
- Hosting at least 3 national meetings/workshops during the lifetime of the Task
- Assisting with organising national training sessions with country stakeholders
- Carrying out the national dissemination activities, plus
- Actively engaging in the (national) expert platform/s
- (Voluntary) Taking part in Subtask 10 efforts.

Participation may partly involve funding already allocated to a national activity, which falls substantially within the scope of work to be performed under this Task.

Deliverables overview

Subtask	Deliverable	Deliverable name	Type of deliverable	Month of completion
0	D0	Advisory committee	Network	ongoing
5	D6	Social meeting place for Behaviour Changers	Online social media platform	ongoing
6	D7	National Behaviour Changers	Online social media platform	12 but ongoing
6	D8	International Conference for Behaviour Changers	Conference	6 may be duplicated at 24
6	D9	Repository of all relevant DSM/behaviour work per country	database	12 but ongoing
7	D10	List of top 3 DSM issues per country, including analysis of case studies elsewhere	database	18
7	D11	List of 20 efficiency and conservation behaviours and approximate contribution to a country's load management	database	18
8	D12	Decisionmaking tool	Online/Software App	24
9	D13	Training module for Behaviour Changers	Interactive training module	24

Subtask	Deliverable	Deliverable name	Type of deliverable	Month of completion
10	D14	Support on design, implementation, evaluation and iteration of national policies, programmes or pilots	Interactive report-back of country-specific learnings developed from Task 24	36

BUDGET

We hope to ultimately attract at least 8 countries (and/or sponsors), as this Task benefits from the maximum number of Behaviour Changers (in addition to the national experts) we can engage to draw on their knowledge and learnings. Not all of them may be part of participating countries, thus in-kind contributions of experts and countries to specific Subtasks will be welcome. The IEA DSM ExCo is currently developing guidelines on what constitutes the various participants.

4 - 5 countries	6 - 7 countries	8 - 9 countries	10+ countries
€62,500 per country (€25,000 per annum) (2 OAs, travel, platform maintenance, filming, training module, overheads) **Total budget €250,000-€312,500**	**€62,500 per country (€25,000 per annum)** (2 OAs, travel, platform maintenance, filming, training module, overheads) **Total budget €375,000-€437,500**	**€62,500 per country (€20,833 per annum)** (2 OAs, travel, platform maintenance, filming, training module, overheads) **Total budget €500,000-€562,500**	**€62,500 per country (€15,625 per annum)** (2 OAs, travel, platform maintenance, filming, training module, overheads) **Total budget €625,000**
Level of detail in deliverables: · Social expert platform · Country expert platform · Top country specific issues of 4-5 countries · Decisionmaking tool · Training modules for 4-5 countries	Level of detail in deliverables: · Social expert platform · Country expert platform · Top country specific issues of 6-7 countries · Decisionmaking tool · Training modules for 6-7 countries	Level of detail in deliverables: · Social expert platform · Country expert platform · Top country specific issues of 8-9 countries · Decisionmaking tool · Training modules for 8-9 countries	Level of detail in deliverables: · Social expert platform · Country expert platform · Top country specific issues of 10+ countries · Decisionmaking tool · Training modules for 10+ countries
30 months duration	**30 months duration**	**36 months duration**	**42 months duration**

Subtask 10 is a voluntary add-on module, each country will be asked (after conferring with their Behaviour Changers and National Experts) after 12-18 months if it wants to join Subtask 10. This will add an extra €15,000 per country (once-off payment).

TIMELINE

Based on 8 countries.

Subtasks	2015		2016		2017	
Subtask 0 - Admin						
Subtask 5 - Expert Platform						
Subtask 6 - National experts						
Subtask 7 - Top DSM Issues						
Subtask 8 - Decisionmaking tool						
Subtask 9 - Training sessions						
Subtask 10 - Interventions						

We are hoping to start some of this work mid 2014, in conjunction with finishing off Task 24. The first countries that join will have some of the work on Subtasks 6 and 7 already underway by 2015.

Agenda 3d. (42nd meeting of the IEA DSM Programme)

Document G

Concept Paper:
Information Exchange Forum

Proposed by EA Technology, United Kingdom
Linda Hull

The Proposal is submitted to the ExCo with the request to: • Approve the Concept Paper and develop further in Task Definition Phase

CONCEPT PAPER FOR A PROPOSED NEW TASK
INFORMATION EXCHANGE FORUM

Since the inception of the IEA Demand Side Management program in the early 1990's there have been many challenges faced by governments and businesses. These challenges include the need to conserve valuable energy resources whilst ensuring that energy supply security is not compromised, requirements to integrate increasing levels of intermittent renewable energy sources onto electricity networks that were not designed for that purpose. Despite these challenges, the potential of the Demand Side to assist overcoming these problems has remained largely untapped.

Different countries have adopted various approached towards the demand side. They are motivated to do this in many cases by their different starting points, for example, the different natures of the problems that they are trying to overcome, different regulatory or organisational backgrounds, different sociological approaches or different attitudes to energy.

This concept paper proposes that a new Task be established within the IEA DSM Implementing Agreement to facilitate the exchange of information between participating countries. This proposal is in line with the objectives of the Extension of the IEA DSM Programme which states that it intends to facilitate:

> "*A global exchange of experiences . . .in order for countries to develop both models for implementation that facilitates trade across borders and create a base for facilitating/enabling technologies to be developed, produced, shipped and used in a way that improves their performance and makes the cost for the applications acceptable."*[6]

By exchanging information and supplementing their knowledge base via this proposed Task participants will be enabling the more efficient, effective and targeted use of demand side technologies, services, and commercial products.

This Task would be similar in approach to Annex I of ENARD.

Motivation

Different countries have adopted different approaches towards the demand side. Different technologies such as Smart Meters and Smart Appliances (air conditioning, heat pumps and washing machines) have been tried in different countries. Elsewhere different commercial practices such as different pricing structure (Critical Peak Pricing, Time of Use tariffs) have also been implemented. Some countries have taken a mandatory approach to measures while others have required participants to opt in to schemes.

The exchange of information between nations will allow a better understanding of which practises are successful and which have not worked in different scenario. This knowledge can help governments, energy businesses and other stakeholders make informed decisions.

[6] End-of-Term Report for the IEA Demand-Side Management Programme 2008-2012, p3

Objectives

The aim of the proposed Task is to facilitate the gathering, collation and exchange of information between participating countries on topics of common interest.

It is suggested that the Task run for an initial fixed term, say two years. After this time the project can be extended and/or a new Operating Agent allocated.

Each year, a theme would be chosen, and the Operating Agent would be responsible for co-ordinating the collation and exchange of information. The theme or topic would be chosen by the participants, for example via a voting system.

Suggested themes for this information and knowledge sharing task include:

- Approach to regulation, and how this impacts on the opportunities for DSM;
- Stimuli for the development of DSM technologies and business models;
- Expected new loads (e.g. electric vehicles, heat pumps) and their impact on the energy system.

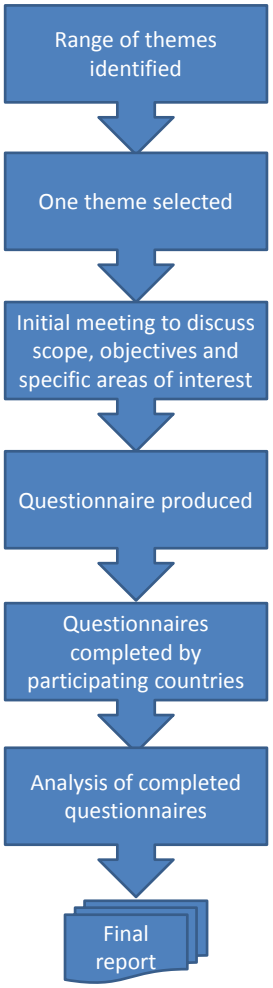
EA Technology would welcome the opportunity to act as Operating Agent for the initial two year term of the Task.

Approach

The suggested approach for the organisation of this Task is that an Operating Agent be appointed for an initial fixed term. The Operating Agent and the participating countries will select a theme or topic of interest. National Experts will be recruited from the participating countries. A Task meeting will be held at the start of the year to confirm the scope of topics to be considered within the chosen theme, and to identify areas of specific interest to participants.

The Operating Agent will then be responsible for producing a questionnaire to collate information from the participating countries. It will be the responsibility of the National Experts to complete the questionnaires and return them to the Operating Agent within a designated timeframe. The Operating Agent will analyse the returned questionnaires, drawing out synergies and differences between the different national approaches and listing key learning points. This analysis, together with the completed questionnaires will be hosted on the secure area of the IEA web-site or made public.

This process is illustrated in the diagram below.



Results

The output of this Task would be a report comparing and contrasting the experiences of the participating countries within the selected theme. The report will focus on highlighting synergies, trends, key learning points and key opportunities for future collaborative DSM projects.

The reports will, over time, provide a valuable resource on potentially a wide range of DSM related topics, and will act as a springboard to help identify new areas for further collaborative research within the IEA DSM Implementing Agreement.

AGENDA 4a. (42nd meeting of the IEA DSM Programme

Document H

Task 23
Role of the Demand Side in Delivering Effective Smart Grids

Task Status Report

This Task Stats Report is submitted to the IEA DSM ExCo with a request to:

In summary, the matters for the consideration of the ExCo are as follows

1. Approval of the Task Status Report
2. Request for a no-cost extension to the project
3. Consideration of proposed new extension of the Task (Subtask 6) – proposal is presented in a separate document.

International Energy Agency

IMPLEMENTING AGREEMENT ON TECHNOLOGIES AND PROGRAMMES FOR DEMAND SIDE MANAGEMENT

Task 23
Role of the Demand Side in Delivering Effective Smart Grids

Task Status Report
20 September 2013

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CONTENTS

1. SUMMARY

The aim of the new Task is to identify and where possible quantify the risks and rewards associated with Smart Meters and Smart Grids from the perspective of the consumer, both now and in the future. By identifying the potential risks and rewards the Task would seek to develop best practice guidelines in order to ensure the demand side contributes to the delivery of effective Smart Grids.

From the point of view of ordinary users, who are uninterested or unable to play an active role either on the generation or the demand side, a Smart Grid may look like a plain traditional network, to which a number of time-variable, non dispatchable generators have been added, but one that needs costly and sophisticated technologies in order to deliver an acceptable service (equal at least to the one supplied by the original network). Thus, a first step in the effective deployment of Smart Grids needs to involve the engagement of customers so that they understand that a Smart Grid is instrumental to the implementation of certain measures (renewable generation, efficiency, demand response) that facilitate the reduction of greenhouse gas emissions and make the use of energy a sustainable activity. In this perspective it is important for every user to the able to take advantage of the "smartness" of the Grid; otherwise customers will simply end up paying the cost of the Smart Grid without receiving any of the benefits.

At the 37th Executive Committee Meeting, held in Washing in April 2011, the Executive Committee members decided to initiate the Task. The members unanimously approved Linda Hull to be the Operating Agent for the Task.

2. PROJECT WORK PLAN

Task 23 comprises the following Subtasks:
(*For a complete description of the scope of each Subtask and its associated activities, see the full Proposal within the Pre-Meeting Document for the 37th Executive Committee Meeting, held in Washington D.C., USA, April 2011)*

Subtask 1 Impact of energy markets on the role of customers
There are many stakeholders in the energy market with different interactions with consumers and different responsibilities. This subtask would map the interactions of different stakeholders in a 'market map' for each participating country, with the consumer as the central focus. This could include power and information flows and responsibility (e.g. for billing and metering). Ownership of data may also be an important issue from the consumer perspective and so the current situation in each country will be shown on the map.

Outputs to include:
- Market map for each participating country
- Analysis of impact of different market structures on Smart Grid implementation from the perspective of customers

Subtask 2 Interaction between technology and customers
There a number of technologies associated with the Smart Grid concept including Smart Meters, electric vehicles, heat pumps, micro-generation and energy storage as well as the control and communications needed to actively manage end-use consumption. The way that customers use and relate to these technologies has a significant impact on their ability to contribute towards an effective Smart Grid.

This subtask will draw upon the available information on Smart Grid enabling technologies in order to consider the appropriateness of these technologies, both from the customer perspective and the Smart Grid industry perspective.

Outputs to include:
- Summary of experiences of customer interactions with Smart Grid technologies
- Analysis of TRLs and MRLs of selected technologies and the impact on Smart Grid deployment.

Subtask 3 Identification of Risks and Rewards associated with Smart Grids
This subtask will identify the possible risks and rewards relating to the Smart Grid concept from the consumer perspective. Each of these risks and rewards are influenced by a number of stakeholders for which the Smart Grid can meet specific needs and requirements.

Outputs to include:
- Map of risk and rewards from perspective of customers
- Report chapter (s) detailing risks and rewards from perspective of customers

Subtask 4 Defining offers and programmes (tools) to help ensure Smart Grids meet needs of customers
The effectiveness of the Smart Grid can be improved by engaging with the demand side. In order to engage with consumers and achieve their "buy-in", the Smart Grid should provide tangible benefits to customers themselves. This could include direct benefits associated with Smart Grid deployment, or additional functionality or services which represent "added value" to the consumer.

This subtask will draw upon the work that has already been undertaken in this area, and will focus on highlighting the costs and benefits associated with different approaches that have been adopted. For example, the benefits of mandating vs. the ability to opt-in to a program will be considered, and the trade off between the level of functionality included within smart meters as standards against the risks and rewards for customers.

