ieadsm
energy efficiency

IEA Implementing Agreement Demand-Side Management Technologies and Programmes

Fourty Sixth Executive Committee Meeting

Pre-Meeting Document (PMD) - Part 1

iea Energy Technology Network

21 - 23
October
2015

Halifax
Canada

Contents

MATTERS FOR THE EXECUTIVE COMMITTEE

Document B

Secretariat Report

- Discussion at the Executive Committee meeting: Coordination opportunities between the DSM ETI and the IEA Secretariat – see pages 3-5.

Document C

Project Preparatory Committee (PPC) Report

- Approve the Report

Document D

Task 26 Multiple Benefits

- Approve the Work Plan and budget and subscribe to the Task as a participant (appoint Expert)

Document E

DSM University

- Approve the Task Status Update report

Document F

Concept paper: Big Data

- Discuss whether the objective is interesting
- Discuss how open/closed the information would be during the Task:
- Restricted to participants
- Non-participating countries: EXCO will pay if people in their country use products
- Free access for developing countries on request
- Clear indication of interest in participation
- Decide on a start now or decide at the next EXCO

Document G

Task 17 – Integration of Demand Side Management, Distributed Generation, Renewable Energy Sources and Energy Storages – Phase 3.

- Approve the Task Status Report

Document H

Task 17 – Potential Follow-Up Activities on Task 17

- Express interest in the concept

Document I

Task 24 – Phase II – Helping the Behaviour Changers

- Finalise Task 24 Phase I officially
- Approve Task Status Update Phase II

Document J

Task 16 – Innovative Energy Services – Phase III Energy Efficiency and Demand (end) Phase IV Life-Cycle cost; 'Deep Retrofit'; Simplified M&V; (Crowd)-Financing & ES Taxonomy (start)

- Approve Task Status Report

Document K

Task 25 – Business Models for a more effective market uptake of DSM energy services

- Approval of Task Status Update Report.
- Approval of the start of a H2020 proposal.
- Decide upon extension of the Task with 1 year with the joining of Norway and possibly the Netherlands. We would like to still do most of the work next year, but would require some time to arrange for a good catch-up of Norway and Netherlands, and would use the final months of the extension to work on dissemination, outreach, and starting up of additional subtasks.
- Approval of definition of new subtasks.

Document L

Programme Visibility

- Approve the Status Report

Document M

Task Zero

- Initiate Task ZERO and start invoicing USD 11,000/country as of 2016-01-01.

..PMD Part 2

Financial Report 2015 and proposed Budget 2016

- Approve the Financial Report 2015 and the proposed Budget 2016

Document N

Election of Chair and Vice Chairs

- ExCo Members are welcome to send in their nominations up and until 21 October COB

Document A

AGENDA

IEA Demand-Side Management Energy Technology Initiative
Forty Sixth Executive Committee Meeting
21 – 23 October, 2015, Halifax, Nova Scotia. Canada

TUESDAY 20 October 2015

07:30 – 17:00 2015 Bright Business Conference – Energy Efficiency: Leading by Example, Cunard Centre, Halifax

WEDNESDAY 21 October 2015

09:00 – 17:00 DSM Day – Venue: EfficiencyOne office: 230 Brownlow Avenue in Dartmouth, Nova Scotia

18:00 – 20:00 Operating Agents Meeting – Westin Hotel
Visibility Committee Meeting – Westin Hotel

THURSDAY 22 October 2015

Venue: EfficiencyOne office: 230 Brownlow Avenue in Dartmouth, Nova Scotia

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 Fifth ExCo meeting Minutes – Cape Town, South Africa	Distributed earlier
	1d. Status of the Implementing Agreement	
	1e. IEA Relations	
	– Secretariat news	DOC B
	– Contacts with possible sponsors/new participants – Rob Kool	
	– IA relations, BCG and ECG, – Rob Kool	
	1f. Report from the Project Preparatory Committee (PPC) – Rob Kool	DOC C
	1g. Operating Agents meeting report – Rob Kool	
10:00 – 10:30	Coffee break	
	2. NEW WORK	
10:30 – 11:00	2a. Task 26 on Multiple Benefits for Energy Efficiency – Catherine Cooremans, Université de Genève, Switzerland	DOC D
11:00 – 11:30	2b. Development of the DSM University – Hans Nilsson	DOC E
11:30 – 12:00	2c. Concept paper on Big Data – Harry Vreuls, RVO, Netherlands	DOC F
12:00 – 12:30	2d. Competitive Energy Services – Phase IV – Jan W, Bleyl, EnergeticSolutions, Austria	DOC J
12:30 – 13:30	Lunch	

3. CURRENT TASKS – LOAD SHAPE CLUSTER

13:30 – 14:00	3a. Task 17 – Integration of DSM with other Distributed Energy Resources – Phase 3 – Matthias Stifter, AIT, Austria	DOC G
14:00 – 14:30	Potential Follow-Up Activities on Task 17 – Matthias Stifter, AIT, Austria	DOC H

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

– Decide to initiate the new Task based on work done to date.
– 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.
– 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.
– Decide to pursue the subject in co-operation with other parties within the IEA or elsewhere
– Rejection (or moth-balling)

14:00 – 14:30	3b. Task 24 Closing the Loop – Behaviour Change in DSM: Helping the Behaviour Changers – Phase II. Task Status Report – Sea Rotmann, SEA - Sustainable Energy Advice, New Zealand – Ruth Mourik, DuneWorks, The Netherlands	DOC I
14:30 – 15:00	4. CURRENT TASKS – LOAD LEVEL CLUSTER	
	4a. Task 16 – Phase 3 – Energy Efficiency and Demand Response Services – Task Status Report – Jan W. Bleyl, EnergeticSolutions, Austria	DOC J
15.00 – 15:30	Coffee break	
15:30 – 16:00	4b. Task 25 Business models for a more effective market uptake of EE energy services. Task Status Report – – Ruth Mourik, DuneWorks, the Netherlands	DOC K
16:00	Adjourn	
19:00	Hosted Dinner	

FRIDAY 23 October 2015

09:00 – 12.00	5. SPECIAL SESSION – NEW DEVELOPMENTS AT THE IEA	
	5a. Briefing on IEA work	
	5b. Discussion of collaboration on Secretariat work	
	6. PROGRAMME VISIBILITY	
	6a. Programme Visibility Report Sea Rotmann – Sea Rotmann	DOC L
	6b. New website – Sea Rotmann	
10:30 – 11:00	Coffee break	
11:00 – 12:00	7. ADMINISTRATIVE MATTERS	
	7a. Task Zero	DOC M
	7b. Financial Report 2015 – Paul Atkins	PMD Part 2
	– Accountax Status Report	PMD Part 2
	– Status of Common Fund payments	PMD Part 2
	7c. Election of Chairman and Vice Chairs	DOC N
	7d. ExCo approval of Forty Seventh ExCo meeting in Stockholm, Sweden April 2015	
	7e. Decision on plans for the Forty Eighth ExCo meeting October 2016	
	7f. Plans for the Forty Ninth ExCo meeting April 2017	
12:00 – 13:30	Lunch	
13:30 – 15:00		
	8. OTHER ISSUES	
	Adjourn	

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 Executive Committee 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, Subtask 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 Subtask

Document B

REPORT FROM THE IEA SECRETARIAT

October 2015

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Information on recent developments within the IEA Secretariat

General IEA business

New IEA Executive Director, new vision for the IEA: On September 21st, 2015 IEA Executive Director (ED) Fatih Birol held his first all-staff meeting to discuss his vision for the IEA. In addition to strengthening the work the IEA does on energy security, the ED wants to modernize the IEA and make it a center of clean energy and sustainability. The ED sees energy efficiency as a priority for the Agency and wishes to see the IEA emerge into a globally-recognized center for energy efficiency policy analysis. Other issues of interest include sustainability and more work on issues such as the water-energy nexus and local air pollution. The ED is also keenly focused on non-member governments where many of the most important energy system issues rest over the coming years.

Implementing agreement meeting Sept 18, 2015: The IEA hosted a meeting with the Implementing Agreements (IAs). The ED's interest in IAs is two-fold: a) IAs offer a huge resource of expertise to the IEA and can contribute to the vision for the IEA to modernize into the global center of expertise for clean energy and sustainability and b) IAs offer access to non-member governments consistent with the goal of developing strong bridges between the IEA and all of the world's major energy players.

The meeting, "Preparing the next 40 years of multilateral energy technology collaboration," looked at ways to better promote the programme worldwide, particularly outside of IEA member countries. Participants also discussed which of their insights should be presented to governments at the IEA Ministerial meeting in November in Paris. That meeting, which will be chaired by US Energy Secretary Ernest Moniz, will highlight the 40 years of IEA work on technology research addressing energy and climate challenges, especially relevant as COP21 starts in Paris just weeks later.

The meeting included animated discussion on rebranding of the research network system, which many participants endorsed. Other suggestions from member and non-member countries alike addressed how to increase direct IA-IEA co-operation, particularly on communications, and there were calls for more inter-IA events as well as annual workshops to advance and elaborate recommendations made at the meeting.

COP-21 and IEA Ministerial

- **IEA Ministerial November 17-18, 2015:** The IEA Ministerial will be chaired by Dr. Ernest Moniz US Secretary of Energy. The theme for the Ministerial is Innovation for a Clean Secure Energy Future with the objective to highlight the power of advancing technology and innovation to i) shift paradigms, ii) lift limits on what is thought to be achievable and iii) lend momentum to progress toward energy security and clean energy goals. Over 20 ministers of energy will attend the Ministerial. The goal is to achieve a strong statement from Ministers in advance of the COP.

- **COP-21:** The IEA has never been more involved in a COP process. Some key activities being organized related to IEA-DSM area of interest are:

    - IEA day at COP-21 December 3rd which will focus on the analysis underpinning IEA's messages to COP 21.
    - A high-level energy event featuring speakers discussing challenging issues in decarbonisation December 10.
    - An efficiency event scheduled based on Energy Efficiency in Emerging Economies December 2nd.
    - The IEA is also supporting the Lima-Paris Action Agenda energy efficiency event December 7.

- Note these events are not finalized as of the writing of this report and are pending approval from IEA and COP-21 organizers.
- The IEAs involvement in COP21 could see various new streams of follow-up work which may call on IEA DSM research and broaden opportunities for engagement between the Secretariat and the IEA DSM.

New SPT Director: Kamel Ben Naceur

Mr. Ben Naceur was appointed the new director of Sustainable Policy and Technology September 1st, 2015. He has over 35 years' experience in the energy industry, having started his career with Schlumberger in R&D in 1980, where he was in charge of developing new oil and gas technologies. He then moved to senior management positions with Schlumberger in Africa, Europe, North and South America, Middle East and Russia. In 2008, Mr. Ben Naceur became Schlumberger's Chief Economist, based in Paris, responsible for the company's strategic outlook, before moving to Rio de Janeiro as President of the Schlumberger technology organization. In 2014, he became Tunisia's Minister of Industry, Energy and Mines. Mr Ben Naceur is co-author of 13 books and over 120 publications, and has received numerous awards and distinctions.

Raising awareness

2015 marks the 40th anniversary of the mechanism underlying the IEA Energy Technology Initiatives (formally organised through an Implementing Agreement). A number of activities are planned during the year to celebrate this milestone, culminating in in discussions at the IEA Ministerial (a new initiative, presentation of a video and the publication Energy Technology Initiatives) and COP21.

The new interactive Forum for IA participants – the Forum - is available for use. Key features include your IA's news items (e.g. webinars), best practice and an interface discussion forum. While originally designed for IAs, CERT and WP delegates also have access to the Forum. http://www.iea.org/techinitiatives/forum/

username: Forum
password: network

Energy Efficiency Unit work

1. Energy Efficiency in Emerging Economies (E4) Programme

Coordination opportunity: The EEU has begun organizing the 2016 training week in September 2015. This is an opportunity for IEA DSM members to assist with training opportunities.