Outputs to include:
- **Overview of Smart Grid experiences from the perspective of customers**
- **Best practice approaches**
- **Report chapter(s) identifying tools to ensure Smart Grids meet needs of customers**

Subtask 5 Helping customers to actively engage with Smart Grids – Synthesis and Dissemination of Findings

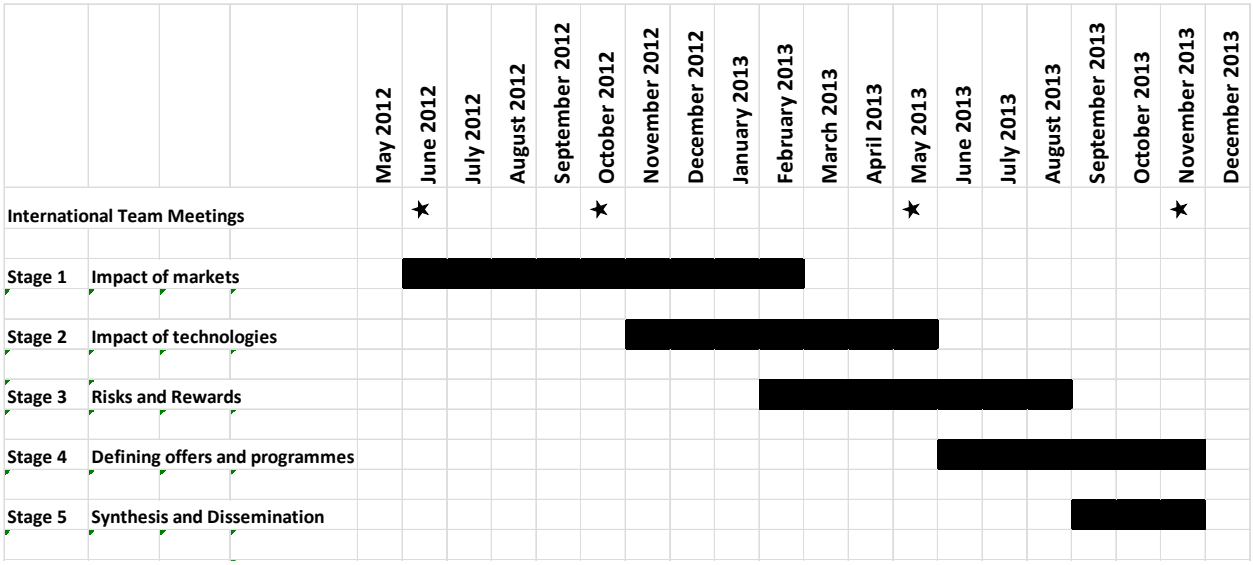
The main objective of this activity is to understand how the findings of subtasks 1 to 4 come together, and disseminate the results via a series of regional workshops organised and delivered by the Task participants. Thus, this subtask will identify the key issues that impact on the way customers interact and view Smart Grids. This will include the impact of market structure, the role of technology, the ability for customers to realise any potential rewards whilst minimising the risks, and the effective deployment of tools and measures indentified in subtask 5. Thus this subtask will focus on the factors that need to be addressed in order to ensure Smart Grids are able to achieve their full potential by ensuring that all industry stakeholders, including customers, benefit from their deployment. This subtask would include an industry workshop, to which a wider group of cross-industry stakeholders could be invited to discuss the results and findings of the Task.

Outputs to include:

- **Cross-sector workshop**
- **Workshop proceedings**
- **Final report**

3. OBJECTIVES FOR THE LAST SIX MONTHS

The objectives for the last six months were to continue to progress Task 23 in line with the work programme shown below.



Specific tasks included:

- Complete Subtask 2 report
- Complete Subtask 3 report
- Commence Subtask 4;
- Hold third Experts meeting

4. PROGRESS AGAINST OBJECTIVES

Experts meetings

To date, three Experts Meetings have been organised and delivered. The first was held on 25th & 26th June, in Chester, UK.

The second was held on 11th October, and was organised to follow on from the Task 24 workshop held in Oxford on 9th and 10th October.

The third Experts Meeting took place in Steinjker, Norway on 4th & 5th July. The meeting provided an opportunity to visit the Smart Grid demonstration project 'Demo Steinjker' being hosted by the local Distribution Company. The meeting focussed on reviewing the Case Studies identified by the Task Expert, reviewing the preliminary findings for Sub-task 3, and agreeing the way forward for Sub-tasks 4 and 5.

The Experts agreed that the final Task meeting should take place before the end of the project, to allow them to review on the preliminary outputs of Subtask 4. Therefore, the date of the last Task Meeting has been set for 8th – 9th October.

Date	Place	Total Experts	Type of meeting	Government	Industry	Academic
25th – 26th June 2012	Chester, UK	9	Experts meeting	1	8	0
11th October 2012	Oxford, UK	8	Experts meeting	1	7	0
4th – 5th July 2013	Steinjker, Norway	6	Experts meeting	1	5	0
8th – 9th October 2013	Seoul, South Korea	tbc	Expert meeting			

In addition to these 'face-to-face' meetings, a number of web-meetings have been organised to discuss progress with the National Experts meetings. These are organised on an ad-hoc basis as and when necessary.

Subtask 2 report

As previously indicated, the original intention of this Subtask was to focus on the interaction of consumers with technologies, but the scope was increased to include four intervention types. These are:

- Time of Use tariffs
- Control (remote / automatic)
- Feedback of information
- Advice

A draft sub-task 2 report has been produced, and sent to the Task Experts for comment and review.

The report includes an analysis of 21 surveys of consumer attitudes and reactions to Smart Grid and other related initiatives. The study also identifies over 40 case studies involving Smart Grid related initiative – however, few of these focus on customer related aspects. In particular, very little information is reported on what customers dislike and why customers do

not sign-up for trials and pilots. The studies do, however, highlight a number of examples of 'good practice' which aim to address customer concerns.

Due to annual leave commitments of the Task Experts over the summer period, the review process has taken longer than originally planned. At the beginning of September, comments had been received from two of the Task Experts. The comments suggested some modifications to the report, focussing mainly on the inclusion of further information on customer attitudes, customer behaviour and social norms. This information was not provided in the case study templates provided by the National Experts, and work is on-going to assess whether the additional information can be sourced. The suggested modifications will be discussed and agreed at the final Task meeting in South Korea.

Subtask 3

As agreed at the last Exec Co meeting, it has been decided that this Subtask should focus on a qualitative assessment of the factors that influence the decision making process for consumers. However, a single worked example (based on loft insulation) demonstrates how the losses and gains associated with Smart Grids could be quantified in a particular context. The results of this analysis help to re-affirm customer behaviour, but will not provide a reliable basis to predict customer behaviour.

Work has now been completed on the Subtask 3 report, which is currently being reviewed by the Task Experts.

Subtask 4

Subtask 4 aims to bring together the learning points from Subtasks 1 to 3, to ensure that Smart Grids provide tangible benefits to customers themselves. This could include direct benefits associated with Smart Grid deployment, or additional functionality or services which represent "added value" to the consumer.

This Subtask will comprise two activities

1. Consideration of the interrelationship between customer needs and stakeholder needs in order to demonstrate where the benefits of Smart Grids reside. This will be the platform by which the potential impact of the tools/measures on Smart Grids will be quantified.
2. Examples of best practice identified in Subtask 2, will be combined with information from Subtask 1 and 3 to define tools and measures to ensure Smart Grids provide benefits to consumers.

A method has been developed to demonstrate the complex interrelationship between customer needs and industry stakeholder needs. This will be discussed at the forthcoming Experts meeting in Korea.

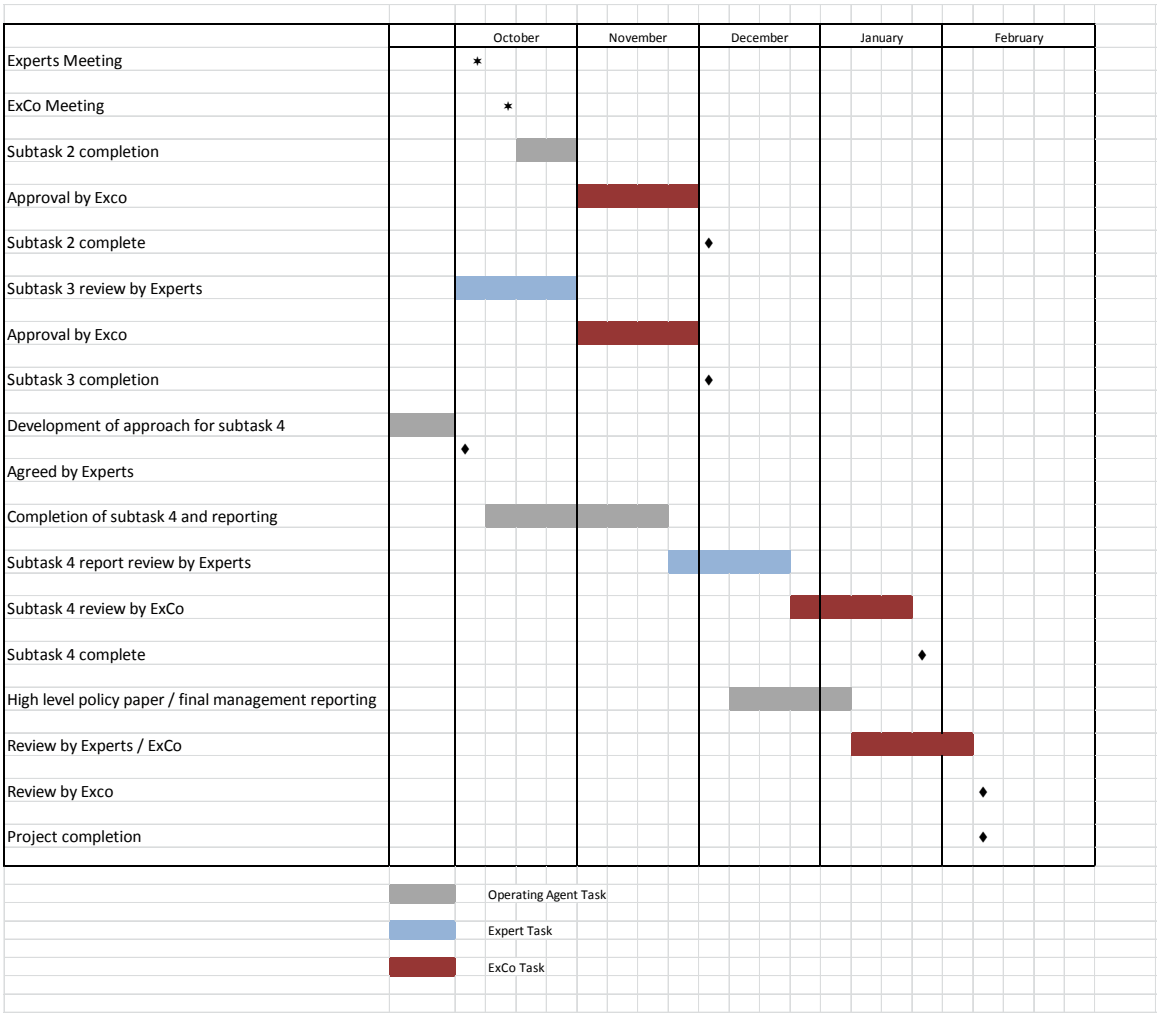
Subtask 5

Subtask 5 will draw together the findings from Subtask 1 to 4 to produce a final report. Individual Subtask reports have been produced on an on-going basis during the project, and these form the main outputs of this task. However, it is recognised that the Subtask reports are very detailed and not ideally suited for policy makers. Therefore, a shorter policy document will also be produced at the end of the project highlighting the key results and

highlighting the key recommendations for policy makers and key industry stakeholders. A supporting power point presentation will also be produced for use by the National Experts when disseminating the results of the Task within their own country.

5. WORKPLAN FOR THE NEXT SIX MONTHS

It is currently expected that the main project outputs can be completed by the end of November as originally planned. However, experience suggests that the report review and approval process is generally a time consuming process. Therefore, the ExCo are asked to consider the approval of a short no-cost extension of 3 months to allow for the final production of the project outputs. The revised timetable for completion is therefore as follows:



6. FINANCE

The budget for Task 23 is set at £279,220 based upon five participating countries. Thus, the financial contribution per Participant will be £55,844 (based upon five Participants).

In the event of more than five Participants, the financial contribution per Participant will be based on the total Operating Agent's budget of £279,220, divided pro-rata by the number of Participants.

In the event of less than five Participants, the individual Participant financial contributions shall be maintained at £55,844 per Participant and a reduced programme-of-work shall be agreed accordingly, subject only to a minimum of four Participants supporting the Task.

If a Participant decides to join the Task once work has commenced, the Operating Agent reserves the right to revisit the costing shown above. If necessary, the total costing will be adjusted to reflect any additional administrative or project management costs associated with incorporating the additional Participant. These revised costs will be agreed with existing Participants.

To date, payments have been received from all five participating countries, as stipulated in each participant's letter of engagement.

Expenditure is in line with expected for project status.

7. MATTERS FOR THE EXCO

Extension to current work programme

It is currently expected that the main project outputs can be completed by the end of November as originally planned. However, experience suggests that the report review and approval process is generally a time consuming process. Therefore, the ExCo are asked to consider the approval of a short no-cost extension of 3 months to allow for the final production of the project outputs.

New Subtask

As part of the activities of the UK Team[7] it was decided to conduct a survey of domestic energy consumers. The objectives of the survey were as follows:

- To determine peoples' attitudes and current behaviours with regard to the energy usage;
- Their views and attitudes towards Demand Side Management;
- The level of rewards necessary for them to take part in a DSM programme; and
- Specific actions which they could undertake.

This survey is being undertaken by a specialist market research company. The survey being undertaken by the UK team was described at the third International Expert's Meeting for Task 23 (held in Steinkjer, Norway, 4th-5th July 2013). The comments and feedback provided during that meeting indicated a level of interest that merited the development of a proposal to extend the survey to other countries. Therefore, the ExCo are asked to consider the proposed extension to Task 23 – the proposal is presented in a separate document.

In summary, the matters for the consideration of the ExCo are as follows

- Approval of the task status report
- Request for a no-cost extension to the project
- Consideration of proposed new extension of the Task (Subtask 6) – proposal is presented in a separate document.

[7] A consortium made up of Distribution Network Operators (DNOs), an Energy Supplier, the Transmission System Operator (TSO) and regional Government.

AGENDA 4b. (42nd meeting of the IEA DSM Programme)

Document I

Task 24

Closing the Loop – Behaviour Change in DSM: From Theory to Practice

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Ruth Mourik (Netherlands)

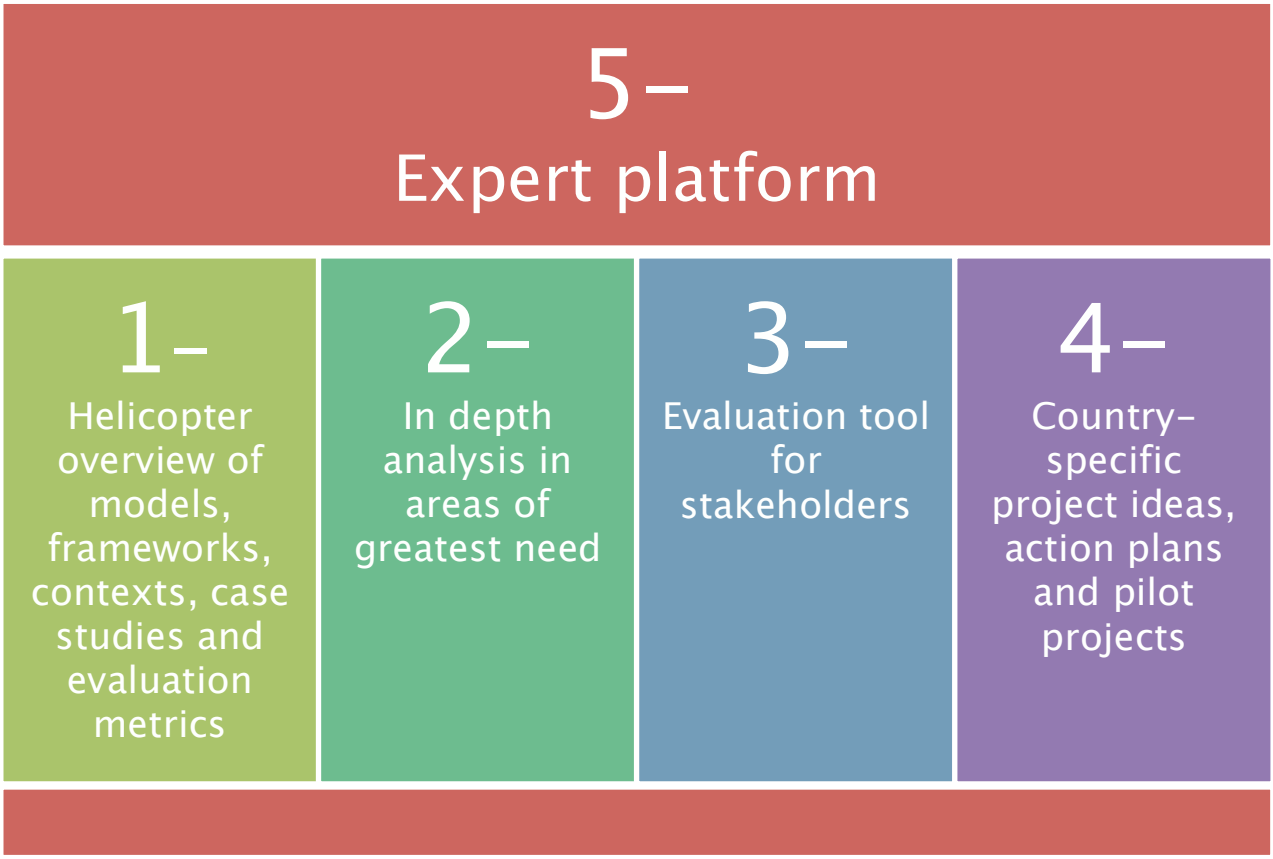
This Task Stats Report is submitted to the IEA DSM ExCo with a request to:

1. Approve the Task 24 Task Status Report

INTERNATIONAL ENERGY AGENCY

IMPLEMENTING AGREEMENT ON TECHNOLOGIES AND PROGRAMMES FOR DEMAND SIDE MANAGEMENT

Task 24: Closing the Loop - Behaviour Change in DSM: From Theory to Practice



4th Task Status Report October 2013

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Prepared for the EXCO meeting in Luzern, October 16-18, 2103.

SUMMARY

Task 24 continues to attract experts from all over the world and generates widespread publicity. We have now finished our Subtask I analysis (over 140 pages of synthesis and stories from 40+ case studies from over 10 countries). Italy and South Africa have inofficially confirmed their participation in the Task, and Austria is currently supporting the Task with in-kind expertise. We are hoping that a successful budget bid will mean that Austria might join this year as well. The UK has also continued to support the Task in-kind, with experts visiting Task workshops and supplying case studies and other support and analysis to Subtask 1. Finally, Spain and Portugal also started to contribute in kind and by supplying case studies and coming to workshops. A visit to the UAE in June proved highly successful and there is a lot of interest in our work from the Energy Savers Dubai and their stakeholders.

In addition, we held three more national stakeholder workshops, one in Norway in May 2013, one in Sweden on October 10, and one in Switzerland on October 15. Over 60 experts from all energy sectors contributed and participated in these workshops. The online expert platform is also growing organically - we currently have over 180 experts from 20 countries signed onto the platform. All content generated by the Task is posted here. A wiki has been developed to enable better content management, analysis and collaboration for the Subtasks.

The Task is highly publicised in social media, via several blogs, columns, the weekly Behaviour Change and Energy newspaper, the @IEADSM twitter feed, the Co-Operating Agents' twitter, facebook and linkedin profiles and word of mouth. We have also successfully 'matchmaked' several experts with one another, including across international borders. The Task was presented (including with peer reviewed papers) at the eceee summer study in June 2013 and the ELCAS conference in Greece in July 2013; the UAE Energy Savers in Dubai in June 2013; the IEE International Smart Grid conference in Copenhagen in October 2013 (where we also lead the panel on consumer behaviour); and will be presented as an oral paper at the largest behaviour change conference (BECC) in Sacramento in November.

The main issue facing the Task continues to be around country payments and finalising contracts. We are currently finalising our contract with Belgium, and hope to finalise contracts with Italy and South Africa before the end of this year.

PROJECT WORKPLAN

There is no behaviour change 'silver bullet', like there is no technological silver bullet that will ensure energy efficient practices. Designing the right programmes and policies that can be measured and evaluated to have achieved lasting behavioural and social norm change is difficult. We believe that this Task, and its potential extension, will help address these difficulties and come up with guidelines, recommendations and examples of best (and good) practice and learnings from various cultures and contexts. We rely on sector-specific experts (researchers, implementers and policymakers) from participating and interested countries to engage in an interactive, online and face-to-face expert platform and contribute to a comprehensive database of a variety of behaviour change models, frameworks and disciplines; various context factors affecting behaviour; best (and good) practice examples, pilots and case studies; and guidelines and examples of successful outcome evaluations. The Task has several deliverables, the most important being the expert network and platform for continued exchange of knowledge and successes and the large-scale analysis of the helicopter overview and case studies.

Task aims and objectives

The main objective of this project is to create a global expert network and design a framework to allow policymakers, funders of DSM programmes, researchers and DSM implementers to: I. Create and enable an *international expert networ*k interacting with countries expert networks II. Provide a *helicopter overview* of behaviour change models, frameworks, disciplines, contexts, monitoring and evaluation metrics

* Provide *detailed assessments* of successful applications focussing on participating/sponsoring countries needs (smart meters, SMEs, transport, building retrofits)
* Create an internationally validated *monitoring and evaluation template*
* Break down silos and *enable mutual learning* on how to turn good theory into best practice

Deliverables are broken down in Table 1 below (revised and based on 8 participating countries).

Phase / Duration of the action (in months)	preparation	1-2	3-4	5-6	7-8	9-10	11- 12	13-14	15-16	17- 18	19- 20	21- 22	23-24	25-26	27-28	29-30
Subtask 0: Management of the task																
0.1 Set-up an advisory board																
Workshop to finalise task definition in Austria/NL plus VC, 6-monthly ExCo meetings. Annual Advisory Board (AB) meetings. Task outcome presentation in South Africa?	Kick-off WS AUT/NL			ExCo		ExCo			AB ExCo			ExCo		AB	ExCo	
Subtask 1: Helicopter overview of models, frameworks, contexts, case studies and evaluation metrics																
1.0 Development of template to analyse models, frameworks and evaluation metrics																
1.1 Inventory of available models, frameworks and disciplines and analysis of applicability of models in differing contexts																
1.2 Deliverable on definitions of models and frameworks and their contextual applicability																
1.3 Build-up and continuous updating of database (wiki style)																
Workshops in BEL (August 2012) and UK (October 2012), summary in NZ workshop (February 2013)			WS Bel/UK	Web	WS NZ		WS NO									
Subtask 2: In depth analysis of topics of particular interest to participating countries																
2.1 Detailed characterisation of targeted cases and development of case study template																
2.2 Collection and analysis of case studies for different selected sectors, themes and countries with inventory of key context factors and success stories and learnings. Insert in database developed under ST1.3 (Note: extra length of time due to logistics of collecting case studies in countries when national expert workshops are held)																
2.3: Development of deliverable on context factors influencing DSM activities in topics of particular interest to participating countries																
Workshops and webinars in BEL and UK (same as in ST1), New Zealand (February 2013) and Norway (May 2013)			WS Bel/UK	Web	WS NZ	Web	WS NO		WS CH			WS NZ	WS Swe			
Subtask 3: Evaluation Tool																
3.1: Identifying relevant indicators/metrics/tools for monitoring and evaluation of DSM project and programmes																
3.2 Assessing context sensitivity of indicators/metrics/tools, dependent on stakeholder needs																
3.3: Developing and testing monitoring and evaluation tool																
Workshops Norway, Switzerland, Sweden (and Italy if it joins)							WS NO	VC	WS CH		Web	WS NZ	WS Swe	VC	WS Ita	
Subtask 4: Country-specific project ideas, research priorities, to do/not to do lists and ideas for pilot projects																
4.1 Development of stakeholder-tailored to do's and not to do's for successful context (country) sensitive implementation, monitoring and evaluation of DSM projects on selected topics and target groups (i.e. smart metering, SMEs and transport)																
4.2 Development of country specific research priorities, project ideas and pilot plans - to be put in practice if task extension is approved																
4.3 Dissemination of to do's and not to do's																
Workshops Switzerland, Norway, New Zealand and others if other countries become participants					WS NZ		WS NO		WS CH		Web	WS NZ	WS Swe	VC	WS Ita	
Subtask 5: Social media expert platform																
5.1 Overall coordination of the project																
5.2 Design of a Stakeholder Engagement Plan																
5.3 Design of the online platform and specification of its individual components in consultation with experts																
5.4 Utilisation of ongoing expert platform																
Workshop to finalise task definition in Austria/NL plus VC, ExCo meeting sign-off in Norway April 18, 2012. Ongoing online interaction	Kick-off WS AUT/NL	Web	Web	Web	Web	Web	Web	Web	Web	Web	Web	Web	Web	Web	Web	Web

Detailed Deliverables (based on 8 participating countries)

Subtask	#	Deliverable name	Type of deliverable	Month of completion
0	D0	Advisory committee, Task Management	• Network, annual meetings, governance • Annual reports, ExCo updates, flyers, Spotlight articles, conference presentations, scientific papers, blogs, columns, tweets, publicity, networking, engagement with IEA Secretariat and other DSM groups and implementing agreements	ongoing

Subtask	#	Deliverable name	Type of deliverable	Month of completion
1	D1	Database/wiki listing collected models, contexts, evaluation metrics and a list and short descriptions of DSM policies, programmes and projects	w. database/wiki with an inventory of what diverse (sub) disciplines have to offer both empirically and theoretically; and an inventory of evaluation metrics and contexts affecting behaviour change x. an overview of different definitions used in the field y. list of experts working with different models of understanding - 2 templates that have been filled in with > 20 'models' and > 25 descriptions of DSM work in 4 themes - framework/navigation tool for stakeholders to evaluate models for diverse uses • filmed interviews with DSM experts highlighting issues central to diverse models of understanding • filmed short presentations by national experts on models of understanding they have provided • 'tweetable' (ie 140 characters or less) definitions of each model of understanding • positioning papers for Brussels and Oxford workshops • stories of 40+ case studies using models of understanding behaviour in practical applications	12 but continuing thereafter
1	D2	Final 'report' on work in ST1	Interactive format, including film, graphics and interviews, tweets and podcasts as well as framework, tables and lists	18
2	D3	Surveys and post-evaluation of detailed case studies in 4 topics of particular interest to participating countries	28. Report/interactive feedback 29. List of interview questions for case study surveys 30. Filmed interviews with some case study stakeholders 31. List of detailed case studies in participating countries and how certain models have contributed to a better understanding of DSM and behaviour change 32. special attention will be put on evaluation to be fed into Subtask III 33. Best practices of participating countries will be publicised 34. Country-specific context factors and key approaches to solving contextual issues on the local, regional and national level	24
3	D4	Tool to evaluate 'successful outcomes' of DSM programmes	Interactive tool based on what works best for various stakeholder needs	24
4	D5	To do's and not to do's, priority research areas and ideas for pilots and projects for participating countries and stakeholders	- Country-specific briefs and other formats - Stakeholder analyses in participating countries	30
5	D6	Social platform and meeting place for DSM and behaviour change experts and implementers	• Online social media platform for collaboration and dissemination • List of global experts, their bio, field of expertise and ability to engage with them • Face-to-face workshops in participating countries publicising countries' DSM successes and sharing learnings	ongoing

OBJECTIVES FOR THE LAST 6 MONTHS

Subtask I - Helicopter Overview:
· Finish collection of templates of models and case studies
· Finish analysis of templates and interactive report-back
· All information to be put onto wiki
· Analyse interviews with energy professionals telling their 'energy stories'
· Collect more energy stories from participating countries (Sweden, Switzerland)

Subtask II - Case studies:
· Collection of detailed case studies and best practice in four overarching themes
· Includes (filmed) interviews in Austria, Norway, Sweden, Switzerland

Subtask III - Evaluation Tool:
· Template to enable better evaluation of successful behaviour change outcomes depending on the stakeholder point of view
· Based on 'Beyond kWh' paper by Karlin and Ford (2011)

Subtask V - Expert Platform:
· Continued growth of experts to the platform
· Utilisation of platform, including uploading all content from workshops and Subtasks and Wiki
· Create content including blogs and webcasts for DSM University
· Update whole platform to Ning 3.0 when it goes live
· Continue to foster engagement and 'matchmaking' among experts - tell the stories
· Continue publicising of Task 24 - including 4 international conferences (eceee, BECC, UAE, ELCAS)

Subtask 0 - Administration:
· Advisory Group meeting in October (virtual)
· ExCo meeting and report-back Switzerland
· National expert workshops and webinars (NO, CH, Sweden)
· ECEEE summer study, ELCAS, BECC conference paper presentations

PROGRESS AGAINST OBJECTIVES

· SUBTASK I

Finish collection of templates of models and case studies

The collected templates (so far more than 40 have been collected from 10 countries in all 4 domains transport, SMEs, building retrofits and smart metering) can be found here: https://www.dropbox.com/sh/uhdl2aam37dig5y/N9W3xOQYf6 and a ('living') table with all countries, cases, models and domains that have been collected can be found here: https://www.dropbox.com/s/jsvgp45f30y7zsr/Table%20Domains-Countries_Cases_models%20and%20theories.doc
An overview of the various models of understanding and theories of change (and what the distinction means) can be found here: http://www.slideshare.net/drsea/helicopter-overview-of-behaviour-change-models. We have collected case studies in each domain (sometimes more than one per domain) in almost all of our participating countries (Belgium being the exception with only one template collected so far). We are still waiting for templates from countries that joined our Task later, like Italy, South Africa and (hopefully) Austria. However,

as the analysis needed to be finalised in order to meet our obligations to the early participants, we will add these templates to the analysis at a later stage (providing an updated, final document at the end of Task 24).