The E4 programme has on-going activities in China, India, Indonesia, Mexico, South Africa and Ukraine with discussions on potential activities in Brazil, Thailand and Vietnam underway. Support requested from emerging economy governments continues to be very much in line with the IEA's analytical capabilities and is drawing on resources from the Energy Data Centre, the Energy Technology Policy Directorate and the World Energy Outlook Team as well as the Energy Efficiency Unit. Consistent themes include energy data collection and analysis to: track progress of energy efficiency measures at a macro and sector level; assess the impacts of individual energy efficiency policy measures; and project the potential for energy efficiency improvements.

There is also a high degree of alignment with the work of the Energy Efficiency Unit with the Energy Efficiency Policy Recommendations (EEPRs) playing an important role and the Energy Efficiency Market Report and multiple benefits work attracting a high level of interest.

The highlight for E4, since the March meeting, has been the **Energy Efficiency in Emerging Economies Training Week** that was held from 8 to 12 June 2015. This was the IEA's first training event dedicated to sharing experience with planning, implementing and evaluating energy efficiency policies in emerging economies. Consideration is being given to making the E4 Training Week an annual event. The objectives for the week were to:

- build technical expertise in the next generation of energy efficiency policy makers and their advisors;
- strengthen the relationship between the IEA and emerging economies; and
- facilitate exchanges among emerging economies.

Around 100 energy efficiency policy makers and advisors from 36 emerging and developing countries representing about 45% of the world's total final energy consumption took part. Participation was especially high from some of the largest energy-consuming countries China (8 delegates), Indonesia (8 delegates) and India (6 delegates). The training week also benefited from the experience of more than 30 trainers from a range of organisations:

- The first day of the training was a plenary covering cross sectoral themes including a presentation from Fatih Birol.
- On days two, three and four of the training week there were four sectoral work streams: buildings; industry; transport; and appliances and equipment. Each group had 20-30 participants.
- The last day was a plenary covering energy efficiency communication campaigns and the IEA Executive Director awarded the training certificates.
- The written evaluation of the training showed a high degree of satisfaction.
- A LinkedIn group has been established to keep the network of participants and trainers in contact with one another to continue to share their experience.

Other developments since the March 2015 meeting include the publication in English and Spanish of the Energy Efficiency Policy Recommendations brochure for the Latin America and Caribbean region; the publication (forthcoming at time of writing) of Energy Efficiency Policy Priorities Ukraine; and the development of the Secretariat's work on energy efficiency metrics in emerging economies, where the concept of "energy efficient prosperity" is being tested. The report on the Energy Efficiency Potential in South Africa that was discussed at the March meeting has also been completed.

In terms of Programme Management, since the last ExCo meeting the E4 Programme has been presented to the IEA Governing Board and the Programme Reference Group comprising Denmark, the

European Commission, Japan and the United States has met to discuss proposed and on-going activities that could form the basis for collaboration.

2. Energy Efficiency Market Report (EEMR)

Coordination opportunity: We are interested in cross-promotion opportunities of the EEMR and because it is free for IEA DSM members to distribute the report launch widely in their networks. We are also interested in promoting the report; if you can host or know of other launch events please extend an invite.

Coordination opportunity: Energy Efficiency Market Report 2016 is in early planning stages. We are interested in possible research, themes, analysis to include in the next report along with cross-linkages to IEA DSM work.

EEMR launches October 8, 2015 and, for the first time, it is a ***free*** publication from the IEA. The report focuses on quantifying some of the multiple benefits of energy efficiency such as improved energy security and avoided GHG emissions. As in previous years the report is in two parts, with Part 1 focusing on international analysis and themes, and Part 2 presenting information on energy efficiency activity in specific geographic markets. This year Part 1 includes chapters on the energy efficiency market in buildings (see 1e below) and the relationship between energy efficiency and electricity markets, as well as an opening chapter on the value of the returns generated by energy efficiency investments and a chapter presenting the latest results from a decomposition analysis based on the Agency's Energy Efficiency Indicators Database. The thematic chapters were informed by a technical experts' workshop held at the IEA on 16 March 2015. Part 2 differs from previous years by including chapters on markets in sub-national jurisdictions (Massachusetts, Paris, Seoul, Tokyo) and, as suggested by EEWP delegates at the March meeting, a number of country-level Energy Efficiency Market Snapshots which have been shared with the relevant member countries (Australia, Germany, Spain, Sweden and the United States).

EEMR 2015 Table of Contents:

1. Energy Efficiency Investment Returns and Market Outlook
2. Tracking energy efficiency progress
3. Efficiency market for buildings
4. Energy Efficiency in the Electricity System and the Outlook for Utility Efficiency Investments
5. Energy Efficiency Market Snapshots
6. Country profiles:

Brazil	Paris	Seoul
Massachusetts	Russia	Tokyo
Mexico	Saudi Arabia	United Kingdom

3. Evaluating the Multiple Benefits of Energy Efficiency Improvements (MB)

Coordination opportunity: IEA Secretariat interested in discussing with the IEA Demand Side Management on possible areas of interest.

The IEA held an evaluation workshop on 20 April 2015 in Paris, organised jointly with the International Energy Policy & Programme Evaluation Conference (IEPPEC). It brought together evaluation experts and policy makers to discuss the evaluation of the multiple benefits generated by energy efficiency measures in the buildings sector. The workshop has led to further work by participants to develop the conceptual

framework, the evidence base and outreach strategies ahead of the 2016 IEPPEC conference. The Secretariat has been involved in steering this work.

The Secretariat is looking to do further work on the estimation of multiple benefits in the buildings sector. This work could include developing methodologies and quantitative estimates in collaboration with other organizations, including the world Health Organization (WHO) on health benefits. The Secretariat has continued to present its work on multiple benefits, for example in relation to industrial energy efficiency at the Danish Embassy in Paris (to delegates from Dansk Metal).

4. Behaviour and Energy Efficiency

Coordination opportunity: Seek participation from Operating Agents of Tasks 24 and 25 in November workshop.

The EEU held its first workshop in this new work stream on behaviour 11-12 March 2015. The workshop featured a diverse range of presentations from policy makers, academics and programme delivery practitioners. The first morning of the workshop was held jointly with the International Partnership on Energy Efficiency Cooperation (IPEEC) and featured presentations from a number of non-IEA Member Countries (Mexico, China, South Africa and Russia). Later sessions focussed on the buildings sector, human interactions with energy efficiency technology, information campaigns, public-sector initiatives, and how to model energy consumption behaviour. Elizabeth Shove (Lancaster University) provided a challenging introductory presentation, and Ruth Mourik (IEA Demand Side Management energy technology initiative) provided the final presentation on monitoring and evaluation.

On 12-13 November 2015 the Secretariat will hold a second workshop in Paris focusing on behaviour and decision-making in businesses towards increased energy efficiency. The workshop will present current research and promising approaches, explore how new technologies can further support energy efficient behaviour and investments and discuss approaches towards ensuring persistence of change. The workshop will be attended by policy makers, industry representatives, researchers and experts in the field.

5. Buildings Energy Efficiency

The buildings energy efficiency work stream cuts across almost all of the other work streams covered in this paper (see 1a, b, c, d and h). A particular focus has been on the development of the buildings chapter in EEMR 2015. To create a solid dataset for analysis, a database of building energy efficiency investments was created. It is envisaged that this database will be further developed as the basis for a global database of energy efficiency investment across all sectors over the coming years. Other key areas have included work on space cooling and building codes in Mexico and preparing for “buildings day” at COP21 on 3 December 2015.

The Secretariat has also collaborated with the Energy Technology Perspectives (ETP) and World Energy Outlook (WEO) teams on buildings model data, resulting analysis and 360 degree reviews of publications and worked with the Energy in Buildings and Communities (IEA-EBC) energy technology initiative in a desk officer capacity, with the goal for increase collaboration between the technical tasks of the IEA-EBC and the policy work of the IEA Secretariat.

6. Industrial energy efficiency

Coordination opportunity: Support in disseminating the SME policy pathway report expected to be available end of November.

The Secretariat is interested in suggestions and any ideas for future possible collaboration/joint work in the area of business or industrial energy efficiency.

The Secretariat has progressed work on the Policy Pathway on promoting energy efficiency in SMEs. It is expected that the publication will be finalised and published by the end of November/early December 2015. The Secretariat will in 2016 follow up with promotional work to ensure a broad distribution and uptake of the Policy Pathway.

The Secretariat will support the work on industrial energy efficiency for the 2016 Energy Technology Perspectives and Tracking Clean Energy Progress. The Secretariat is organising a session on networks to promote industrial energy efficiency in the joint IEA – IPEEC meeting on 16 September 2015. The Secretariat is continuing its outreach activities by presentations on and discussions about industrial energy efficiency in relevant fora (e.g. the Institute of Electrical and Electronics Engineers meeting, European textile industry association conference). The Secretariat is developing ideas for new projects in the area of energy efficiency in industry and businesses to be further discussed.

7. Appliance and Equipment Efficiency: Network standby

As part of the G20 Energy Efficiency Action Plan, the Secretariat has, together with the UK government, led a task group on networked devices. Two workshops were held in May (at the IEA 4E ExCo meeting in Copenhagen) and in June (at the IEA with industry representatives present). As a result, the task group has submitted a technical report and recommendations for further work in this area ahead of the November G20 meeting in Turkey. The work stream has resulted in a network of more than 300 policy makers, experts and industry thereby forming a good basis for continued work in this area.

Following the work on More Data, Less Energy (2014), further potential areas are being explored for future work with a particular focus on the energy efficiency aspects of the Internet of Things.

The Secretariat will also organise in December 2015 (preliminary date) a workshop on how appliance standards, labels and policy compliance can be supported by the use and development of product registries, new technologies (such as QR codes for labels), novel ways of gathering data and information sharing mechanisms. The Secretariat is continuing to liaise with relevant organisations such as the International Telecommunications Union, the International Organization for Standardisation, the International Electrotechnical Commission, the IEA energy technology initiative on Energy Efficient End-use Products (4E) and SEAD (Super-efficient appliance and equipment Deployment) initiative.

8. Databases: Energy Efficiency Policies and Measures Database (PAMs) and Building Energy Efficiency Policies (BEEP)

The main focus of the Secretariat is now on consolidation and improvement of the content in the Policies and Measures database (PAMs), the two-year programme of more substantial revisions having come to an end. The team is consolidating the significant progress made over the past two years by testing and refining existing features and seeking and responding to user and IEA Delegate feedback. For example, in the last review round, a combined review of PAMs and the Building Energy Efficiency Policies database (BEEP) was distributed, and a new Word format was piloted. Revisions have been made to the BEEP database structure, including a new interface (www.iea.org/beep/), search function, data input template, and input process based on the twice a year PAMs review process. Work is continuing on the quality and depth of data included in the database on building policies globally.

Further improvements to PAMs being investigated include the possibility of better summary information by country, incorporation of Intended Nationally Determined Contributions, updates to the search categories and streamlining of the Content Management System, the possibility of new engagement with non-IEA countries, short videos to explain how to use PAMS, an online user survey, and refinements to the visualisation aspect. To pursue these enhancements, new resources may need to be identified.

9. Energy Technology Perspectives 2016

The Energy Technology Perspectives (ETP) Project aims to provide information and advice to decision makers on the potential of technology to contribute to policy and business objectives. The ETP analysis focuses on the status and outlook for current and future energy technologies and on identifying what actions can accelerate technological progress. The 2016 ETP edition will focus on urban energy systems and their role in fostering global and national sustainable energy transitions. It will analyse how local and national energy policies can be more effectively aligned so that cities can meet their sustainable development objectives while maximizing their contribution to national energy policy objectives of environmental sustainability, energy security, and economic development.