Finish analysis and interactive report-back

We have finished the analysis and synthesis of all current case studies and summarised them into a 140pp report (to be found here: https://www.dropbox.com/s/pmy8z3uhypxvgli/Analysis_of_case_studies_IEA_DSM_Task_24_Closing_the_Loop_17092013_clean.pdf). This report has been commented on by the national and contributing experts. It contains a synthesis of all the case studies, the models used in various programmes, tables listing all evaluation metrics used in the various case studies, recommendations and questions for further enquiry. It also contains stories, in three separate formats: the stories of the various cases can be grouped into hero stories, learning stories, love stories and horror stories (see Janda & Topouzi, 2013). The stories of each model has been described from the perspective of the end users and stakeholders using the models. And each case study has been described as its own short story, for example:

Once upon a time... there was a great, big organisation that was delivering mail and parcels all over New Zealand, called New Zealand Post.
Every day...100s of courier drivers were driving 1000s of kms to deliver these parcels to Kiwis.
But, one day...NZ Post realised that it was spending way too much money on fuel and that its drivers weren't being as efficient as they could be.
Because of that...they decided to start a fuel efficient driver training programme, in order to teach their contractors to drive more efficiently (and safely).
But then...they realised that a lot of the drivers didn't like being told what to do!
Because of that... they very cleverly used their most respected contractors to become trainers of the other drivers and made it all about being good business sense.
So, finally... They took them on test drives and showed them that they could save between 5-40% of their fuel just by changing simple behaviours.
And, ever since then...there was an overall, ongoing reduction in fuel consumption of 5% among the drivers that have taken part in the programme. **The end.**

Wiki to collect and analyse case studies

A Wiki was developed and integrated into the Expert Platform - ie the same login and password can be used to access the Wiki (www.ieadsmtask24wiki.info). It will contain the entire report in an interactive way to be able to jump between sections of interest.

Analyse interviews of energy experts' own stories

We have now filmed almost 30 energy efficiency professionals' personal energy stories, as told in their own words. These professionals from all energy sectors talk about the way they use energy in their own lives, what they are particularly vigilant about, what they are proud of and what they think and wish they could do better. Each story is unique and provides great insight into the idiosyncracies and complexitities of human behaviour and the various contexts that effect it. We have analysed these stories and will use excerpts from them to illustrate various models of understanding behaviour, contextual drivers and barriers, values, habits, emotions and social norms. All interviews can be found on the Expert Platform at www.ieadsmtask24.ning.com

Country energy stories (Part of Subtask 2)

We are collecting the 'energy story' of each participating country in Task 24, during each national workshop. The Belgian energy story has been filmed in Brussels in September 2012, and will be converted to a podcast. The NZ energy story has been filmed in Wellington in 2013 and is on the Expert Platform, so is the Norwegian energy story. The slide presentations of all stories can also be found on the expert platform. Most participating countries have also provided a Pecha Kucha on their national energy story (20 slides with 20 seconds per slide only). They can also be found on the expert platform. In addition, we will workshop country stories with experts in Sweden and Switzerland in order to gain greater insight for Subtasks 2 and 4.

Workshops for Subtask I

Three more workshops concentrated on aspects of Subtask I. The Norwegian workshop focused on the draft analysis and collected feedback from the national experts. The Swedish and Swiss workshops will present the final analysis and comments. All findings, presentations, videos and workshopped conclusions can be found on the Task 24 expert platform: www.ieadsmtask24.ning.com

· SUBTASK II

Collection of best practice case studies and interviews

So far, four interviews have been filmed/recorded with experts in Norway and Austria (for 3 case studies). They include a comparison of two very different approaches in feedback (smart metering domain), that attempted to attain a common goal (Energy Neighbourhoods 2 and €CO2 Management in Austria). We also filmed interviews on the Finnfjord ferrosilicon smelter in Norway, the most energy efficient smelter in the world (interviews were filmed with the CEO of Finnfjord and ENOVA, the Norwegian agency that supported the project; SME domain). In October, more case study interviews will be filmed in Sweden (on the Stockholm congestion pilot; transport domain) and Switzerland (on the 2000 Watt Society; buildings and transport domains). More case study interviews are going to be undertaken over the next 6 months in the Netherlands, New Zealand and Belgium. Next year, we will finalise them at workshops in Italy, the UK and South Africa. The analysis of case studies will be undertaken as we collect them, with a final analysis to be expected towards the end of 2014. The Subtask is on track.

· SUBTASK III

There has been considerable work done on Subtask III - Evaluation. We have analysed the Karlin and Ford 'Beyond kWh' paper as a possible template with experts in Norway and at the eceee summer study in an informal session. We have also collected all evaluation metrics used in the case studies for Subtask I. More analysis on these aspects will be undertaken in workshops in Sweden and Switzerland in October. The Subtask is on track.

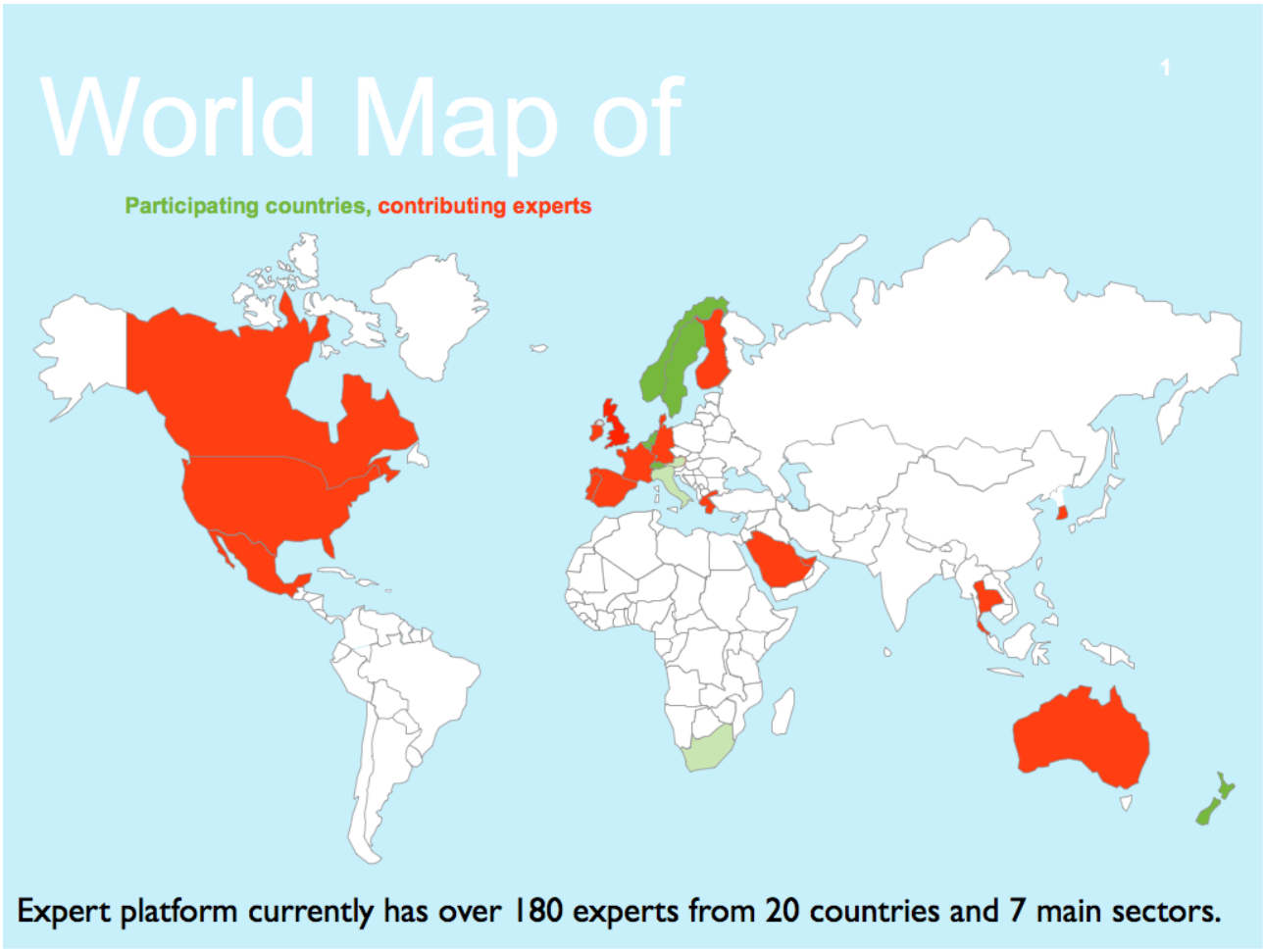
· SUBTASK IV

Information for this Subtask is continually collected in each of the country workshops we are undertaking. The country energy stories will contribute to the recommendations, as will information collected in Subtasks I, II and III. In addition, we have undertaken stakeholder surveys in the Netherlands and New Zealand (see reports on the IEA DSM ning site) and will undertake further surveys in Sweden and Switzerland, as well as the workshops planned for next year. The Subtask is on track.

4. SUBTASK V

Continued growth of experts on the platform

The Expert Platform is continually and organically growing and currently contains biographies and details from almost 180 experts from 7 sectors from 20 countries (see worldmap, below).



Utilisation and Engagement with Expert Platform

The expert platform has an incredible wealth of information on it:

· 93 videos and presentations from all workshops, including a professional, 25min film from the 2-day Oxford workshop
· 70 photos, including impressions from all workshops
· 5 blogs from Sea Rotmann, one from Juan Pablo Garcia
· 11 events
· 22 discussion fora
· 3 member groups for Subtasks I, II and III

From Google Analytics stats, we can see that the platform is well utilised, with the average visitor staying around 6 minutes and clicking through the various sites. Where we still face problems, is engagement. Even though people are looking at the information (particularly after broadcast messages have been sent with digests and links to all new information), they are loathe to comment, add to, or even 'like' the content. They are also not utilising the many communication functions of the platform, such as private messaging between members and

chat. The previous issues around managing content were resolved by connecting a Task Wiki to the platform. The dropbox has also been used successfully to collect and share information with the national experts. Matchmaking between various stakeholders has been quite successful and this Task has fostered many connections between members, both nationally and internationally. However, the most successful ways to create these connections was still via face-to-face workshops, which have proven invaluable to the Task.

Creating content for IEA DSM website and DSM University

This will be undertaken as the website will be updated and the DSM University developed. We are keen to trial the European Copper Institute's webinar tool for Task 24. We have updated the Task 24 Flyer and will provide a Spotlight article for the next edition.

Dissemination of Results and Discussion with Stakeholders

Task 24 has produced a number of publications and given presentations at various conferences and workshops to disseminate and discuss the Task results. It is also widely disseminated and publicised online, via social media and social networks. Furthermore, stakeholder workshops and webinars were organised in conjunction with each project meeting to discuss behaviour change topics relevant to the host country of the meeting. We have also done a cross-over workshop with Jan Bleyl, Operating Agent from Task 16 at the eceee summer study.

Task 24 Publications and reports

- IEA DSM Initial Positioning Paper on Behaviour Change
- IEA DSM Task 24 Draft and Final Workplans
- IEA DSM Spotlight Issues (4 stories so far)
- IEA DSM Task Flyer 24 (updated)
- IEA DSM website Task 24 (updated)
- Positioning paper and minutes from Brussels workshop
- Positioning and definitions paper and UKERC report from Oxford workshop
- 25 minute professional film summarising Oxford workshop
- Template for Models of Understanding Behaviour via Case studies in 4 domains (40+ and counting)
- IEA DSM Task 24 Pecha Kucha presentation (powerpoint/film)
- 5 participating countries' Pecha Kucha presentations (powerpoint/film)
- Interviews of experts' own energy stories (film, over 30 so far)
- Belgian, NZ and Norwegian DSM and behaviour change story (podcast/film) - underway
- NZ World Café report-back (film/presentations/documents)
- ECEEE summer study (2013) paper on Task 24 by Rotmann and Mourik
- ELCAS (2013) paper by Carabias-Hütter, Lobsiger-Kagi, Mourik and Rotmann (2013)
- Overview of definitions and how they were derived (powerpoint)
- Overview of models of understanding behaviour (powerpoint/film)
- NL and NZ stakeholder analysis (powerpoint, report)
- Implemention bloopers (powerpoint/film)
- 10 presentations on various aspects of behaviour change models (powerpoint/film)
- Interview with energynet.de (podcast)
- Analysis of Subtask I (140pp report, wiki)

Online sharing and administration of Task 24

- Widely disseminated via @IEADSM on twitter, linkedIn and facebook group; also ECEEE, UKERC, EEIP, Global Energy Professionals and Global Energy Insights columns and blogs and energy and behaviour linkedIn groups
- Weekly publication of Behaviour Change & Energy News by Dr Sea Rotmann
- Expert platform went 'live' in July 2012: www.ieadsmtask24.ning.com

- Mendeley (www.mendeley.com) Task 24 Group and bibliography database of >400 behaviour change and energy publications
- CRM Capsule (www.crmcapsule.com) contact relationship management system, collects all emails and contact information related to the Task
- Behaviour change and energy pearltree (www.pearltree.com) to collect and manage related websites etc
- Task 24 dropbox (www.dropbox.com) to share templates and collected models etc
- Task 24 wikipedia (www.ieadsmtask24wiki.info)
- Task 24 youtube channel (http://www.youtube.com/user/DrSeaMonsta/videos?flow=grid&view=0)
- Task 24 slideshare (http://www.slideshare.net/drsea)

5. SUBTASK 0

Meetings, webinars, report-back

The Advisory Group invitations have been sent out in March 2013. The first (online) meeting is planned for October 2013 to discuss findings from Subtasks I and II.
All other meetings, national expert workshops and webinars, as well as conferences and seminars where the Task was presented are shown below. We have been asked to become part of the Technical Steering Committee for the BEhavE conference in the UK next year and to chair the consumer behaviour panel at the IEEE's International Smart Grid conference in Copenhagen.

Meetings and workshops held so far

Date	Place	Total # Experts	# of countries	Type of meeting	Government	Business and NGO	Academic
10/4/12	Utrecht, NL	23	4	Task kick-off	4	9	10
10/4/12	Graz, AUT	5	2	Task kick-off	4	1	1
11/4/12	online	13	6	Webinar - Task kick-off	2	2	9
3/5/12	online	6	5	Webinar - Expert Platform	1	1	4
30/8/12	Utrecht, NL	20	1	Stakeholder Meeting NL	2	12	6
7/9/12	Brussels, BE	24	8	Expert Workshop	3	8	13
9&10/ 10/12	Oxford, UK	65	9	Expert Workshop	3	13	39
26/10/ 12	online	6	5	Expert Webinar		2	4
12/11/ 12	online	6	5	Expert Webinar		2	4
20/12/ 12	Utrecht, NL	22	1	Stakeholder Meeting NL	1	14	7
7/2/13	online	6	5	Expert Webinar		2	4
15/2/13	Wellington, NZ	50	4	Expert Workshop	15	15	20

Date	Place	Total # Experts	# of countries	Type of meeting	Government	Business and NGO	Academic
22/5/13	Graz, AUT	10	2	Social Media in Task 24		10	
27-29/5	Trondheim, NO	20	8	Expert Workshop	1	3	17
10/10/13	Stockholm, SE		2	Expert Workshop			
15/10/13	Luzern, CH			Expert Workshop			

Seminars and/or Conferences where Task was presented

Date	Place	Total # Experts	# of countries	Type of meeting
8/5/12	Linköping, SE	20	2	Presentation to University
29-31/8/12	Basel, CH	~300	15+	Task Presentation at 3rd Intl Sustainability Conference
19/9/12	Helsinki, FI	20	3	Task Presentation to Finnish Experts
20-21/9/12	Helsinki, FI	~250	15+	Task Presentation and session chairing at BEhavE conference
24-25/10/12	Berlin, GER	100s	10+	Attendance at EEIP 'Energy Recovery in Industry: Opportunity for energy efficiency' conference
17/12/12	Wellington, NZ	10	1	Stakeholder update NZ Government
13-14/2/13	Wellington, NZ	100+	6	National Energy Research Institute conference 'Energy at the Crossroads'
13/3/13	Paris, FR	30+	28	Presentation to IEA Secretariat Behaviour Workshop 'Choices, Decisions and Lifestyles Roundtable'
24/4/13	Utrecht, NL	50+	12	DSM Workshop 'The NL Polder Model', 2 presentations
7/6/13	Hyéres, FR	450+	45	eceee summer study, 1 presentation, 3 informal sessions
15/6/13	Milan, IT	15	2	presentation to RSA - Italian stakeholders
17/6/13	Dubai, UAE	30+	3	Task 24 Presentation at UAE Energy Savers
21/8/13	Wellington, NZ	6	1	Stakeholder update NZ Government
7/10/13	Copenhagen, DE	100+	15+	IEEE ISGT conference - also leading Consumer Behaviour panel
16/10/13	Luzern, CH	30+	10+	IEA DSM Workshop

WORKPLAN FOR THE NEXT 6 MONTHS

Reports and Publications planned

- Subtask I - Helicopter Overview Wiki of report
- Subtask II - collection of case studies and best practice in four overarching themes

- Subtask III - template to enable better evaluation of successful behaviour change outcomes depending on the stakeholder point of view
- Subtask V - social media presentation at RAP in Vermont
- BECC conference paper on Task 24
- Spotlight issues on various aspects of the Task
- Flyer updated to include Subtask 1 analysis

Meetings planned for 2013

Several meetings, both face-to-face and online, are planned for the coming 6 months, including an Advisory Board meeting in October. The Task will be presented in an oral paper at the BECC conference in Sacramento in November. In addition, Sea Rotmann will present at the RAP offices and discuss the Task with various US institutions like UC Davies, Stanford, Lawrence Berkely etc. From March 17, 2014, the NZ stakeholders will hold an 'International Sustainable Energy Week', co-organised by the NZ ExCo and Task 24. It will include a DSM workshop, ExCo meeting, and National Energy Institute (NERI) conference.

FINANCE

Costs (revised for 7 countries)

Description personnmonths/costs	Cost (Euro)	personnmonths Sea Rotmann per subtask	personnmonths Ruth Mourik per subtask	total costs Sea Rotmann	total costs Ruth Mourik	total sum
Subtask 0	4500	3	1.5	13500	6750	20250
Subtask 1	4500	6	3	27000	13500	40500
Subtask 2	4500	6	3	27000	13500	40500
Subtask 3	4500	6	3	27000	13500	40500
Subtask 4	4500	5	2.5	22500	11250	33750
Subtask 5	4500	4	2	18000	9000	27000
Total personnmonths/costs		30	15	€162000	€54000	€202500
Description costs	Costs					
OAs travel costs	55000	costs travel Sea Rotmann and Ruth Mourik including extended stay in Europe of Sea Rotmann and frequent face to face meetings RM and SR (6 times travel SR to Europe from New Zealand)				
stakeholder analyses	5000	separate meetings and costs associated with stakeholder analyses				
website and data management	10000	including website, webinars, VC, social media, blogs/vlogs, database etcetera				
overheads and incidentals	7500					
Total	€77500					**€280000**

Income and Spending to date

Income	Cost
Country participation: NL €40,000 (finished) SE €30,000 NZ €40,000 (finished) NO €20,000 CH €40,000 (finished) BE €10,000 **€180,000**	Person months Sea Rotmann 18pm Ruth Mourik 10pm **€126,000**
In-kind: UKERC Meeting Place Oxford Workshop contribution €40,000 NZ Workshop contribution NZ$3600 Energy Savers Dubai Workshop contribution Approx €1000 In-kind expertise from non-participating countries: Over 8 weeks expert time	Travel and web development, video, incidentals: Sea Rotmann €32000 Ruth Mourik €7000 **€35000**

MATTERS FOR THE EXCO

Please accept this Task Status Update.

AGENDA 5a. (42nd meeting of the IEA DSM Programme)

Document J

Standardisation of Energy Efficiency Calculations

Prepared by Harry Vreuls, NL Agency

Task Status Report
September 2013

This Task Stats Report is submitted to the IEA DSM ExCo with a request to:

- Approve the Task 21 Status Report
- To decide on two options:
  - Preparations of new Subtasks for decision at the ExCo meeting in April 2014 or,
  - Closure of Task 21

Participating countries

The following countries are participating: France, Korea, Netherlands, Norway, Spain, Switzerland and the USA.

Progress in the work

Since the last expert meeting April 2011 in Seoul (Korea) no additional meeting was organised.

At the Exco meeting in Helsinki, November 2012, the main results of the work were presented, including the highlights for the topics as included in the work plan:

- Experiences in countries with energy savings calculations for selected technologies and the usefulness of the template for documenting energy savings calculations;
- Summaries of findings for the selected technologies
- Harmonisation for energy savings calculations and key elements
- Guidelines for energy savings calculations
- Future development/improvements for harmonisation of energy savings calculations

At the Exco meeting in Helsinki, also potential topics for new subtasks where presented and discussed with the Exco delegates. Additional work within the IEA DSM Agreement could be especially in the area of develop case applications for selected additional technologies as input for the follow-up of the EU/ISO standardisation work, the EU programmes and/or the US uniform methods projects and develop case applications and evaluations for packages of P&M. Potential interest for these topic were discussed with US experts during the International Energy Program Evaluation Conference in August. While there is progress on harmonisation in the USA and in USA regions, information from outside the USA is seldom reached and used. The Operating Agent continued following developments in Europe related to energy savings calculation methods related to the implementation of the Energy Efficiency Directive (EED) and the progress in the work by the International Standardisation Organisation (ISO) on a standard on bottom up energy savings calculations. At the EXCO meeting in October the Operating Agent will provide a concept paper for potential new subtasks with a view decide to decide to prepare the selected subtask to come in force at the EXCO meeting March 2014 or to close the Task (and the communication activities) and present a final report to the EXCO at their meeting.

The work from Task 21 in combination ideas to use results from the Task for energy savings calculations for energy savings obligations and policy programs were presented International Energy Program Evaluation Conference in August.

The impressions from this evaluation conference were use for an article in the IEA DSM newsletter.

Work is ongoing to update the Task flyers. It is foreseen to finalise these updates prior to the Exco meeting.

Financial status

Budget

The budget, as included in the work plan is follows:

		Manpower (€)	Project costs (€)	Total (€)
Subtask 1	Existing ESC standards, standards under development and most relevant reports for ESC	46000	4000	50000
Subtask 2	Basic concepts, rules and systems for ESC standards	72000	5000	77000
Subtask 3	Potential for use and continue development and maintenance of ESC standards	67000	9000	76000
Subtask 4	Communication and information	38000	39000	77000
TOTAL		223000	57000	280000

Status

By 1st September 2013 the expenditures for manpower were € 222,732 and the project costs were € 49,533. So the total costs were € 272,265. As agreed in earlier Exco meeting a part of the budget (about €25,000 was set aside for communication actions after finalisation of the subtasks (e.g. distribution of the outcome of the Task at conferences and providing answers to questions during 2013 up to early 2014). At the moment this part of the budget is almost complete used. The remaining small part of the budget will used up to April 2014.

The project is finalised within the budget.

Work plan for the coming months

The Operating Agent will continue to provide information to relevant stakeholders and update the information on the IEA DSM website.

The Operating Agent will continue to co-operate with the ISO work group "Definition of a methodological framework applicable to calculation and reporting on energy savings".

The Operating Agent will either prepare proposals for new subtasks or start the preparation of the Task closure.

Items for the EXCO

4. To approve the status report
5. To decide on two options:
    a. Preparations of new subtasks for decisions at the EXCO meeting April 2014 or
    b. The closure of Task 21

AGENDA 7a. (41st meeting of the IEA DSM Programme)

Document K

Visibility Committee Report

October 2013

Sea Rotmann

The Task Status Report is submitted to the IEA DSM ExCo in Rigi, Switzerland with a request to:

- Approve the Visibility Committee Report

DOCUMENT

IEA DSM PROGRAMME VISIBILITY COMMITTEE REPORT
Submitted by Anne Bengtson, Executive Secretary

Annual Report

The 2012 Annual report, including a Theme Chapter on "Smartness Requires DSM" was made available electronically to ExCo members by the end of January 2013 and was uploaded to the IEA DSM website. Printed copies (250) were sent out in March to the EUWP, EEWP, ExCo Members and Operating Agents. Executive Committee Members and Operating Agents should ensure that copies are distributed to all interested parties.

Input from the Operating Agents for the 2013 Annual Report is required by 15 November, 2013. The Executive Committee members should also consider a Theme Chapter on DSM at the 42nd ExCo meeting.

Issues
Consider a theme chapter for the Annual Report 2013.

Website

All ExCo delegates and Operating Agents are strongly encouraged to review the whole website regularly, particularly areas relevant to their activities. It is very easy for information to become out-dated. Operating Agents have considerable freedom to keep their own Task areas up to date, but other feedback, reporting of functions that appear not to work and suggestions for further improvements should be made via Anne Bengtson anne.bengtson@telia.com and/or the Visibility Committee. In particular, we would be interested to know how useful the social network links are.

Statistics

Total website hits:

September1st, 2011 – August 31, 2012 – 995 224 visitor hits
September 1st 2012 – August 31, 2013 – 1 085 423 visitor hits

Hits per day:
September 1st, 2011 – August 31st, 2012 – 2727 per day
September 1st, 2012 – August 31st, 2013 – 2974 per day

Download information for Tasks – see attachment.

Issue
Need a more detailed analysis using Google Analytics that can track/identify traffic, how long they stayed, country etc.

Website Solstice
Solstice proposal for further developments

Solstice has not proposed any further developments.

Issues
1. We would welcome suggestions for further developments
2. Members should review the website regularly

Spotlight Newsletter

By the end of 2013, four DSM Spotlight newsletters will have been published. It is proposed that the same be done in 2014.

To date the following 2013 newsletters have been published and are posted on the DSM website:

* Issue 48/ April 2013
* Issue 49/June 2013
* Issue 50/September 2013

The last issue will be published:

* Issue 51/December 2013 – articles due November 10, 2013

Articles in Issue 48:
New member: European Copper Institute
Note from the Chairman: Energy Efficiency – Who is afraid of the M word?
Task 24: The Netherlands holds 3rd Behaviour Change Workshop
Centre of Excellence: DSM University in the works
Case Study: Energy Australia Pricing Strategy Study - Australia

Articles in Issue 49:
Task 24: Is the Human Aspect of Energy Use Finally Becoming Interesting to Decision Makers?
Note from the Chairman: Teaming Up
Task 17: providing Users Network Flexibility
Task 23: Smart Grids and the Consumer
These Behavioural People – Hans Nilsson

Thank you to all ExCo members and OAs that have contributed an article(s) to the DSM Spotlight this year. In 2014 Editor Pam Murphy looks forward to highlighting not only the Task work, but DSM work in the Member countries.

The Programme has tremendous news to share so please continue to think about, suggest and submit future articles. The Editor is happy to work with you on an article in any form – completed article by you or someone else, information for an article that you would like for the Editor to write, a conference paper that the Editor can convert into a newsletter article or just an idea that you think would make an interesting article. If you have an article to contribute, please email it to Pamela Murphy [pmurphy@kmgrp.net]. Feedback on the newsletter is always welcome. This is the Programme's newsletter and the Editor Pam Murphy is happy to make any changes in acontent and layout.

Issues
With four newsletter issues published in 2013, it is proposed that the same be done in 2014.

The proposed schedule for 2014 is:

- **Issue 52/April 2014**
  1. Articles due: February 10
- **Issue 53/June 2014**
  a. Articles due May 10
- **Issue 54/September 2014**
  - Articles due August 10
- **Issue 55/December 2014**
  - Articles due November 10

Brochure

Comments on the format, style and content of the brochure and the inserts are welcome. The inserts were last updated in September 2013.

Issues

Please provide comments on the brochure and its contents at the October ExCo.

Task Flyers

Task flyers Task 17 and Task 22 need to be updated to reflect results in Phase II of Task 17 and the completion of Task 22.

Social Media

The Implementing Agreement is getting more traction on social media. We now have a presence on:

- facebook (IEA DSM Group) with 92 members and growing. Even though most posts are by Anne Bengtson, Rob Kool and Hans Nilsson, there are regularly posts and questions by other participants;
- LinkedIn (IEA DSM Group) with 31 members and slowly growing. Most posts are by Anne Bengtson and Sea Rotmann. We would need to actively invite people into this group in order to achieve the professional reach that LinkedIn could afford.
- Twitter (@IEADSM) with 149 followers and 440 tweets. This is the fastest growing social media platform and has fostered some good engagement, retweets and mentions. Sea Rotmann is posting for this group.
- IEA DSM Youtube Channel - needs to be populated with some relevant videos. Sea Rotmann has proposed to use some of the 60+ Task 24 videos for this channel. If we start filming some ExCo workshops, this would be a great channel to distribute visual information fast.
- IEA DSM Task 24 Expert Platform - 180+ members, invite-only (www.ieadsmtask24.ning.com). Very successful multi-media platform to distribute findings from Task 24, could be used for other Tasks, but only if they follow a similar, open dissemination strategy. Platform had 1500 visits already, average page view for new visitors is 8 minutes 30 seconds. The platform is also linked to a dropbox, a Wiki and a twitter account and includes 93 videos, 70 photos, 5 blog posts, over 20 discussions, all events associated with the Task, 3 Subtask Groups and member chat and email functions and all experts' short biographies and interests.