ETP 2016 will look at the interaction between different components of urban energy systems, notably transportation, buildings and urban energy supply options, and how energy technology and policy responses can help deal with growing urban energy use. By looking at how planning for urban energy services can help meet multiple policy objectives, the ETP analytical framework will seek to identify cooperation mechanisms and opportunities between local and national governments for each to meet their respective goals. As was the case for previous ETP editions, ETP 2016 will contain specific analysis on one of the IEA's key partner countries, and this year the analysis will be focused on Mexico, and how local actions can help Mexico achieve its ambitious energy transition plans.

With the work on urban energy systems on ETP 2016, we aim to:

- Estimate current urban energy demand, urban energy supply and its technical potential with the ETP model[1] as a basis from which to gauge how shifts in urban energy systems could impact national energy policy objectives;
- Estimate the potential for energy demand reductions and distributed generation in urban energy systems under different scenarios so as to assess the urban contribution to national goals related to climate change mitigation (with a break-down of GtCo2 avoided from different options) and adaptation, as well as energy security. This analysis will include an assessment of the different urban options (e.g., district heating, higher shares of motorized and public transport, etc.) that can be effectively tapped by local policy-making to realize this potential;
- Analyze which innovative policy and finance mechanisms can be disseminated at the local level and how a more effective integration of local and national decision-making can help achieving national energy policy objectives.
-

10. Publications

The IEA Publication programme and launch dates can be found below:

Publication	**Launch**
Latin America & Caribbean Energy Efficiency Policy Recommendations (English and Spanish)	August 2015
Energy Efficiency Policy Priorities Ukraine	September 2015 (forthcoming)
Energy Efficiency Market Report 2015	Q4 2015
Policy Pathway – Small to Medium Enterprises	Q4 2015

[1] The 'ETP model' is composed of four sector-specific models: three demand models (buildings, industry, and transportation) and the supply model.

Document C

PROJECT PREPARATORY COMMITTEE (PPC) REPORT

April 2015 – September 2015

The PPC consists of the Chair and Vice Chairs, the Advisor, the Chair of the Visibility Committee and the Executive Committee Secretary. The IEA Desk Officer attended the meetings as well.
The PPC had two formal telecom meetings in the past six months. In addition, a lot of time was spent including on telecom meetings which were organised to get the new website up and running.

The following topics were discussed:

Direction of IEA DSM

The IEA Secretariat under the new Executive Director Fatih Birol is going to significantly step up collaboration with IAs/ETIs. On September 18 he is meeting with all ETIs and the Secretariat. We'll discuss the outcome in Halifax.

Italy – the Executive Committee alternate member Antonio Capozza has retired after serving DSM for many years both as alternate and Operating Agent. He left us with some critical remarks on the direction in which DSM is heading. Italy would like more emphasis on technology. The Italian Executive Committee member Walter Bruno Grattieri underlined this desire. As technology is a part of our work, at the moment in Task 17, we do invite new ideas in this direction to be brought forward to the Executive Committee. Of course this invitation goes out to all involved.

Website

Sea and Anne worked closely together with our new website designer/provider Weber Web. Our previous provider Solstice collaborated fully to get a smooth transition. There are still minor details to be resolved, but the most important issue that remains is the input from our Executive Committee members and Operating Agents, including regularly updating Tasks, uploading new publications and providing engaging content for the site.

All were asked to promote our new website.

Communications

Within the framework of the 40 years of the ETI network the IEA week offered a week for each ETI. The DSM week passed without announcement, so an opportunity was lost. The Desk Officer will look at an opportunity for further focus.

DSM was highlighted at the EEWP meeting on 15th of September, and we will discuss what opportunities this may present. At least there was a lot of interest for multiple benefits analysis. The Secretariat is organising a behaviour workshop in November and Task 24 was invited to help shape the agenda and partake.
Better communication is necessary – how to make it better? We need a discussion at the Executive Committee meeting in Halifax as we still do not have enough engagement.

(New) Work

Big data – Harry Vreuls is working on a proposal for a completely new way of running a Task. This will be discussed in Halifax.

Task 26 – Multiple benefits has been much more defined. The proposal and the option to collaborate with the IETS ETI has been discussed in a number of (telecom) meetings. The Operating Agent Catherine Cooremans, together with Hans Nilsson have produced a proposal that clearly shapes the work and outlines the collaboration with IETS and the IEA Secretariat. This is to be discussed at the Executive Committee meeting.

Task 24 is collaborating with 4E on a potential way to get Australia into the DSM ETI. DECC loves Task 24 but may get dissolved so can't fund any Tasks right now. DOE is working on an approval as soon as PG&E grants co-funding for Task 24. Ireland also expressed interest in joining the behavioural work.

Contacts with countries

China:

- Benoit Lebot of IPEEC to team up to approach China – possible opportunity with IEA EEU and China ERI project under 4E. Tyler will follow-up.
- China – Philippe Zhang from the Copper Association. Tyler to update on project with 4E.

Belgium has asked for a presentation of DSM in October, the Chair will go there.

South Africa ran into financial problems again, and aren't able to sign up for DSM at the moment, Barry Bredenkamp of SANEDI will stay in touch and continue to look for opportunities.

The host of our Halifax Executive Committee has signed up officially now, and we are waiting for the CERT approval. We are convinced they will be a full Sponsor at our first 2016 meeting.

TASK 26/ANNEX 19 – THE MULTIPLE BENEFITS OF ENERGY EFFICIENCY

Background

The easiest, quickest and cheapest way to reduce energy consumption and to decrease greenhouse gases emissions is to improve energy efficiency. The IEA energy efficiency market report 2014 confirms energy efficiency's place as the "first fuel": "Avoided energy use was larger than the supply of oil (1,202 Mtoe), electricity (552 Mtoe) or natural gas (509 Mtoe) in 2011; these savings equate to 59% of total final consumption in the 11 IEA member countries that year"[2]. The IEA has also shown with the "Energy Efficiency Scenario" (World Energy Outlook 2012) that global warming could almost be limited to 2 degrees centigrade by economically profitable efficiency measures alone if applied globally.

However an under-investment in energy-efficiency — an "energy-efficiency gap"— is observable in all countries. Public policy efforts to curb energy consumption and greenhouse gases emissions have often obtained insufficient results and there is still a significant potential to improve energy performance in all sectors of energy consumption3. With regard to businesses (in industrial facilities and tertiary buildings), this situation is due to several "barriers", the most important being that businesses do not consider energy or energy use as a contributor to their competitive advantage. In other words they do not perceive the strategic character of energy-efficiency investments.

In 2014, in an effort to activate the huge untapped potential of energy-efficiency, the IEA issued a report on the "Multiple Benefits of Energy Efficiency" (MB). MB of energy efficiency include all the benefits entailed by new equipment which are not energy benefits (i.e. energy savings translated into monetary savings) in and of themselves. As emphasized in the IEA report, "identifying the multiple benefits that may be linked to energy-efficiency measures in industry could enhance the business case for action".

Similar to energy benefits, multiple benefits of energy efficiency (MBs) may translate into financial benefits for the investor. According to IEA literature review, the monetary value of NEBs could be in the range of 40% to 50% of the value of the reduced demand of energy per measure and they may lower energy-efficiency project paybacks by more than half.

Often-observed examples of NEBs include reductions of maintenance cost, increases in workplace comfort or safety (for instance when an old oven is replaced by a new, better insulated one), increases in industrial productivity (due to lower production time or a reduction of the rejection rate), and improvements in product quality. A reduction in GHG emissions is another frequently-observed NEB of an energy-efficiency project.

Most authors in the field (Finman and Laitner, 2001; Hall and Roth, 2003; Lilly and Pearson, 1999; Lung, et al., 2005; Pye and McKane, 2000; Worrell, et al.; 2003) agree on the following categorization of NEBs in businesses (all sectors included):

- **Production** (for example, increased production and production reliability, improved product quality, increased equipment life, shorter process cycle time, reduced raw materials use);
- **Operation and maintenance** (for instance, reduced maintenance, lower cooling requirements, reduced labor requirements, reduced need for engineering controls);
- **Working environment** (for instance, increased worker safety, reduced noise, improved air quality, improved temperature control, improved lighting);

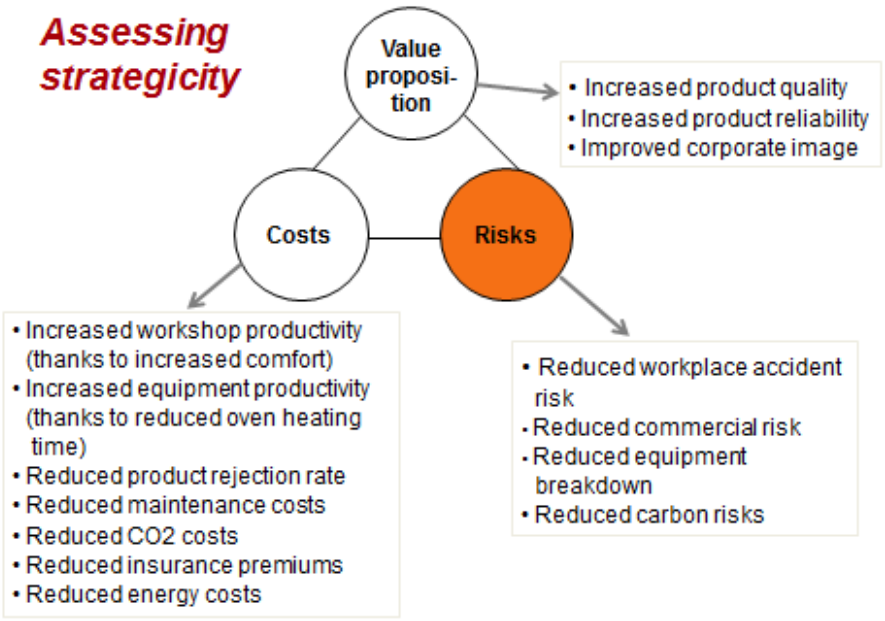
[2] IEA, Energy Efficiency Market Report, 2014, p. 16.

[3] According to the International Energy Agency, if current trends continue in the years to come, two-thirds of the economic potential to improve energy-efficiency will remain untapped until 2035, including 55% of the energy efficiency opportunities in the industrial sector (Philippe Benoit, Several IEA strategic actions to increase energy-efficiency, EEMR 2015 and Multiple Benefits, European Council for an Energy-Efficient Economy (ECEEE) workshop, Brussels, October 21, 2014).

- **Waste** (for instance, reduced waste water, reduced hazardous waste, use of waste fuel, heat, gas, materials reduction);
- **Emissions** (for instance**,** reduced CO, CO_2, NO_x, SO_x emissions);
- **Other** (improved public/corporate image, improved worker morale, increased sales level).

A further way to classify Multiple Benefits, speaking a more convincing "business language", is to analyze their contribution to businesses' competitive advantage in its three components: 1) the value proposition a firm offers to its customers in its products, 2) the costs borne and 3) the risks borne to create this value proposition. As an example, Figure 1 lists the multiple non-energy (and energy) benefits of energy efficiency in an industrial bakery:

Figure 1. Multiple benefits of energy efficiency for an industrial bakery



The full benefits of energy efficiency are seldom taken into the calculations, partly because they are hard to quantify, and therefore easily underestimated, and partly because economic analysis usually shuns benefits such as health, comfort, security, convenience etc.