Communications Plan and Dissemination Strategies

The Visibility Committee is currently working on a draft communications plan for the Implementing Agreement. In it, we will analyse in detail our communications history, what works and what doesn't, who our audience is and how well we service them and how we can improve our plan going forward. It will ultimately include individual Task Dissemination Strategies to ensure that the website, Spotlight newsletters and social media channels are utilised well by all Tasks to report their findings and other relevant events.

Dr Sea Rotmann
Visibility Committee Chair

Anne Bengtson
Executive Secretary

PROCEDURE FOR THE ELECTION OF CHAIR AND VICE-CHAIRS

Elections shall be held for the Chair every two years, during the second ExCo meeting of the year.

- Any ExCo member is eligible to be elected Chair. Sponsors cannot be Chair.
- The requirements to serve as Chair are (1) able to spend the necessary time to plan the ExCo meetings, to respond to numerous requests from the Secretariat and elsewhere, and to provide the vision and leadership that the Programme requires; (2) broad knowledge of DSM and EE; and (3) a known ability to manage meetings.
- Nominations will be sent to the Executive Secretary prior to the ExCo meeting, the Executive Secretary will provide a specific deadline
- The Executive Secretary will confirm the willingness of each proposed person to be nominated and to serve for a two-year term, if elected.
- The list of nominees will be included in the PMD, If more than one name is listed, each candidate will be asked to provide a one-page description of the challenge facing the Programme and how he or she plan to address them.
- Elections will be held at the end of the Second ExCo meeting of the year. Only those present may vote. Abstentions are allowed. ExCo members not present may send their vote, in advance of the start of the ExCo meeting to the Executive Secretary and those votes will be counted.
- If there is more than one candidate, a secret ballot will be used and the Executive Secretary will tally the votes and report the results.
- A majority is required to be elected.
- In case of a tie, a second vote will be held among those present and repeated until a winner emerges.
- The Chairman will be elected for a two-year term.
- The Chair may be elected for as many terms as the ExCo decides. If the ExCo is unhappy with the Chairman they must nominate someone who must win with a simple majority.

Vice Chair

- The ExCo shall have two VC whose role is to assist the Chair. • The Chair will propose each and the ExCo will, by simple majority, approve each or not.
- If not approved, the VC candidate or candidates will be asked to leave the room and the ExCo will hear the pros and cons for each person.
- A second vote will be made to gain approval.
- If that fails, the Chair will be required to offer an alternate name or names. • When a Chair steps down or is not re-elected, the VC term expires and after a new Chair is elected, he or she will propose new VC for ExCo approval.

As of 26 September, six countries have voted via e-mail for Rob Kool as Chairman

IEA Secretariat News – Document

Report from the IEA Secretariat

September 2013

Information on recent developments within the IEA Secretariat

1. IEA Executive Office

IEA Ministerial Meeting: The 2013 IEA Ministerial Meeting will take place at the OECD conference centre over one and a half days beginning with the Energy Business Council session at 16h00 on the afternoon of Tuesday 19 November, and concluding with a press conference at 17h30 on Wednesday 20 November. The theme for this meeting is "Global Synergy for Tomorrow's Energy".

2. Committee on Energy Research and Technology (CERT)

The **64th CERT meeting** was held on 20-21 February 2013 in Paris. At the meeting, the SPT Director confirmed that the Governing Board had voted the IEA's budget for the next biennium on a zero nominal growth basis which meant that in real terms budget resources were shrinking compared to previous years. Several Delegates expressed concern about being able to maintain the necessary level of Secretariat support for the Technology Network, and emphasised the value of face-to-face meetings. The Secretariat confirmed that there was Desk Officer support for all implementing agreements (IAs) and that it was looking at different support options including scheduling back-to-back meetings in a same location, webinars and teleconferencing. Enhancing the role of the Working Parties was also seen as crucial in making closer links with a larger number of IAs.

The Secretariat gave an update on the forthcoming edition of the *Energy Technology Initiatives (ETI)*, which continues to serve as a reference document on, and engagement tool for, the Implementing Agreements (IAs), providing up-to-date information on the full gamut of IAs for use by members of the Energy Technology Network, the Secretariat and beyond. Delegates were supportive of this publication, which put scientific language into policy makers' language. The *ETI 2013* is planned to be released in September 2013. The IEA is very grateful for the support from the IAs for this publication.

The **65th CERT meeting** was held on 3-4 June 2013 in Paris. The meeting was back-to-back with a CERT/SLT (Standing Group on Long-Term Co-operation) joint workshop on game changers in the energy field on 4 June.

The IEA secretariat presented to CERT plans for a report to the Governing Board later in 2013 entailing a comprehensive review of the value and work of the IAs (*A Comprehensive Review of the Implementing Agreements*). The purpose of the report is to:

- Prepare a short assessment of the value added of the IAs;
- Continue efforts to increase the visibility of substantive results of IA work and to encourage policy relevant messages;
- On this basis, communicate the value and work of the IAs to the Governing Board.

The planned report is part of cross-Agency work plan on the IAs for the biennium 2013-2014 ("IA work plan"). The IA work plan comprises the four primary goals to:

- assess and maximise the value of the IAs to Member countries and the Secretariat;
- enhance communication on the work and value of the IAs;
- further the use of the IAs as an engagement tool; and
- confirm internal Secretariat management of the IAs in light of the Executive Director's priorities and the 2012 Secretariat reorganisation (in 2012, recognising the important role of the IAs as a tool for multilateral IEA engagement and their links to work across the Agency, internal responsibility for IA management was moved to the newly created International Partnerships and Initiatives Unit ("IPI") within the Office of Global Energy Policy).

The CERT nominated Dr. Robert Marlay (US) as Vice-Chair to the CERT. The Governing Board of the IEA approved the CERT's recommendation for the vacant Vice-Chair position at their meeting in March. The CERT cabinet consists now of the Chair (Peter Cunz) and the four Vice-Chairs (Alicia Mignone, Shiro Hori, Steve Martin, Robert Marlay).

The 66th CERT meeting will be held on 3-5 December 2013.

Contact: Jean-François Gagné, Head of Energy Technology Policy Division Jean-Francois.Gagne@iea.org.

3. Energy Technology Perspectives

ETP 2014 Project vision

The ETP analytical programme is moving away from a bi-yearly publication to an on-going programme with a yearly publication as one of its outcomes. This new vision, aimed at making ETP messages clear, relevant and accessible to policy makers, and consistent with overall IEA communication, rests on two pillars: a more streamlined printed publication, with a generic structure, focused on a more limited set of technology questions; and a more comprehensive online presence where much of the core scenarios, the technical analysis and background materials are made available.

ETP 2014 will focus on the theme of "Electricity in the Energy System" and will continue the evolution initiated in ETP 2012 by building on the work on energy systems and move away from a silo approach to analysing energy technologies. Systems integration, and the interdependencies of technologies, will be at the heart of the analysis. While the long term analysis of the energy systems will retain its objective of reducing emissions and end use energy consumption, more focus will be put this year on operational aspects of the system including peak demand reduction and the integration of variable renewables. Key topics will include: Solar, Gas, Energy Storage, EV's, and a focus on Financing and India's power sector.

ETP 2014 Topical coverage

- Decarbonising energy supply: **Is solar the answer?**
- **The enabling role of natural gas**: Flexibility vs. Base load
- **Electrified transport** - how quickly and how far can we go?
- Systems integration - **energy storage as a game changer**?
- **Financing** low carbon electricity generation and capacity

- Partner country focus: **high efficiency power generation in India**

Contact: Jean-François Gagné, Head of Energy Technology Policy Division Jean-Francois.Gagne@iea.org.

4. IEA Energy Technology Roadmaps

The IEA has currently published 17 global roadmaps and 2 national roadmaps on wind in China and cement in India. Global roadmaps released in 2012 include, Bioenergy for heat and power, Solar heating and cooling, Fuel economy of road vehicles, Hydropower and High efficiency low emissions coal fired power. Since June 2012, the IEA roadmaps webpage has received 18,000 visitors. The Secretariat is currently working on an additional 4 roadmaps (chemical catalysis, energy efficient building envelopes, hydrogen and energy storage) scheduled for completion in 2013 and 2014. The IEA is evaluating opportunities to develop additional technology roadmaps including hydrogen and ocean energy. Additional national roadmaps on solar energy technologies for China and South Africa are being developed with technical support from the IEA and support wider implementation of the global roadmaps.

Existing roadmaps are also being updated based on the level of change since their release. Updates that will take place during this biennium include CCS, wind, solar PV and nuclear.

The roadmaps are freely downloadable at the IEA website (www.iea.org/roadmaps).
For more information, please contact Cecilia TAM (E: Cecilia.Tam@iea.org).

Energy Efficient Building Envelope Roadmap - A draft will be circulated in September 2013 for review and publication is expected by the end of 2013. For more information, please contact Marc LaFrance, marc.lafrance@iea.org.

5. IEA CHP/DHC Collaborative

Combined Heat and Power (CHP) and District Heating and Cooling (DHC) are attractive to policy makers and industry because they deliver a variety of energy, environmental and economic benefits, which stem from the fact that these applications are inherently energy efficient, providing a transition to a low-carbon future. Their benefits include: dramatically increased fuel efficiency, reduced CO_2 emissions, cost savings for the energy consumer, and beneficial use of local energy sources (particularly through the use of waste, biomass and other renewable sources, as well as waste energy).

The IEA International CHP and DHC Collaborative was initiated in 2007 with the goal of accelerating deployment of cost-effective, clean CHP and district energy technologies, leading to increased use of renewable energy, reduced CO_2 emissions and increased overall efficiency of the energy system; and of providing a platform for stakeholders to share best practices policies and experiences and applied solutions on these technologies. This initiative has completed several publications which provided a vision of CHP and district energy potential, along with an overview of policy best practices and recommendations of options to consider when implementing these policies. The Collaborative results also highlighted the benefits of an integrated energy system approach with co-generation technology assisting in balancing electricity production from variable renewables.

The IEA has recently re-launched Phase III (2013-2014) of the CHP and DHC Collaborative at a joint workshop with the CHP and DHC Clean Energy Ministerial Working Group last February in Paris. This next phase will build from and advance the findings of the previous studies. In particular, a key need for a step change in the deployment of these technologies which hinges on elements such as an appropriate regulatory framework which could complement the promotion of energy efficiency and renewable energy sources, as well as the existence of a heat-demanding market where CHP and district energy could show their added-value. The existing regional differences when analysing those aspects constitute a crucial element to be deeply understood in order to provide relevant policy recommendations, as well as a systems integration perspective to analyse the full potential that these technologies can offer in the overall energy picture.

The IEA CHP/DHC Collaborative Phase III programme of work is intended to help overcoming the main barriers and concerns raised, and it is compounded by three main pillars, namely:

- Country specific reports (scorecards), which aim to provide key policy recommendations concluded from specific analysis of the CHP and DHC market and regulatory framework at a national level of the selected countries. A first set country scorecards are in preparation, comprising Finland, India, Japan and Korea.
- Development of a compendium of case studies of industrial CHP and integrated applications of CHP within DHC networks, including the business model and the financing mechanisms used to develop and operate the projects.
- Improvement of CHP/DHC related data. The Collaborative is intended to be a platform to support the exchange of statistical information from national agencies and industrial associations in order to provide more detail data to improve the resulting analysis.

Contact: Araceli FERNANDEZ PALES Araceli.FernandezPales@iea.org.

6. Medium-Term Progress & Prospects in Energy Efficiency

The concept for this new product was presented at the September 2012 Energy Efficiency Working Party meeting, where it received strong support. IEA senior management is also very supportive of the energy efficiency market report, which complements the agency's other market reports and helps to reinforce the concept of energy efficiency as a hidden fuel. The market report complements the work done for the energy efficiency chapter in WEO 2012 and ETP modeling work for energy efficiency, by discussing how the market for energy efficiency is developing as compared to the IEA's scenarios, such as the WEO's long-term NPS and EWS scenarios. The market report takes a medium-term perspective and seeks to develop understanding of the investment trends, current status, and medium term (5 year) prospects in a number of key global markets for energy efficiency. The report will, among other things:

- analyze the state and progress of energy efficiency by assessing investments and outcomes in key measurable markets,
- assess the value of the outcomes generated by these investments, and
- inform policy makers and investors of the likely opportunities for further investments and how governments can usefully create supportive environments for investments.
- The report will be released in October 2013. For more information contact Robert TROMOP Robert.Tromop@iea.org.

7. IEA Energy Training Week 2013

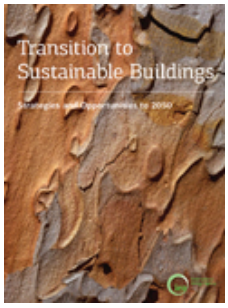
More than 120 energy professionals from government and industry, representing more than 50 nations – mainly developing and newly industrialising countries, attended the 2013 Energy Training Week (2013 ETW) from 8-14 April 2013 in Paris. For the 2013 ETW, there were two introductory sessions and five advanced courses covering a wide spectrum of topics – energy security, markets, sustainability, technology and analysis – featuring the latest trends and developments in sectors such as oil, gas and renewables. IEA experts and guest specialists lead the classes. One of the advanced courses, Energy Analysis and Modelling, looked at a range of practical IEA applications – from developing energy efficiency indicators to modelling a national power generation portfolio. Around 25 participants had the opportunity to get acquainted with the fundamental principles of energy analysis and modelling, including some hands-on training using the TIMES modelling framework.

For more information visit www.iea.org/training/ or contact Assen GASHAROV Assen.Gasharov@iea.org.

8. Recent and forthcoming IEA publications

As a IEA Network partner, you can request a discount on the top left column of our bookstore page, please see http://www.iea.org/w/bookshop/b.aspx?new=10

a. Transition to Sustainable Buildings: Strategies and Opportunities to 2050 (ISSUED JUNE 2013)



Buildings are the largest energy consuming sector in the world, and account for over one-third of total final energy consumption and an equally important source of carbon dioxide (CO_2) emissions. Achieving significant energy and emissions reduction in the buildings sector is a challenging but achievable policy goal.

Transition to Sustainable Buildings presents detailed scenarios and strategies to 2050, and demonstrates how to reach deep energy and emissions reduction through a combination of best available technologies and intelligent public policy. This IEA study is an indispensible guide for decision makers, providing informative insights on:

- cost-effective options, key technologies and opportunities in the buildings sector;
- solutions for reducing electricity demand growth and flattening peak demand;
- effective energy efficiency policies and lessons learned from different countries;
- future trends and priorities for ASEAN, Brazil, China, the European Union, India, Mexico, Russia, South Africa and the United States;
- implementing a systems approach using innovative products in a cost effective manner; and
- pursuing whole-building (e.g. zero energy buildings) and advanced-component policies to initiate a fundamental shift in the way energy is consumed.

This publication is part of the *Energy Technology Perspectives* series and one of three end-use studies, together with industry and transport, which looks at the role of technologies and policies in transforming the way energy is used.

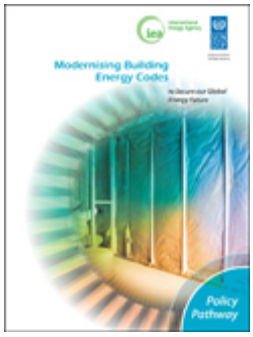
For more information about the publication, please see http://www.iea.org/etp/buildings/.

To see a video of the webinar of when the publication was launched, please see https://cleanenergysolutions.org/training/transition-to-sustainable-buildings

To order the book, please see http://www.iea.org/w/bookshop/add.aspx?id=457

For more information, contact Marc LaFrance, marc.lafrance@iea.org

b. Policy Pathways: Modernising Building Energy Codes



Buildings are the largest consumers of energy worldwide and will continue to be a source of increasing energy demand in the future. Globally, the sector's final energy consumption doubled between 1971 and 2010 to reach 2 794 million tonnes of oil equivalent (Mtoe), driven primarily by population increase and economic growth. Under current policies, the global energy demand of buildings is projected by the IEA experts to grow by an additional 838 Mtoe by 2035 compared to 2010.

The challenges of the projected increase of energy consumption due to the built environment vary by country. In IEA member countries, much of the future buildings stock is already in place, and so the main challenge is to renovate existing buildings stock. In non-IEA countries, more than half of the buildings stock needed by 2050 has yet to be built.

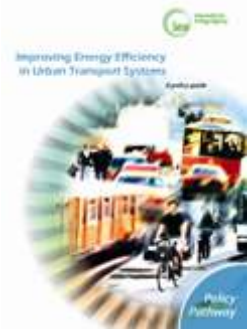
The IEA and the UNDP partnered to analyse current practices in the design and implementation of building energy codes. The aim is to consolidate existing efforts and to encourage more attention to the role of the built environment in a low-carbon and climate-resilient world.

This joint IEA-UNDP Policy Pathway aims to share lessons learned between IEA member countries and non-IEA countries. The objective is to spread best practices, limit pressures on global energy supply, improve energy security, and contribute to environmental sustainability.

Part of the IEA Policy Pathway series, Modernising building energy codes to secure our global energy future sets out key steps in planning, implementation, monitoring and evaluation. The Policy Pathway series aims to help policy makers implement the IEA 25 Energy Efficiency Policy Recommendations endorsed by IEA Ministers (2011).

To download a copy, please see http://www.iea.org/publications/freepublications/publication/name,42535,en.html

c. Policy Pathways: A Tale of Renewed Cities



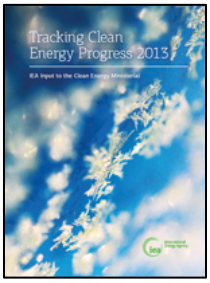
Transport currently accounts for half of global oil consumption and nearly 20% of world energy use, of which approximately 40% is used in urban transport alone. The IEA expects urban transport energy consumption to double by 2050, despite ongoing vehicle technology and fuel-economy improvements. While increased mobility brings many benefits, the staggering rate of this increase creates new challenges. Urgent energy-efficiency policy attention will be needed to mitigate associated negative noise, air pollution, congestion, climate and economic impacts, all of which can cost countries billions of dollars per year.

This report highlights lessons learned and examples of good practice from countries with experience implementing a wide range of measures to improve energy efficiency in urban transport systems.

Part of the IEA Policy Pathway series, *A Tale of Renewed Cities* sets out key steps in planning, implementation, monitoring and evaluation to achieve improved energy efficiency in urban transport systems. The Policy Pathway series aims to help policy makers implement the IEA 25 Energy Efficiency Policy Recommendations.

To download a copy, please see
http://www.iea.org/publications/freepublications/publication/name,39940,en.html

d. Tracking Clean Energy Progress



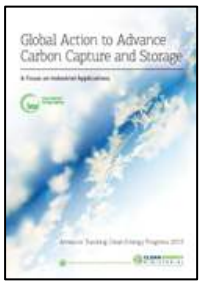
Tracking Clean Energy Progress 2013 examines progress in the development and deployment of key clean energy technologies. Each technology and sector is tracked against interim 2020 targets in the IEA 2012 Energy Technology Perspectives 2°C scenario, which lays out pathways to a sustainable energy system in 2050.

Stark message emerge: progress has not been fast enough; large market failures and preventing clean energy solutions from being taken up; considerable energy efficiency remains untapped; policies need to better address the energy system as a whole; and energy-related research, development and demonstration need to accelerate.

Alongside these grim conclusions there is positive news. In 2012, hybrid-electric vehicle sales passed the 1 million mark. Solar photovoltaic systems were being installed at a record pace. The costs of most clean energy technologies fell more rapidly than anticipated. TCEP 2013 provides targeted recommendations to policy makers on how to scale up deployment of these key technologies.

To download the report and to explore the underlying data, go to http://www.iea.org/etp/tracking/.

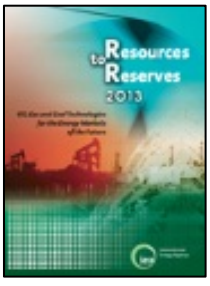
e. Global Action to Advance Carbon Capture and Storage: A Focus on Industrial Applications



Representing one-fifth of total global CO_2 emissions currently, industrial sectors such as cement, iron and steel, chemicals and refining are expected to emit even more CO_2 over the coming decades. Carbon capture and storage (CCS) is currently the only large-scale mitigation option available to cut the emissions intensity of production by over 50% in these sectors. CCS is already proven in some industrial sectors, such as natural gas processing. Yet, the commercial-scale demonstration stage in key sectors such as iron and steel, cement or some processes in the refining sector has not been reached. To achieve decarbonisation goals, policy makers must pay more attention to industrial applications of CCS, while not undermining the global competitiveness of these sectors.

To download the report, go to
www.iea.org/publications/freepublications/publication/name,37068,en.html. For more information, contact Simon BENNET simon.bennet@iea.org.

f. Resources to Reserves 2013



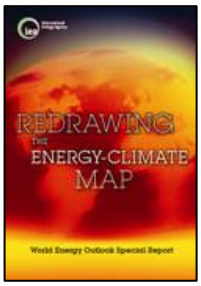
The availability of oil and gas for future generations continues to provoke international debate. In 2005, the first edition of Resources to Reserves found that the known hydrocarbon resources were sufficient to sustain likely growth for the foreseeable future. Yet the book also predicted that developing oil and gas

resources – and bringing them to market – would become more technically demanding.

Resources to Reserves 2013 – a comprehensive update to the 2005 edition – confirms these earlier findings and investigates whether oil and gas resources can be produced at a reasonable cost and in a timely manner, while also protecting environmentally sensitive areas. Released amid a boom in shale gas and oil development in North America that is transforming the global energy landscape, the book surveys the cutting-edge technologies needed to find, produce and bring these reserves to the market, and it reviews the challenges on greenhouse gas emissions associated with fossil fuel production. With renewed interest in coal as a potential source of liquid and gaseous fuels, it also looks at technology advances for this fossil fuel.

For more information visit www.iea.org/w/bookshop/add.aspx?id=447 or contact Keith BURNARD Keith.Burnard@iea.org.

g. World Energy Outlook Special Report 2013: Redrawing the Energy Climate

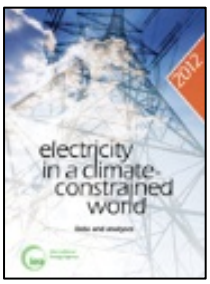


Governments have decided collectively that the world needs to limit the average global temperature increase to no more than 2 °C and international negotiations are engaged to that end. Yet any resulting agreement will not emerge before 2015 and new legal obligations will not begin before 2020. Meanwhile, despite many countries taking new actions, the world is drifting further and further from the track it needs to follow.

The energy sector is the single largest source of climate-changing greenhouse-gas emissions and limiting these is an essential focus of action. The World Energy Outlook has published detailed analysis of the energy contribution to climate change for many years. But, amid major international economic preoccupations, there are worrying signs that the issue of climate change has slipped down the policy agenda. This Special Report seeks to bring it right back on top by showing that the dilemma can be tackled at no net economic cost.

To download the report, go to www.iea.org/publications/freepublications/publication/WEO_RedrawingEnergyClimateMap.pdf.

h. Electricity in a Climate-Constrained World: Data & Analyses



After experiencing a historic drop in 2009, electricity generation reached a record high in 2010, confirming the close linkage between economic growth and electricity usage. Unfortunately, CO_2 emissions from electricity have also resumed their growth: Electricity remains the single-largest source of CO_2 emissions from energy, with 11.7 billion tonnes of CO_2 released in 2010. The imperative to "decarbonise" electricity and improve end-use efficiency remains essential to the global fight against climate change.

The IEA's Electricity in a Climate-Constrained World provides an authoritative resource on progress to date in this area, including statistics related to CO_2 and the electricity sector across ten regions of the world (supply, end-use and capacity additions). It also presents topical analyses on the challenge of rapidly curbing CO_2 emissions from electricity. Looking at policy instruments, it focuses on emissions trading in China, using energy efficiency to manage electricity supply crises and combining policy

instruments for effective CO_2 reductions. On regulatory issues, it asks whether deregulation can deliver decarbonisation and assesses the role of state-owned enterprises in emerging economies. And from technology perspectives, it explores the rise of new end-uses, the role of electricity storage, biomass use in Brazil, and the potential of carbon capture and storage for 'negative emissions' electricity supply.

For more information, visit www.iea.org/w/bookshop/add.aspx?id=445.

i. Global EV Outlook

The Global EV Outlook represents the collective efforts of two years of primary data gathering and analysis from the Electric Vehicles Initiative (EVI) and IEA. Key takeaways and insights include landscape analysis of electric vehicle (EV) stock/sales and charging station deployment. Existing policy initiatives are delineated and future opportunities highlighted in an "Opportunity Matrix: Pathways to 2020". Together EVI countries accounted for more than 90% of world EV stock at the end of 2012. Strong government support in EVI countries on both the supply and demand sides are contributing to rising market penetration. 12 out of 15 EVI countries offer financial support for vehicle purchases, and most employ a mix of financial and non-financial incentives (such as access to restricted highway lanes) to help drive adoption.

The Global EV Outlook is a unique and data-rich overview of the state of electric vehicles today, and offers an understanding of the electric vehicle landscape to 2020.

The report is available under
www.iea.org/publications/freepublications/publication/GlobalEVOutlook_2013.pdf.
For more information, contact Tali TRIGG tali.trigg@iea.org.

j. Global Land Transport Infrastructure Requirements

Over the next four decades, global passenger and freight travel is expected to double over 2010 levels. In order to accommodate this growth, it is expected that the world will need to add nearly 25 million paved road lane-kilometres and 335 000 rail track kilometres. In addition, it is expected that between 45 000 square kilometres and 77 000 square kilometres of new parking spaces will be added to accommodate vehicle stock growth. These land transport infrastructure additions, when combined with operations, maintenance and repairs, are expected to cost as much as USD 45 trillion by 2050.
This publication reports on the IEA's analysis of infrastructure requirements to support projected road and rail travel through 2050, using the IEA Mobility Model. It considers land transport infrastructure additions to support travel growth to 2050. It also considers potential savings if countries pursue "avoid and shift" policies: in this scenario, cumulative global land transport infrastructure spending could decrease as much as USD 20 trillion by 2050 over baseline projections.

The information paper is available under
www.iea.org/publications/freepublications/publication/TransportInfrastructureInsights_FINAL_WEB.pdf.
For more information, contact John DULAC john.dulac@iea.org.

k. Gas to Coal Competition in the U.S. Power Sector

Coal currently supplies with more than 40 % of the world electricity consumption and it essential input of around 70 % of world steel production, representing around 30 % of the world primary energy supply. This is because coal is cheap, abundant, accessible, widely distributed and easy energy to transport, store and use. For these features, coal is projected to be intensively used in the future. Production and use of coal present a series of issues throughout the whole value chain. While existing technology allows addressing most of them (safety at work, land restoration, mercury, NOx and sulphur emissions avoidance, etc.), CO_2 emissions continues to be the biggest challenge for coal use in the future.

This report focuses on the technology path to near-zero emissions including useful insights in advanced coal power generation technologies and Carbon Capture, Utilisation and Storage, a promising technology with a large potential which can push Carbon Capture and Storage competitiveness.

In addition, the report shows the features of the new generation of coal-fired power plants in terms of flexibility for dynamic operation and grid stability, requirements increasingly needed to operate on grids with significant wind and solar generation.

The insights paper is available under www.iea.org/publications/insights/CoalvsGas_FINAL_WEB.pdf. For more information, contact Carlos FERNANDEZ ALVAREZ carlos.fernandez@iea.org.

9. Communication

IEA OPEN Energy Technology Bulletin: news from the IEA Energy Technology Network: http://www.iea.org/openbulletin/.

IAs on the IEA website: work is currently underway to make Implementing Agreements more visible on the IEA public website, and to update the IMPAG Delegates' pages.

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IEA DSM TASK 16:
Competitive Energy Services – Phase III

Energy Efficiency and Demand Response Services

Task Status Report

prepared for the IEA DSM ExCo meeting
in the Switzerland, October16th-18th, 2013

Task XVI
"Competitive
Energy Services"
www.ieadsm.org

Graz, Austria, September 2013

Legend, Synopsis and Authors

This report was developed within Task 16 "**Competitive Energy Services** (Energy-Contracting, ESCo Services)" of the IEA's Demand Side Management Implementing Agreement.

International Energy Agency
IA Demand Side Management (DSM)
Task 16 "Competitive Energy Services"
http://www.ieadsm.org

Task XVI
"Competitive
Energy Services"
www.ieadsm.org

Synopsis:

This is the 6-monthly **Task Status Report** of IEA DSM Task 16 "**Competitive Energy Services** (Energy-Contracting, ESCo Services)" - Phase III: "**Energy Efficiency and Demand Response Services"** to the Executive Committee of the IEA Demand Side Management Implementing Agreement to be included in the pre-meeting document.

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With contributions from Task 16 national experts
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IEA DSM Task 16 - Phase III builds on work, which was previously led by Graz Energy Agency. Thank you GEA!

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*The project partners wish to **explicitly thank the IEA DSM ExCo members of the participating countries** and their **financing partners** for their support.*

Table of Content

For a summary of the background and motivation, objective, and results of IEA DSM Task 16 please refer to the task work plan or the annual IEA DSM report.