Identifying and assessing NEBs is not an easy matter. "Hundreds of different benefits for industry have already been identified in past studies and surveys of energy efficiency project implementation, making it challenging to produce a definitive list of the most important ones" (IEA, 2014:134). "Because so few studies have been undertaken in this area, methodologies for quantifying wider benefits from energy efficiency measures in industry are still at the inception stage" (IEA, 2014:137). NEBs vary in terms of the time horizon in which they occur, as well as in terms of their measurability (which has to be made in physical, monetary and strategic terms). In addition, NEBs are not constant in time (as equipment efficiency usually decreases with time). All this complicates NEBs assessment.

NEBs can be identified upstream (to inform energy-efficiency investment decisions) or downstream (after investment decision-making, in a retrospective analysis). It seems that most NEBs reported have been found incidentally, i.e. *ex post* after implementation of energy-savings measures. To reinforce the business case of energy efficiency and increase acceptance of energy-efficiency investments, a method is needed to identify and analyze NEBs upstream, i.e. *ex-ante* in early analyses of projects (energy audit analyses, technical, financial and strategic analyses), and to include them in investment calculations.

NEBs pose different types of challenges:

- **Methodology**:
  - a methodology is needed to categorize NEBs (existing categorization is still too vague) and to assess them ex ante, at the beginning of projects, along different perspectives (technical, human, financial, strategic);
  - this methodology must be capable to take into account NEBs time variations and measurability requirements.
- **Data**:
  - In order to inform practitioners and decision-makers, reliable data must be identified and collected (when possible) throughout industry worldwide;
  - data collected must be anonymized and organized in a global public data base.
- **Training & communication:**
  - a convincing way to communicate about NEBs towards businesses and policy-makers has to be developed and trained

When multiple benefits are included in the strategic and financial evaluations of energy-efficiency investments, these investments look much more attractive to decision-makers.

This is why developing better tools for quantification and allocation of the MB of energy efficiency was identified in IEA DSM strategic planning as one "important area for work"[4].

In their 45th meeting (Cape Town, 26-27 March 2015), the Executive Committee members of the IEA Demand Side Management (DSM) Energy Technology Initiative unanimously decided to start Task[5] 26 "Multiple Benefits of Energy Efficiency", in order to take further the ground-breaking work of the IEA 2014 MB report. Industrial Energy-Related Technologies and Systems (IETS) Energy Technology Initiative had the Multiple Benefits Annex idea approved by a majority of its 20th ExCo (Paris, 12-13 May 2015).

It is therefore suggested by Rob Kool, chairman of DSM and Thore Berntsson, chairman of IETS to create a new DSM-IETS joint project "Multiple Benefits of Energy Efficiency" (Task 26 for DSM, Annex 19 for IETS).

Based on the Task/Annex Definition Meeting(s) of March 13, of Sept. 1 and of Sept.23, 2015, a Task/Annex Work Plan, a Task/Annex Information Plan and a description of the Resources needed, are submitted for approval at the 46th meeting of the Executive Committee members of the IEA DSM Energy Technology Initiative (Halifax, 22-23 October 2015) and at the 21st meeting of the Executive Committee members of the IEA IETS Energy Technology Initiative (Vienna, November 17, 2015).

Objectives and Scope

In close partnership with other Energy Technology Initiatives, Task 26 / Annex 19 should work in two main directions in order to make MBs operational and applied in DSM activities:

- Deepening the knowledge about issues and actors concerned and do so in a way that takes into consideration different applications in different countries and different planning environments, in a way relevant for applications locally.
- Improving quantification of multiple benefits based on real examples.

[4] http://www.ieadsm.org/strategic-plan/
[5] A "Task" in DSM terminology is called an "Annex" by IETS

The DSM-Programme is well situated to take on the supervisory task “Multiple Benefits in Action” and to do so in co-operation with other relevant IEA Agreements / Energy Technology Initiatives, with a leading role for IETS regarding process industries (see next page for more details).

As suggested by Hans Nilsson (see the 45th DSM ExCo minutes, p. 14), Task 26 would have a supervisory role, in collaboration with IEA Secretariat and IETS. Sub-tasks would be outsourced to ETIs, with which a close collaboration would be organized on their topics of competences.

"The overall work should cover all aspects of MBs as laid down in the IEA report[6] ", i.e.:

- Macroeconomic
- Public budget
- Health and Well-being
- Industrial sector
- Energy delivery

However, two important aspects must be pointed out:

1) purely macro benefits (such as macroeconomics impacts and public budget impacts at national level) have to be assessed at a global level, which seems to be out of the scope for DSM. In addition, energy delivery is firstly a supply and not a demand-side issue.

2) IEA Secretariat and IETS focus on the secondary sector and, within this sector, on energy-intensive industries (i.e. "process industry", including refineries, bulk chemicals, iron & steel, pulp & paper, cement, food & beverage).

Therefore IEA DSM Task 26 should focus on three main MB categories:

- MB for municipalities: impact on local public budget of energy-efficiency projects in public buildings and facilities, heating installations/schemes, sewage treatment plants, municipal lighting, transport, etc.
- MB for business sector, with an enlarged perspective on industries businesses including process and non-process industries, as well as commercial and administrative activities and SME. This approach would enable to cover, in an integrated perspective, all for-profit activities.
- Health & well-being benefits for organizations (municipalities and businesses).

Within MB for business sector, IEA IETS Energy Technology Initiative would be leading the work on the important category of MB in process industries. The types of industry to be included are iron and steel, chemical, petrochemical, pulp and paper, cement and large food industries. A new type of industry, emerging now and in the mid-term future, is large biorefineries. They can be a stand-alone type of industry or, probably mostly, integrated with one of the industry types listed above. The MBs of biorefineries are several. They are so far not fully understood or quantified. Hence, also for this new type of industry, economic consequences of some MBs are not taken into account in industrial decision-making.

Smaller improvements in the energy system in these are done on a continuous basis. However, in these types of industry, larger energy efficiency measures are in most cases implemented in connection with larger process changes, revamping or renewal of major equipment, etc. Such planned larger process changes are done relatively seldom, typically between every 3rd and 6th year, and are subject to strategic planning. Energy efficiency investments, as a part of -or integrated with- larger process changes, have been considered more as -long-term- strategic investments recently, due to changing conditions regarding energy prices and future probable policy instruments on GHG emissions. This creates new opportunities and importance for energy efficiency and MBs in industry.

Due to the connection with large process changes, MBs must be identified and quantified at the time of decision for doing the large changes, i.e. long before the actual implementation takes place. This makes work with MBs in process industries very time-sensitive. Furthermore, large energy efficiency measures in connection with process measures have a projected service life of many years, typically from 5 up to 30 years. The quantification of MBs must therefore in many cases take into account possible developments

[6] IEA (International Energy Agency) (2014). Capturing the multiple benefits of energy efficiency. OECD/IEA, Paris

with time of surrounding energy systems (e. g. the electricity grid), energy prices, policy instruments and other parameters influencing the quantification of MBs in a time perspective. This means that future market scenarios must be used for the quantification of some MBs. In conclusion, although many types of MBs are known in the process industry types, methods for quantification of some of them are unknown/not used and therefore not taken into account today in industrial strategic decision-making.

Table 1 describes in details the scope of the project and defines main responsibilities and possible partnerships with IEA Secretariat and ETIs. ETIs could collaborate with Task 26 / Annex 19 on their topics of competence. This collaboration would have the additional advantage to spread interest and knowledge regarding MB across IEA and its partners. The approach described in table 1 gives IETS the lead on the work to be done on MB in process industries, while DSM would lead on the other topics, as suggested by Hans Nilsson. An overarching unified conceptual approach would however be applied to all MBs categories, using the "strategicity conceptual framework" (Cooremans, 2011, 2012, 2015).

Table 1 - Identification of MB categories and responsibilities

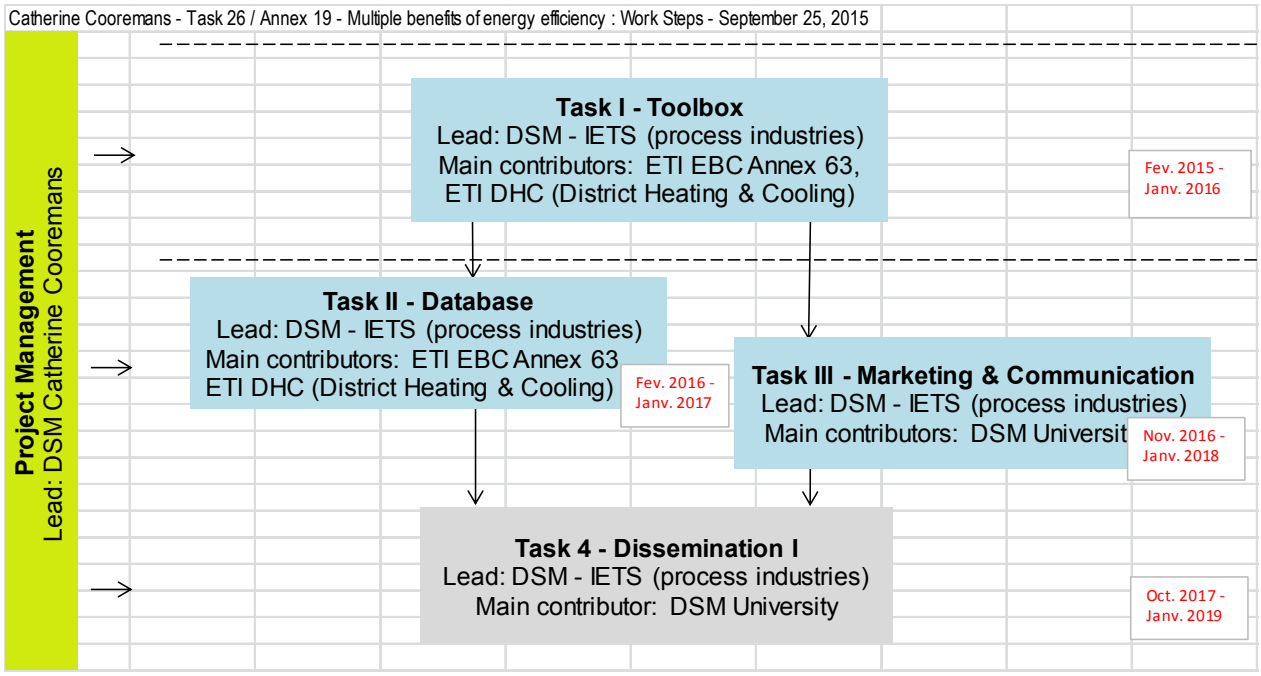
Catherine Cooremans - Annex 26 - Multiple benefits of energy efficiency : categories/sectors - August 31, 2015

MULTIPLE BENEFITS CATEGORIES			
IMPACTS ON:	TARGETS/FOCUS	MAIN RESPONSIBILITY	PARTNERS
LOCAL PUBLIC BUDGET	MUNICIPALITIES	DSM	ETI EBC Annex 63 (Implementation of Energy Strategies in Communities) ETI DHC (District Heating & Cooling)
BUSINESS SECTOR	INDUSTRIAL SECTOR:		
	- Process industries (eg food & bevarage, pulp & paper, foundries)	IETS	DSM
	- Non-process industries	DSM	IETS
	- SME	DSM	IETS
	COMMERCIAL SECTOR	DSM	
	(eg general stores, hotels, parking lots)		
	ADMINISTRATIVE SECTOR	DSM	
	(eg banks, insurances, data centers)		
HEALTH & WELL-BEING	Impacts on businesses & municipalities	DSM	IEA Secretary (IEPPEC)

Workplan

The Participants shall share the coordinated work necessary to carry out the work required according to the proposed workplan (see details in annex 1). .
The objectives shall be achieved by the following task-sharing activities:

Table 2 – Work Steps



As shown in Table 2, the project runs in four steps: 1) Task one is dedicated to conceiving the MB Toolbox; 2) Task 2 is dedicated to the MB database; 3) Task 3 focuses on marketing (marketing plan; website and social networks presence; tools packages) and communication; 4) Task 4 is mainly concerns the organization of workshops and seminars.

Target audience and benefits

Multiple benefits of energy efficiency investments offer a way to overcome barriers to energy efficiency. They not only improve the profitability of the projects but, more decisively, they raise the strategic character of energy-efficiency investments for businesses and municipalities. Therefore they significantly improve energy-efficiency projects attractiveness for decision-makers inside and outside these organizations. In other words, to consider all major MBs and to quantify them will most probably influence decision-making in industry and municipalities with regard to energy aspects in investment situations. Generally Task 26 / Annex 19 achievements will raise the business case of energy efficiency and thus will contribute to improving energy-efficiency and energy performance of organizations. Table 3 describes the benefits of the project for each target audience.

Table 3 – Target audiences and benefits

Catherine Cooremans - Task 26 / Annex 19 target audience and benefits - 26 sept. 2015

TARGET AUDIENCE	TASK 26 / ANNEX 19 BENEFITS
Public programmers	- Task 26/Annex 19 provide them with better tools to include MB in energy-efficiency programmes. - Energy-efficiency public programmes obtain better results (in terms of reduced energy consumption by users). - Energy-efficiency public programs become more attractive to upper decision-makers.
Energy advisors (engineering consultancies, ESCOs)	- Task 26 / Annex 19 provide them with better tools to evaluate and quantify MB *ex ante* , i.e. at the beginning of energy-efficiency projects or audits. - Their energy-efficiency projects become more convincing to their customer organizations (as sound strategic and financial analyses enlarge the usual technical approach of evaluations and thus their analyses look more attractive to organizations top management). - Their projets obtain better results (in terms of reduced energy consumption by users).
Academics	Task 26 / Annex 19 provide them with a unified and coherent theoretical framework to analyze energy-efficiency projects (optimization or investment) *ex ante* or *ex post*.
Energy users (businesses and municipalities)	- They adopt more energy-efficiency projets (presented by energy advisors). - They become more competitive thanks to improved value proposition (to their own customers, which translates in higher sales), decreased costs (mainly non-energy costs), and decreased risks.
The energy efficiency and carbon financial communities	- Task 26 / Annex 19 will enable these communities to have reliable figures, translated into classical investment calculations, regarding profitability of investment calculations. - Quantified MB could be added in economics models of climate change, thus lowering the cost of climate change mitigation.
Policy-makers	- Climate change mitigation costs are significantly reduced by including MB in the economic analysis as demonstrated by economic modelling. - Policy-makers become less relultant to promote stringent climate change mitigation policies.
The society and the environment	- Task 26 / Annex 19 contribute to resources conservation, climate change mitigation, air-quality improvement, public health improvement, security of energy supply, etc.

Deliverables

The **compulsory deliverables** of Task 26 / Annex 19 are:

- Final report of the Task/Annex according to template
- A joint Task/Annex public Website
- Progress reports to the DSM/IETS ExCos four times annually for publication in the Newsletter
- Report to the DSM/IETS Annual report
- Text and pictures to a 2-page popular scientific summary of Annex results to be freely disseminated

Further deliverables[7] of Task 26 / Annex 19 Multiple Benefits are:

- TOOLBOX (Task I)
  - Identification of multiple benefits for each type of investment or optimization measure in each business segment and municipalities, based on 1) literature review; 2) experiences from earlier and on going work with energy efficiency and MB:s in participating organisations; 3) discussions with technical experts (i.e. experts in lighting, cooling, refrigeration, industrial processes, etc.) in and outside organizations
  - Identification of short-term MB:s and MB:s needing a more long-term approach
  - Integration with works being done in the climate change field (i.e. ancillary benefits or secondary benefits of climate change mitigation)
  - Identification of methods/tools for quantification of major MBs in municipalities and in the business sector (process industry to be analysed by IETS and included in the DSM tool box)
  - Development of analytical tools to identify and quantify MBs ex ante (i.e. at the beginning of energy-efficiency projects) in different business activities and under different scenarios and circumstances, and to describe them in energy, operational and strategic terms
  - Development of a communication tool for businesses' internal staff, consultants advising them and public programmers to be used to present MBs in a common and convincing way to decision-makers.
  - Development of a financial spread sheet to properly include energy benefits and MBs in investment appraisal
  - Development of a user's manual to facilitate comprehension and use of the Toolbox by practitioners (engineers in and outside organisations).
  - Report to ExCos
- DATABASE (Task II)
  - Development of a Questionnaire for harmonized data collection in the different organizations / countries
  - Establishment of a network of experts to collect high quality data (based on real examples, experiences and figures)
  - Design of a Database organized by business activity & municipality type, energy-efficiency measure type, geographical location
  - Collection of data in participating Member States using the Questionnaire
  - Statistical analysis of the data collected
  - Report to ExCos
- MARKETING & COMMUNICATION (Task III)
  - Development of a template for workshop and webinar training
  - Development of MOOC (Massive Open Online Course), in collaboration with DSM University
  - Development of Task 26 / Annex 9 social network page and social network presence
  - Communication on the MB of energy efficiency and on their contribution to activate the untapped potential of energy efficiency to public programmers and policy-makers, as well as to the energy efficiency and climate change financial community

[7] Please refer to the Workplan in annex for more details.

- DISSEMINATION (Task IV)
    - Organization of three one-day "Toolbox Training" sessions in each participating Member State to enable engineers to take ownership of the MB toolbox
    - Organization of webinars and MOOCs, in collaboration with DSM University.
    - Final report to ExCos.

Funding

(a) Working Meetings. The working meetings shall be hosted in turn by the Participants. The costs of organizing and hosting meetings shall be borne by the host Participant.

(b) Publications: The cost of publishing the Final Report and summary assessments described in paragraph 6 above shall be equally shared by all the Participants.

(c) Individual Financial Obligations. Each Participant shall bear all the costs incurring in carrying out the Task activities, including reporting and travel expenses. Additionally, each Participant shall make a direct financial contribution to the Operating Agent to cover co-ordination and report preparation expenses and other Annex-related (e.g. workshop) costs.

The tables on the next pages show the fees per participating country, under two scenarios: scenario 1 is based on an assumption of 10 participating countries; scenario 2 is based on an assumption of 5 participating countries. Each Participant's fee shall be paid annually, not later than 4 months after the start of a new working year in the project.

Scenario 1 would result in total fees, per participating country, of 228 working days (WD) and 17,050 US$ (travel costs) over the 3-year life of the project (3 years); Scenario 2 would result in total fees, per participating country, of 209 working days (WD) and 14,300 US$ (travel costs) over the 3-year life of the project.

Table 4 – Scenario 1 forecast Budget – 10 participating countries

Catherine Cooremans - Task 26 / Annex 19 - Multiple benefits of energy efficiency - forecast budget - Sept. 25, 2015

DSM-MBs BUDGET	Scenario 1 : 10 participating countries						
RESOURCES	TASK 1 TOOL BOX		TASKS 2 & 3 DATABASE MARKETING		TASK 4 DISSEMINATION		TASKS 1-4 TOTAL
	YEAR 1		YEAR 2		YEAR 3		YEARS 1-3
	Hyp. %	WD	Hyp. %	WD	Hyp. %	WD	WD
I. GLOBAL PROJECT COSTS							
Operating agent	55%	127	50%	115	20%	46	288
Co-operating agent	20%	46	20%	46	20%	46	138
Administration	0%	0	0%	0	0%	0	0
Data base IT & stastistical analysis	0%	0	10%	23	5%	13	36
Training	0%	0	0%	0	20%	46	46
DSM University (MOOC)	0%	0	0%	0	20%	46	46
Total cost (10 countries)		**173**		**184**		**197**	**554**
Cost per country		**17**		**18**		**20**	**55**
II. NATIONAL PROJECT COSTS							
National expert	10%	23	20%	46	10%	23	92
Expert (1 for each participating country)	10%	23	20%	46	5%	12	81
Total national cost		**46**		**92**		**35**	**173**
III. TOTAL PROJECT COST PER COUNTRY (I. + II. - 10 countries) - WORKING DAYS		63		110		55	**228**

IV. GLOBAL TRAVEL COSTS		US$		US$		US$	TOTAL US$
Core team + chairman		11'000		11'000		5'500	27'500
Training team		0		0		55'000	55'000
Total travel costs		11'000		11'000		60'500	82'500
Cost per country (10 countries)		1'100		1'100		6'050	8'250
V. NATIONAL TRAVEL COSTS							
National expert		1'100		2'200		1'100	4'400
Experts (2 for each country)		1'100		2'200		1'100	4'400
Cost per country		2'200		4'400		2'200	8'800
VI. TOTAL TRAVEL COST PER COUNTRY (I. + II.) - DOLLARS		3'300		5'500		8'250	**17'050**

Table 5 – Scenario 2 forecast Budget – 5 participating countries

Catherine Cooremans - Task 26 / Annex 19 - Multiple benefits of energy efficiency - forecast budget - Sept. 25, 2015

DSM - IETS MBs BUDGET **Scenario 2 : 5 participating countries**

RESOURCES	TASK 1 TOOL BOX		TASKS 2 & 3 DATABASE MARKETING		TASK 4 DISSEMINATION		TASKS 1-4 TOTAL
	YEAR 1		YEAR 2		YEAR 3		YEARS 1-3
	Hyp. %	WD	Hyp. %	WD	Hyp. %	WD	WD
I. GLOBAL PROJECT COSTS							
Operating agent	35%	81	30%	69	10%	23	173
Co-operating agent	10%	23	15%	35	10%	23	81
Administration	0%	0	0%	0	0%	0	0
Data base IT & stastistical analysis	0%	0	10%	23	5%	13	36
Training	0%	0	0%	0	10%	23	23
DSM University (MOOC)	0%	0	0%	0	20%	46	46
Total cost (10 countries)		**104**		**127**		**128**	**359**
Cost per country		**10**		**13**		**13**	**36**
II. NATIONAL PROJECT COSTS							
National expert	10%	23	20%	46	10%	23	92
Expert (1 for each participating country)	10%	23	20%	46	5%	12	81
Total national cost		**46**		**92**		**35**	**173**
III. TOTAL PROJECT COST PER COUNTRY (I. + II. - 10 countries) - WORKING DAYS		56		105		48	**209**