1 Participating Countries in Phase III

Currently the following countries have confirmed participation in IEA DSM Task 16 – Phase III (in alphabetical order):

- ✓ Belgium
- ✓ Korea
- ✓ Netherlands
- ✓ Sweden
- ✓ Switzerland

Pending "maybes" have been expressed by Austria and Germany.

Request to ExCo members from the operating agent: Please remember to sign and send your official letter of participation for Task 16 to the IEA head quarters (a template is available from the Executive Secretary).

2 Structure of the Work and Subtasks

The proposed Task 16 Work Plan extension will continue to work with its well established structure and add demand response services as an additional subtask (depending on participation of Spain, who initiated this subtask). The five operational subtasks are:

1. IEA DSM Energy Services Expert Platform (ES-Platform, subtask 13)
2. Innovative and competitive Energy-Contracting Think Tank (Think Tank, subtask 14)
3. Demand Response services business models (DR, subtask 15)
4. Coaching of individual National Implementing Activities (NIAs, subtask 16)
5. Dissemination (subtask 17)

The following scheme illustrates the general structure and workflow of the task extension:

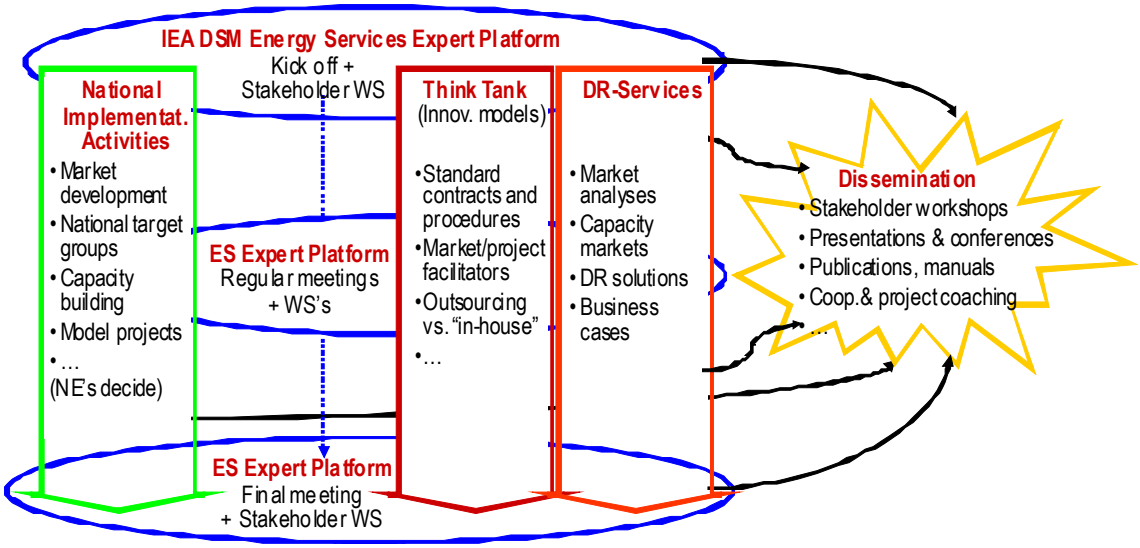

Figure 1 Task 16 - Phase III: Structure and work packages

In the left pillar, the national implementing activities (NIAs) such as market development and capacity building activities take place according to the individual needs and resources of the participating country. In the other two pillars, "Think Tank" and "DR-services", the experts will discuss new developments and elaborate innovative energy and demand response service and business models.

The IEA DSM Energy Services Expert Platform (ES platform) serves as the link between the two pillars, as the communication tool internally and externally and as the starting point for developing services like coaching and training for the outside world (towards a "Centre of Excellence").

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The results of Task 16 are disseminated in a series of stakeholder workshops, presentations at conferences, workshops and through publications. Additionally co-operations with international organizations and assistance services may be offered.

3 Accomplishments since last Report

During the last period the following activities have been performed:

- ✓ Subtask 13 – **Energy Service Expert Platform**
  - 14th experts meeting, was held in Toulon/Hyères, France from June 2nd-3rd 2013 (back to back with the ECEEE summer study). The main agenda items were discussion of national implementation activities, discussions on current Think Tank topics and dissemination activities. Holding the meeting back to back with ECEEE SS proved to be a fruitful environment for exchange.
  - Preparation of the 15th experts meeting, which will be held near Graz, Austria from October 23rd-25th 2013.
- ✓ Subtasks 13 + 16 – **Energy Service Expert Platform + Dissemination**
  - 14th Task 16 stakeholder workshop(s), were held in Toulon/Hyères, France on June 3rd 2013 in conjunction with the ECEEE summer study. The topics were 1. "Comprehensive Building Refurbishment Models" together with IEA secretariat, 2. "ESCo meets Behaviour Change" together with Task 24 and 3. "The Role of Facilitators for ESCo market development". Again, holding the workshops back to back and during ECEEE summer study proved to be a very fruitful environment for exchange.
  - Preparation of the 15th Task 16 stakeholder workshop, which will be held near Graz, Austria on October 24th 2013. The topic will be ",SmartEPC'- an Energy-, Comfort- + Maintenance Performance Contract".
- ✓ Subtask 14 - **Think Tank**:
  - Our joint paper of Task 16 experts: "ESCo Market Development: A Role for Facilitators to play", was published and presented at the ECEEE summer study in June 2013. It continues to receive attention and good feedback (even from North America).
  - The preparation of a publication on "Simplified Measurement & Verification in Combination with Quality Assurance Instruments for Energy Savings in ESCo Projects. Approaches and Examples" in cooperation with dena (German Energy Agency) is well on its way.
  - Comprehensive building refurbishment ('deep retrofit')– cooperation started with IEA ECBCS in their new Annex 61 in September

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2013. Task 16 will contribute business models and develop them further, building on its previous publication on the topic.

Results of the think tank work can be downloaded from the public Task 16 website (www.ieadsm.org/ViewTask.aspx?ID=16&Task=16&Sort=0).

✓ Subtask 15 – **Demand Response Services business models**

- Spain has decided to not participate, although Spain originally initiated this subtask. As a consequence other resources will need to be identified.
- Options are national activities planned in Austria and Slovenia, in particular a research proposal for a "hybrid virtual power plant for distributions system". Also the Netherlands (Yvonne Boerakker from DNV-Kema) is checking for resources. Thirdly, e7, GEA and Energetic Solutions have applied for research resources for this particular subtask in Austria. Final decisions on these proposals are still pending, but if at least two are successful, they will provide sufficient inputs to accomplish this subtask. Otherwise it will need to be postponed to a possible next phase of Task 16.
- *Ideas for other resources or cooperation opportunities welcome.*

✓ Subtask 16 – **Coaching of individual National Implementation Activities**

- Implementation of the individual national activity plans to develop energy service markets were followed up, the experts gave detailed presentations and exchanged good practices during the last platform meeting and through teleconferences in between meetings.

✓ Subtask 17 – **Dissemination**: Publications and presentations at various national and international conferences and seminars were given, e.g.:

- Task 16 members gave several presentations at ECEEE summer study (on ESCo Facilitators, SmartEPC …)
- Energy manager training for State Grid China on behalf of GIZ Germany: Investment grade calculation of energy service projects in June 2013
- Report on ESCo market development activities for South Africa
- Know how transfer and supervision of a start-up ESCo in Croatia
- Co-operation with other ongoing energy service projects intensified (IEA ECBCS – Mr. Rüdiger Lohse and IEA IETS Annex 16 Energy Efficiency in SMEs – Mr. Patrick Thollander, EESI 2020 - BEA) to share information and join forces
- Initiation and preparation of a country workshop in Switzerland on ESCo market development together with Markus Bareit

✓ Subtask 18 – **Management and Reporting**: Regular reporting

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4 Goals and work plan for the next period

For the next reporting period, the following activities are planned:

- ✓ Subtask 13 – **Energy Service Expert Platform**
  - Execution of the 15th experts meeting, which will be held near Graz, Austria from October 23rd-25th 2013. The main agenda items will be discussion of national implementation activities, discussions on current Think Tank topics and dissemination activities.
  - Preparation of the 16th experts meeting, planned to be held in the Antwerp, Belgium May 7th-9th 2014
- ✓ Subtasks 13 + 16 – **Energy Service Expert Platform + Dissemination**
  - Execution of the 15th Task 16 stakeholder workshop, near Graz, Austria on October 24th 2013. The topic will be ",SmartEPC'- an Energy-, Comfort- + Maintenance Performance Contract".
  - Preparation of the 16th Task 16 stakeholder workshop to be held in Antwerp Belgium on May 7th in cooperation with the EESI 2020 project on project and market facilitation topics.
- ✓ Subtasks 14 + 15- **Think Tank and DR Services business models**
  - Add short national perspectives on the Role of Facilitators to our paper "ESCo Market Development: A Role for Facilitators to play", and publish as IEA DSM Task 16 discussion paper
  - Finalization and publication of a paper titled "Simplified Measurement & Verification in Combination with Quality Assurance Instruments for Energy Savings in ESCo Projects. Approaches and Examples"
  - Start work on business models for comprehensive building refurbishment ('deep retrofit') in cooperation with IEA ECBCS Annex 61
  - DR-Services business models: Identification of other resources: e.g. from "hybrid virtual power plant for distributions system", Austria, Yvonne Boerakker from DNV-Kema, Netherlands and e7+GEA , Austria (c.f. short description in last section). Other ideas from ExCo members are welcome.
- ✓ Subtask 16 – **Coaching of individual NIAs**
  - Implementation of the individual national activity plans to develop energy service markets will be followed up, the experts gave detailed presentations and exchanged good practices during the last platform meeting and through teleconferences in between meetings.
- ✓ Subtask 17 – **Dissemination**: Publications and presentations planned at:

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- Publication of a Task 16 paper on 'Simplified Measurement and Verification approaches and examples'
- Presentation of an 'ESCo university' as a pre-conference workshop to the ESCo Europe conference 2014 in Madrid in January 2014
- 2nd Energy manager training for State Grid China on behalf of GIZ Germany: Investment grade calculation of energy service projects including provision of a detailed Excel tool, in November 2013
- Application for publication of the Integrated Energy Contracting Model in a peer reviewed journal (e.g. Energy Efficiency or Energy Policy)
- Continuation of know how transfer and supervision for a start-up ESCo in Croatia
- Continue co-operation with other ongoing energy service projects (IEA ECBCS Annex 61 – Mr. Rüdiger Lohse and IEA IETS Annex 16 Energy Efficiency in SMEs – Mr. Patrick Thollander, EESI 2020 – lead by BEA and 'Transparense' – lead by sEVEN) to share information and join forces

✓ Subtask 18 – **Management and Reporting** (in addition to regular work): no particular activities foreseen

5 Project Time Table

The project time table and current status is shown below:

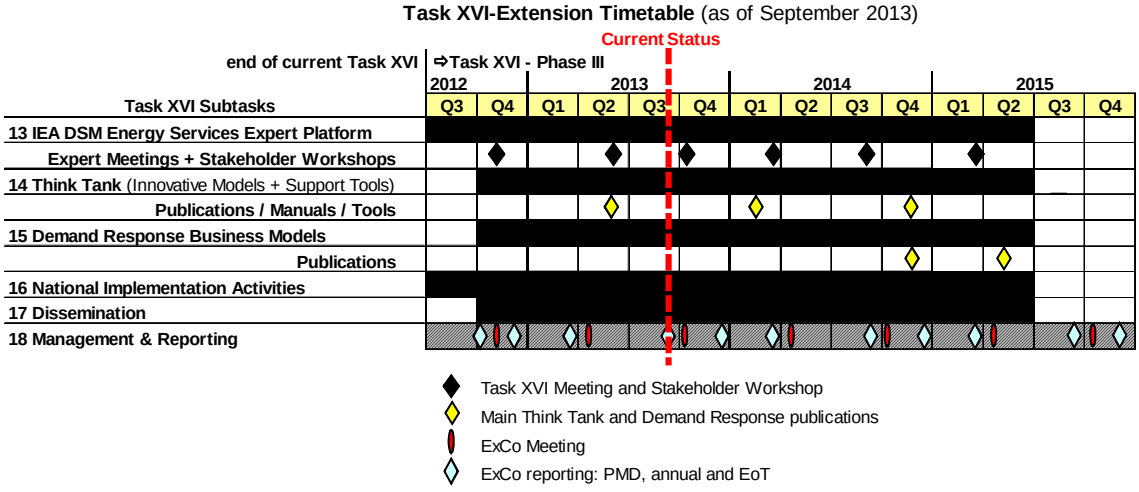

Figure 2 Task 16 time table

Time wise we have spent 14 months out of the 36 month project duration.

All scheduled events and reporting targets have been met.

6 Financial Report

The budget is based on five participating countries.

(Budget and cost accumulation by item in € excl. VAT as of September 2013)

Subtask	Total budget	Cumulative spending	% spent	Remaining
	€	€		€
13 Energy Services Expert Platform	**36.000**	**13.600**	**38%**	**22.400**
14 Energy Services Think Tank	**72.000**	**32.000**	**44%**	**40.000**
15 Demand Response ES Business Plans	**12.200**	**2.400**	**20%**	**9.800**
16 Coaching of National Implementation Activities	**12.800**	**4.400**	**34%**	**8.400**
17 Dissemination (Internat. + Nat.)	**13.000**	**4.400**	**34%**	**8.600**
18 Management & Reporting	**42.000**	**11.200**	**27%**	**30.800**
Subtotal	**188.000**	**68.000**	**36%**	**120.000**
Travel costs	**28.000**	**7.800**	**28%**	**20.200**
Printing&other	**9.000**	**1.800**	**20%**	**7.200**
Total	**225.000**	**77.600**	**34%**	**147.400**

Figure 3 Budget

After 14 months (out of the 36 month project duration) 34% of the budget has been spent.

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EnergInvest *(since 07/2010)*: www.energinvest.fr

Factor4 *(since 07/2010)*: www.factor4.be

Finland *(until 06/2009)*
Motiva Oy: www.motiva.fi

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Bureau of Energy Efficiency: www.bee-india.nic.in

Japan *(until 06/2009)*
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Korea *(since 07/2012)*
Korea Energy Management Coorperation:
www.kemco.or.kr

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Essent Retail Services BV *(until 06/2012)*: www.essent.nl

ESCOPLAN *(since 07/2012)*: www.escoplan.nl

Spain *(until 06/2012)*
Red Eléctrica de España: www.ree.es

Hitachi Consulting (until 06/2012):
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Swiss Federal Office of Energy SFOE: www.bfe.admin.ch

Contact details are provided at the inside of the cover.

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Task	**Document**	**Downloads**
Task 1 Subtask 8 - International Database on Demand-Side Management Technologies and Programmes	INDEEP Analysis Report 2000	87
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