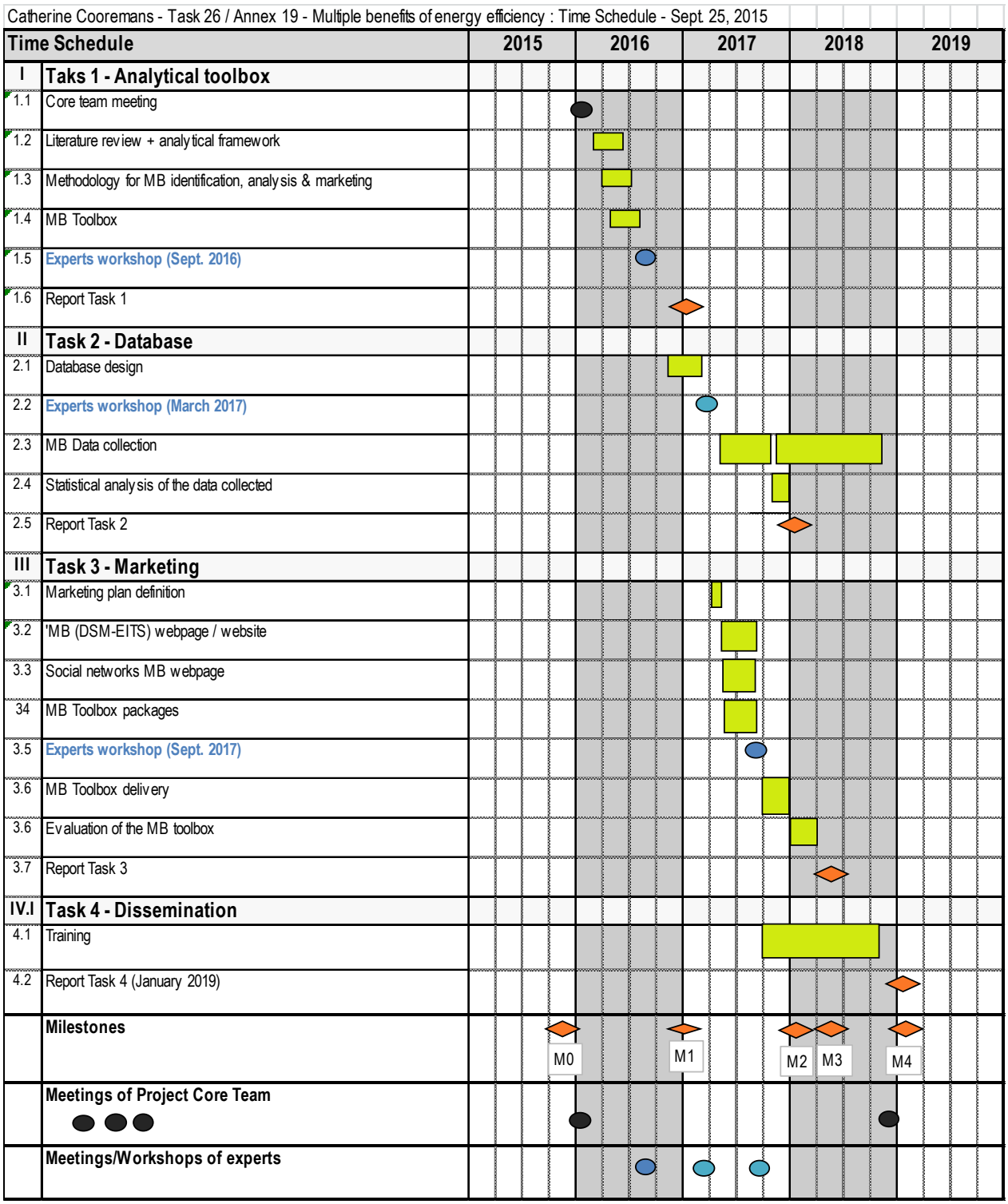
IV. GLOBAL TRAVEL COSTS		US$		US$		US$	TOTAL US$
Core team + chairman		11'000		11'000		5'500	27'500
Training team		0		0		27'500	27'500
Total travel costs		11'000		11'000		33'000	55'000
Cost per country (10 countries)		1'100		1'100		3'300	5'500
V. NATIONAL TRAVEL COSTS							
National expert		1'100		2'200		1'100	4'400
Experts (1 for each country)		1'100		2'200		1'100	4'400
Cost per country		2'200		4'400		2'200	8'800
VI. TOTAL TRAVEL COST PER COUNTRY (I. + II.) - DOLLARS		3'300		5'500		5'500	**14'300**

Time Schedule

It is proposed that this Annex be conducted over a period of 36 months, from February 1st, 2016 to January 31, 2019. Table 4 is a tentative work schedule for the four tasks.

Table 6 – Time schedule

Catherine Cooremans - Task 26 / Annex 19 - Multiple benefits of energy efficiency : Time Schedule - Sept. 25, 2015



Specific obligations and responsibilities of the participants

(a) Each Participant shall nominate a representative to participate in the work under this Annex.

(b) Each Participant shall carry out the equivalent of 46 working days during year 1, 92 working days during year 2 and 35 working days during year 3 of the project, corresponding to the work of one National Expert and one additional expert during the programme period unless otherwise agreed by the Participants.

(c) Each Participant shall contribute to the working meetings and to a workshop on the results achieved through the activities conducted under this Annex, including the identification of speakers and participants.

(d) Each Participant shall make a direct financial contribution to the Operating Agent to cover co-ordination and report preparation expenses and other Annex related (e.g. Workshop) costs.

Specific obligations and responsibilities of the Operating Agent

The Operating Agent shall:

(a) Develop, in co-operation with the Participants, a detailed work programme, a framework for the Final Country Report and a budget for all the activities carried out under this Annex, including methodology and time schedule

(b) Provide the Executive Committees with periodic reports describing the progress of the work being accomplished under the Task / Annex

(c) Deliver the results as described in Section 6

(d) Provide to the Executive Committee, within six months after completion of all work under the Task, a Final Report for its approval and transmittal to the Agency

(e) In co-ordination with the Participants, use its best efforts to avoid duplication with activities of other related programs and projects implemented by or under the auspices of the Agency or by other competent bodies

(f) Provide the Participants with necessary guidelines for the work they carry out, assuring minimum duplication of effort

(g) Co-ordinate the efforts of all Participants and ensure the flow of information within the Task

The IEA DSM / EITS ETI will assist in the establishment of the Task / Annex, in the organisation of the workshop and the publication of the proceedings, as well as of the Final Report.

Information and intellectual property

(a) Executive Committee's Powers. The publication, distribution, handling, protection and ownership of information and intellectual property arising from this Annex shall be determined by DSM / IETS Executive Committees, acting by unanimity, in conformity with this Annex.

(b) Right to Publish. The Participants shall have the right to publish information provided to or arising from their Task, except for proprietary information, as defined in paragraph (c) below.

(c) Proprietary Information. For the purposes of this Task/Annex, proprietary information shall mean information of a confidential nature such as trade secrets and know-how (for example, computer programmes, design procedures and techniques, chemical compositions of materials, or manufacturing methods, processes or treatments) which is appropriately marked provided that such information:

(1) Is not generally known or publicly available from other sources
(2) Has not previously been made available by its owner(s) to others without obligation concerning its confidentiality; and
(3) Is not already in the possession of the recipient Participant(s) without obligation concerning its confidentiality.

It shall be the responsibility of each Participant supplying proprietary information, and of the Operating Agent, to identify such information as proprietary and to ensure that it is appropriately marked.

The Participants and the Operating Agent shall take all necessary measures in accordance with this paragraph, the laws of their respective countries and international law to protect the proprietary information provided to or arising from this Task.

(d) Production of Relevant Information by Governments. The Operating Agent should encourage the governments of all Agency Participating Countries to make available or identify to the Operating Agent all published or otherwise freely available information known to them that is relevant to the Task.

(e) Production of Relevant Information by Participants. Each participant agrees to provide to the Operating Agent all previously existing information, and information developed independently of the Task, which can assist or is needed by the Operating Agent to carry out its functions in this Task, which is freely at the disposal of the Participants, and the transmission of which is not subject to any contractual and/or legal limitations, under the following conditions:

> (1) The Participant will make such information available, at its own costs, provided that such costs are not substantial
> (2) If substantial costs are necessary for the Participant to make such information available, the Operating Agent and all Participants will determine the charge of the costs for each participant, upon approval of the Executive Committee.

(f) Use of Confidential Information. If a Participant has access to confidential information which would be useful to the Operating Agent in carrying out the studies, assessments, analysis or evaluations described in this Annex, such information may be communicated to the Operating Agent but shall not become part of any report or other form of documentation issued as part of this Task, nor shall it be communicated to the other Participants, except as may be agreed between the Operating Agent and the Participant who supplies such information. This information has to be marked clearly as “confidential”.

(g) Acquisition of Information for the Task. Each Participant shall inform the Operating Agent of the existence of information that can be of value to the Task, but which is not freely available, and each Participant shall endeavour to make such information available to the Task under reasonable conditions, in which event the Executive Committee may, acting unanimity, decide to acquire each information.

(h) Reports on Work Performed under the Task. The Operating Agent shall prepare reports on all work performed under the Task and the result thereof, including studies, assessments, analysis, evaluations and other documentation, but excluding proprietary information, in accordance with paragraph 11(c) above.

(i) Copyright. The Operating Agent, or each Participant for its own results, may take appropriate measures necessary to protect copyrightable material generated under this Task. Copyright obtained shall be the property of the Operating Agent, for the benefit of the Participants provided, however, that Participants may reproduce and distribute such material, but shall not publish it with a view to profit, except as otherwise provided by the Executive Committee.

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(j) Authors. Each Participant shall, without prejudice to any rights of authors under its national laws, take necessary steps to provide the co-operation from its authors required to carry out the provisions in this paragraph. Each Participant shall assume the responsibility to pay awards or compensation required to be paid to its employees according to the laws of its country.

Operating Agent

Catherine Cooremans is designated as Operating Agent.

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Participants in this Annex

At least the following representatives will be contacted:

Organisation	Country
The Federal Ministry of Transport, Innovation and Technology *Bundesministerium für Verkehr, Innovation und Technologie (bmvit)*	Austria
Federal Public Service Economy, SPF Economie	Belgium
Danish Technological Institute	Denmark
TEKES	Finland
Forschungszentrum Jülich GmbH	Germany
Bureau of Energy Efficiency (BEE)	India
Italian National Research Council	Italy
The Ministry of Knowledge Economy (MKE)	South Korea
Rvo.nl	Netherlands
National Energy Research Institute (NERI)	New Zealand
ENOVA SF	Norway
Instituto Superior Tecnico, University of Lisbon	Portugal
RED Eléctrica de Espana	Spain
The Swedish Energy Agency	Sweden
The Swiss Federal Office of Energy	Switzerland
Department of Energy & Climate Change (DECC)	United Kingdom
Department of Energy	USA

Matters for the ExCo

Approve the Work Plan and budget and subscribe to the Task as a participant (appoint Expert)

ANNEX 1: detailed Workplan

Task 26 / Annex 19 detailed Workplan is described in table 7 below.

Table 7 – Workplan

Catherine Cooremans - Task 26 / Annex 19 - Multiple benefits of energy efficiency : Workplan/Dissemination plan - Sept. 25, 2015

I	***TASK I - ANALYTICAL TOOLBOX***	***OBJECTIVES***	***DELIVERABLES***	***SCHEDULE***
1.1	Core team meeting		Kick-off	1 Feb. 2016
1.2	Literature review + analytical framework	Deepening the knowledge	Taking into account sectors categories and sub-categories, companies and municipalities.	February 2016 - June 2016
1.3	Methodology for MB identification, analysis & description			
1.4	MB Toolbox	Operationalizing knowledge	MB Toolbox for industries & municipalities	July 2016
1.5	**Experts workshop**	- Discuss & validate methodology for MB identification/categorization/ quantification - Finalize & approve Toolbox - Setting expert networks in participating countries	- Toolbox approval - Experts networks definition & approval	Sept. 2016
1.5	Report on Task 1	Reporting on achievements	Synthesis & report on Task 1	Jan. 2017
II	***TASK II - DATABASE***	***OBJECTIVES***	***DELIVERABLES***	***SCHEDULE***
2.1	Database design - Categories, sub-categories - Templates for data collection - Pre-testing of questionnaire	MB Database	- Database structure - Questionnaire for data collection	Nov. 2016 - Feb. 2017
2.2	**Experts workshop**	- Setting networks for collecting exemples & figures - Database design approval - Questionnaire template approval	Networks for collecting exemples & figures (data)	March 2017
2.3	MB Data collection	- Data collection - Analysis of return & quality of data	MB database based on methodology approved in Task 1, analysable by industry/municipality type, measure type, geographical location. High quality data.	April - Oct. 2017 Nov. 2017 - Nov. 2018
2.4	Statistical analysis of the data collected	Analysis of data	Improving MB knowledge	Nov. - Dec. 2017
2.5	Report Task 2		Synthesis & report on Task 2	Jan. 2018

III	TASK III - MARKETING	OBJECTIVES	DELIVERABLES	SCHEDULE
3.1	Marketing plan definition	Getting in contact with potential customers	Target customers list and access channels	March - April 2017
3.2	MB (DSM-EITS) webpage / website containing: - Toolbox - Database access - Questionnaire template access - Infos on workshops and webinars - Template for training & seminaires - Story telling (case studies, success stories, etc.)		MB Website / Webpages Acess free (but user registration and login) up to a certain level of use Community - Co-creation	April - August 2017
3.3	Social networks MB webpage - Content similar to MB webpages/website			April - August 2017
3.4	MB Tools packages. - Toolbox package - Training packages (for workshops & webinars)		Analytical tool, user's manual Templates workshop and webinar training	April - August 2017
3.5	**Experts workshop**	- Evaluation & approval of Toolbox & training packages - Planning training in participating countries		Sept. 2017
3.6	MB Toolbox delivery		MB Toolbox to networks	Oct. - Dec. 2017
3.7	Evaluation of the MB toolbox: - Developing monitoring & evalutation indicators - Survey and post-evaluation of MB case studies	Refine and improve initial concept (3.4)		Janv. 2018 - March 2018
3.8	Report Taks 3		Synthesis & report on Task 3	May 2018
IV	**TASK IV - DISSEMINATION**	**OBJECTIVES**	**DELIVERABLES**	**SCHEDULE**
4.1	Training: - Workshops - Webinars '- MOOCs (DSM University)	MB Toolbox and Database training for end-users, industry leaders, policy-makers, academics, Escos.	4 workshops in each participating country 4 webinars a year in each participating country	Oct. 2017 - Nov. 2018
4.2	Report Task 4		Synthesis & report on Task 4	31 Jan. 2019

Reference list

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Matters for the ExCo

Approve the work plan and budget and to subscribe to the Task as a participant (appoint Expert)

Document E

THE DSM UNIVERSITY

1. Summary

The DSM University develops largely according to plan and in a steady pace where we can deliver in a way that creates confidence from users and interested parties. The “Heartbeat” of the DSM-U is the webinars that are delivered once a month.

Contacts are developing with IPEEC, the IEA secretariat and parts of GIZ but also local actors to promote and make use of the webinars and associated material.

A process has started to deliver more formal “certificates” (badges) showing that participants have received and made use of the lectures and printed material.

2. Objectives for the last six months

Webinars

There has till 2015-09-17 been arranged 15 webinars. Approximately 2500 persons have registered for them to participate at least in one. Every webinar draws an audience of between 60 and 150 attendants and roughly 1300 have attendants have been participating altogether, listening in to the presentations.

The webinars are recorded and both slides and supporting material is made available for registered users.

Webinars and their distribution over the different themes are shown in the appendix1 that also contains hyperlinks to the websites where the recorded material and further reading material can be retrieved.

“Partner” organisations are alerted about the webinars and asked to promote them in their own circles. Among them eceee (who distributed the calls to several thousands), IRENA, EBRD, IPEEC (G20) and Life Academy. Our contacts with IRENA and EBRD have however changed jobs and we have not been able to establish new ones.

Contacts with the IEA Secretariat and GIZ (Tanzania) were established during the eceee summer study and will be further developed.

The web-platform

Is available on http://www.leonardo-academy.org/course/view.php?id=227

Contents and sources

The material for the webinars has been structured to fit a more formal e-learning format where, webinars can serve as mini-courses. Each course will have standard 5 elements:

1. description
2. course materials - basically the narrated presentation
3. assessments (optional) - a test to measure learning impact. We've not done this so far in DSMU, but we do it quite often for other e-learning.If we want to go for certification, testing is needed.
4. feedback (optional) - an exit questionnaire on the course content
5. further reading materials (optional) - links & pdf's
6.

3. Objectives for the next six months

Webinars

The webinars will be arranged and announced in a rolling 6 months plan. The following webinars are suggested

Other guest opportunities
a) Guest IAs: 4E, ISGAN
b) Policy issues: Club of Rome (Wijkman), Municipalities (Mayor NN), EE in buildings (Joyce)
c) Planning and integration: Peter Lund (Helsinki University)

Standardisation of Energy Savings Calculations	21	Harry Vreuls
Demand Side Management and Climate Change	18	David Crossley
Certificate Trading (The Italian experience)	14	Antonio Capozza
Labelling		Benoit Lebot
Incentives Mechanisms for Promoting DSM and Energy Efficiency in Changing Electricity Businesses	6	David Crossley
Utilty industry in change		ACEEE (Maty Kusheler)
Regulation (cf eceee)		RAP
Applications in growing economies		Sven Ernedal (GIZ) or China (IPEEC)
Municipalities		Peter Hennicke ?
Smart cities		Ludwig Karg (s3c)

The web-platform

Under development. In particular how contents can be edited and channelled for different target groups.

We need to develop links and repositories so there are entries to the material in a more distinct way than presently

Promotion

Problem: speakers take a long time to fill in the template; as a result, promotion cycles are sometimes very short
Solution: once agreed, fill in the template within a week; minimum 8-week promotion cycle

- DSMU19: Jan 14 (latest date to complete preparation Nov 14 2015)
- DSMU20: Feb 18 (latest date to complete preparation Dec 18 2015)
- DSMU21: Mar 17 (latest date to complete preparation Jan 17 2015)
- DSMU22: Apr 14 (latest date to complete preparation Feb 14 2015)
- DSMU23: May 12 (latest date to complete preparation Mar 12 2015)
- DSMU24: Jun 16 (latest date to complete preparation Apr 16 2015)

Attraction-knowledge

Problem: Rather few registrations for the webinar post-event; high quality content remains underexploited.
Solution: develop short policy briefs (~2 pages) post-webinar to re-promote content.

"Tracks, Programmes and Certification"

Tracks: DSM for regulators, DSM for utility engineers
Immediate: Add badges of completion per learning unit (can be exported to Mozilla's OpenBadges backpack)
Future: Organising webinars into learning programs leading to certification

4. Outreach

The next issue is to find "outlets" willing to engage in making use of the material and put it into use in their regular activities. The organisations mentioned above have all shown interest but could be prompted further in particular now when our substance mass has reached some maturity.

The webinars will be more actively promoted on Facebook and LinkedIn.

5. Ideas for new work

See above but it is also time to make courses a bit more formal. Such would however best be made in co-operation with some to ensure that there is also at least a trial test of how suitable it would be.

6. Finance

	3m	6m	9m	12m	15m	18m	21m	24m	Budget (days)
Developing Products									
A. **Webinars.**	One every month (Scheduling by Chairs and secretary)								Moderation and communication by ECA (32)
B. **1. Task reports. 2. WEB-casts**	Exists								
			1	1	1	1	1	1	Duty of OAs (6)
C. **Issue-reports.**		1	1	1	1	1	1	1	Editing (7)
D. **Theme-Summaries.**			2	2	2	2	2	2	Compilation (12)
E. **Blogs.**	1	1	1	1	1	1	1	1	Writer (8)
F. **Key messages.**			1	1	1	1	1	1	Writer (6)
G. **E-learning.**						x	x	x	-
H. **Expert advice.**						x	x	X	-
I. DSM-U Café.	1	1	1	1	1	1	1	1	Moderation (8)
Management	2	2	2	2	2	2	2	2	(16)
Reporting	2	2	2	2	2	2	2	2	(16)
SUM									111 days at 1k$

7. Activity Time Schedule

-

8. Matters for the ExCo

'Recommend the ExCo to approve the Task Status Update Report'.

9. Participating countries

NA

Appendix 1

DSM –U Webinars

DSMU-#	Title	Task	Operating Agent/Presenter	Theme					
				1- The Logic of DSM	*2 - Governance*	*3 - Energy efficiency - Load level*	*4 - Flexibility (load shape)*	*5 - Integration*	*6 - Business models*
1	ESCo market development: A role for Facilitators to play	16	Jan Bleyl			X			
2	ISGAN Annex 2 Spotlight on Demand Management	ISGAN	Laura Marretta				X		
3	Using Demand-Side Management to Support Electricity Grids	15	David Crossley (RAP)				X		
4	Best Practices in Designing and Implementing Energy Efficiency Obligation Schemes	22	David Crossley (RAP)			X			
5	Impact evaluation of Energy Efficiency and DSM programmes	1/9	Harry Vreuls		X				
6	Managing Variability, Uncertainty and Flexibility in Power Grids with High Penetration of Renewables	-	Lawrence Jones, Alstom					X	
7	Customized, Systemic, Strategic – the way to succeed with energy efficiency in industry	-	Catherine Cooremans, Business School of Geneva			X			
8	Taking Stock – 40 years of Industrial Energy Audits	(ecee e)	Peter Mallaburn, UCL			X			
9	Behavioural changes are necessary to get the full impact on energy efficiency. What works and what doesn't (part 1)	24	Ruth Mourik	*15-01-14*					
10	How to make the best technology even better, BAT becomes BAT+	3	Hans Nilsson						*15-02-11*
11	Capturing the Multiple Benefits of Energy Efficiency	New	Nina Campbell	*15-03-11*					
12	Consequences of learning curves for energy policy	-	Clas-Otto Wene						*15-04-15*
13	„Do not take away their steering wheel!" How to achieve effective behavioural change in the transport and SME domain	24-2	Ruth Mourik	*15-05-13*					
14	Improving energy efficiency in SMEs – an interdisciplinary perspective	-	Patrik Thollander			*15-06-10*			
15	Smart Grid Implementation – how to engage consumers?	23	Yvonne Boerakker				*15-09-17*		
16	Integrating renewables and enabling flexibility of households and buildings – results and experiences from successfully implemented projects	17	Rene/Mathias					*15-10-14*	
17	What job is Energy Efficiency hired to do? A look at the propositions and business models selling value instead of energy or efficiency	25	Ruth Mourik						*15-11-19*
18	Simplified Measurement & Verification for Energy Savings – the Task 16 approach	16	Jan Bleyl			15-12-16			

Appendix 2

Theme	Title	Input	Summary & Key Messages	Webinar	Webcast	Briefing note	Case studies	Blog article	Press article	Checklist (lessons learned)	E-learning course
1) The Logic of DSM	DSM as an energy resource	Task 13 Guidebook				x					
	Question & Answers										
2) Governance	7 key analytic elements	Task 1.9 Evaluation	x	x		x		x			
	Lessons Learned	Task 1.9 INDEEP reports (Appendix D)								x	
	Principles for integrated planning of DSM programs	Task 4 Guidebook chapter 2				x					
	Implementing DSM in Market Place	Task 5 (report 6)	x				x			x	
	Taxonomy of DSM Program Mechanisms	Task 6				x					
	White Certificates	Task 14	x								x
	CO2 reduction assessment	Task 18, report 2	x	x		x					
	Implementing EE Obligation Schemes	Task 22	x	x (June 2014)		x		x			
3) EE Load Level											
4) Flexibility (load shape)	7 Steps for Demand Side Bidding	Task 8 ("A Practicle Guide...") + Task 11 (Descriptions of EUMF, TOU and DSB)	x			x					
	Network Driven DSM	Task 15 (report 2 and 3)	x	x (07/05)				x			
	Advanced Metering	Task 15 (report 5)	x			x					
5) Integration	Communication Platform for EE and RES integration	Task 17	x			x		x			
	Communication technology	Task 2 = out of date									
6) Business Models	Cooperative Procurement	Task 3 management report				x					
	Communicating EE in 2003 and now	Task 7						x	x		
	Role of municipalities	Task 9 = out of date									
	ESCOs (general introduction)	Task 16 (First report) + Task 10 chapter 7	x	x		x					
	ESCOs financial calculation tool	Task 16 (First report)				x					
	ESCOs Best Practices	Task 16 (First report)								x	
	ESCOs: 3 models for refurbishment	Task 16 Second Report				x					
	Micro DSM: ESPs and Demand Aggregators	Task 19	x	x		x	x (1 or 2)				
Overall themes	Glossary	Start from Task 4 Guidebook									

Done
Soon
Second priority
Later

Appendix 3: Assessment of the IEA DSM material and its relevance and applicability for different purposes.

Task	Publications	Relevance
1 Subtask 8 - International Database on Demand-Side Management Technologies and Programmes	INDEEP Analysis Report 2004 http://www.ieadsm.org/Files/Tasks/Task%201%20Subtask%208%20-%20International%20Database%20on%20Demand-Side%20Management%20Technologies%20and%20Programmes/Archive/indeep%20analysis%202004.pdf	The INDEEP database started in 1994 as an international tool for: • inspiring the design and planning of new DSM and energy efficiency activities; • comparing the user's own programmes with similar types of programmes and evaluations; • providing access to contacts concerning different types of DSM, thus creating a network. By July 20041 the database contained 229 quality-controlled programmes from 14 countries. The material might still have some interest as inspiration for programmes.
1 Subtask 9 - Evaluation Guidebook on the impact of DSM and Energy Efficiency Programmes for Kyoto's GHG Targets	Evaluation guidebook (2005) Volume 1. http://www.ieadsm.org/Files/Tasks/Task%2019%20Subtask%209%20-%20Evaluation%20Guidebook%20on%20the%20impact%20of%20DSM%20and%20Energy%20Efficiency%20Programmes%20for%20Kyoto's%20GHG%20Targets/Reports/Volume1Total.pdf Volume 2 http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/Volume%202%20total.pdf	Volume (I) deals with evaluation theory and recommends how evaluations for five types of policy measures and programmes should be conducted. This new approach involves organising evaluations into seven key analytic elements. Volume II covers the evaluation tradition in the various countries and a number of selected case examples on evaluations, and also provides readers with additional background information concerning the choices made, which could help them find solutions for missing elements in the theory.
2 - Communications Technologies for Demand-Side Management	http://www.ieadsm.org/ViewTask.aspx?ID=17&Task=2&Sort=1	Very dependent on available technologies at the time of the work. Mostly irrelevant for new distribution systems today with smart grid technology at hand but might have some interest for refurbishment of older existing grids.
3 - Co-operative Procurement of Innovative Technologies for Demand-Side	Co-operative Procurement of Innovative Technologies for Demand-Side Management (2000) http://www.ieadsm.org/Files/Tasks/Task%203%20-%20Co-operative%20Procurement%20of%20Innovative%20Technologies%20for%20Demand-Side%20Management/General%20Information/FRpt.pdf	A procedure for collaborative procurement actions for introduction of innovative, more energy-efficient products has been developed and tested in a number of pilot projects. A clothes drier with the energy use cut by half (the first "Class A" drier), electric motors with losses reduced by 20- 40% and a "copier of the future" where the energy use has been reduced down to 25%!

Management	Appendix to the above http://www.ieadsm.org/Files/Tasks/Task%203%20-%20Co-operative%20Procurement%20of%20Innovative%20Technologies%20for%20Demand-Side%20Management/General%20Information/AppFRpt.pdf Co-operative Procurement - Market Acceptance for innovative Energy-Efficient Technologies http://www.ieadsm.org/Files/Tasks/Task%203%20-%20Co-operative%20Procurement%20of%20Innovative%20Technologies%20for%20Demand-Side%20Management/General%20Information/338_966_co_operative_procurementOCR_Optimized.pdf	The model can easily be transferred to any party/actor who has an interest in boosting the market to deliver products with higher performance, Within the IEA DSM Implementing Agreement, Annex III has developed a Market Acceptance Process for co-operative procurement of innovative energy-efficient technologies. Experience from case studies shows very good results - a 50 per cent energy reduction in some instances - in a very short period of time. The process suggested could help countries and organizations to collaborate and to formulate functional requirements for energy use and other features that may stimulate development efforts among manufacturers and facilitate acceptance and dissemination of new solutions. The creation of buyer groups, consisting of future-oriented, leading buyers and users, will reduce the risks involved for manufacturers and open up opportunities for better interactive development
4 - Development of Improved Methods for Integrating Demand-Side Options into Resource Planning	Guidebook on Analytical Methods and Processes for Integrated Planning (1996) http://www.ieadsm.org/Files/Tasks/Task%204%20-%20Development%20of%20Improved%20Methods%20for%20Integrating%20Demand-Side%20Options%20into%20Resource%20Planning/Reports/Iv3_main.pdf	Planning and its elements (methods and tools) remain relatively stable over time. This publication deals not only with planning techniques but also the mirrors the market situation and makes a difference between Public-Policy based and Business based integrated planning There are large differences and variations between utility market situations regarding the role and function filled by the integrated planning effort, i.e., why and who carries out the integrated planning effort. Similarity in technical elements across utility-market situations — Many of the technical elements of integrated planning can be found across most utility-market situations.
	(Preliminary) Concepts For New Mechanisms for Promoting DSM and Energy Efficiency in New Electricity Business Environments. (1997) http://www.ieadsm.org/Files/Tasks/Task%204%20-%20Development%20of%20Improved%20Methods%20for%20Integrating%20Demand-Side%20Options%20into%20Resource%20Planning/Reports/Iv7_main.pdf	The restructuring of utility business and breaking up of vertical business structures changes the conditions for the actors but not the need for DSM. The mechanisms identified in this report are not DSM and energy efficiency programs. Rather they assist the implementation of such programs. Two types of mechanisms are investigated. First there are policy and regulatory measures which can be implemented by governments and regulators to promote DSM and energy efficiency. Second there are mechanisms which enable energy businesses to make a commercial return by implementing DSM and energy efficiency programs.

5- Investigation of Techniques for Implementation of Demand-Side Management Technology in the Market Place	REPORT 6 Techniques for Implementation of Demand Side Management Technology in the Marketplace (1998) http://www.ieadsm.org/Files/Tasks/Task%205%20-%20Investigation%20of%20Techniques%20for%20Implementation%20of%20Demand-Side%20Management%20Technology%20in%20the%20Market%20Place/Reports/Report6_annex5_english.pdf There are also 5 reports available covering different aspects and all material is available also in Spanish	Local utilities in some participating countries carried out, compared and evaluated some "micromarketing" activities which indicated that: • DSM actions should be carried out even in liberalised markets. • From a Utility's point of view, in a liberalised market DSM should be a part of the marketing activities to reach a more competitive position. • Customers attitudes facing energy use are similar in all countries. • Marketing stimulus is useful probably due to the fact that the benefits from an efficient use of the electricity are not, for the moment, so obvious to the customers. • The Public Sector is always somehow connected with DSM programmes. • The DSM campaigns produce a cumulative long term effect on customers that implies a lower effort for future actions.
6 - Mechanisms for Promoting DSM and Energy Efficiency in Changing Electricity Businesses	A summary and overview of the work was published in the journal ***Energy Policy*** under the title." Public policy analysis of energy efficiency and load management in changing electricity businesses" (2003). http://www.ieadsm.org/Files/Tasks/Task%206%20-%20Mechanisms%20for%20Promoting%20DSM%20and%20Energy%20Efficiency%20in%20Changing%20Electricity%20Businesses/Journal%20Articles/Energy_Policy_overview.pdf	
	Research Report No 1: Existing Mechanisms for Promoting DSM and Energy Efficiency in Selected Countries (1998). http://www.ieadsm.org/Files/Tasks/Task%206%20-%20Mechanisms%20for%20Promoting%20DSM%20and%20Energy%20Efficiency%20in%20Changing%20Electricity%20Businesses/Publications/resrpt1_fin.PDF	The work in Task VI comprised the identification and characterisation of existing mechanisms for promoting DSM and energy efficiency. Experts provided details of these mechanisms which were recorded in a database. Eventually, details of over 100 existing mechanisms were recorded in the database. To these were added 25 new mechanisms. The effectiveness of these mechanisms was assessed against a range of criteria. Four types of mechanisms were developed: • **Control Mechanisms** – these are used to direct energy businesses to change behavior. • **Funding Mechanisms** – these provide funding for other mechanisms. • **Support Mechanisms** – these provide support for behavioural changes by end-users and energy businesses. • **Market Mechanisms** – these enable the use of market forces to encourage behavioural changes by end-users and electricity businesses. The material is available in Spanish.
	Research Report No 2: Public Policy Implications of Mechanisms for Promoting Energy Efficiency and Load Management in Changing Electricity Businesses (1999). http://www.ieadsm.org/Files/Tasks/Task%206%20-%20Mechanisms%20for%20Promoting%20DSM%20and%20Energy%20Efficiency%20in%20Changing%20Electricity%20Businesses/Publications/resrpt2_fin.PDF	
	Research Report No 3: Developing Mechanisms for Promoting Demand-Side Management and Energy Efficiency in Changing Electricity Businesses (2000). http://www.ieadsm.org/Files/Tasks/Task%206%20-%20Mechanisms%20for%20Promoting%20DSM%20and%20Energy%20Efficiency%20in%20Changing%20Electricity%20Businesses/Publications/resrpt3_fin.PDF	
7 - International	Market Research Industry Consultation (2004).	A central goal of the work has been to find a better way to market energy efficiency.

Collaboration on Market Transformation	http://www.ieadsm.org/Files/Tasks/Task%207%20-%20International%20Collaboration%20on%20Market%20Transformation/Archive/Branding%20Energy%20Efficiency%20-%20IEA-DSM%20MT7%20Industry%20Consultation.pdf	The study explores attitudes and behaviour in the field of energy efficiency, which are closely related to typologies and value patterns. Understanding the characteristics of these typologies and value patterns will be crucial for those wishing to market their energy efficient products and services effectively.
	Branding Energy Efficiency (2003). http://www.ieadsm.org/Files/Tasks/Task%207%20-%20International%20Collaboration%20on%20Market%20Transformation/Archive/Branding%20Energy%20Efficiency%20-%20IEA-DSM%20MT7%20Market%20Report.pdf	
8 - Demand-Side Bidding in a Competitive Electricity Market	Brochure with introduction to the concept. http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/brochure.pdf	Demand Side Bidding (DSB) is a mechanism that enables consumers to actively participate in electricity trading, by offering to undertake changes to their normal pattern of consumption. Measures aimed at producing long-term changes in demand, e.g. traditional Demand Side Management programmes that result in permanent demand reduction, are outside the scope. DSB may be applied for balancing of the system and/or for frequency response.
	Market participants' views towards, and experiences With, Demand Side Bidding (2002). http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/Stage1ReportV2.pdf	
	A Practical Guide to Demand-Side Bidding. http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/PracticalGuideToDSB.pdf	
9 - The Role of Municipalities in a Liberalised System	29 Case studies (from Europe and Northern America) of Good Practice in Rising to the Challenge of Liberalisation. (2002) http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/MEELSCaseStudies.pdf	This project is investigated how the roles of local authorities in demand side management are affected by a liberalised market. Demand side management includes action to improve energy efficiency, load management and action to reduce CO 2 emissions by energy substitution. Local authority activities in this field were assessed for replicability, choice of targets, its effectiveness in producing long term results, response to social and political needs, response to conditions of the liberalised market and the likelihood of resources and financing being found on a long term basis.
	General Background to the Energy Sector in the Participant countries and how it has been affected by Liberalisation (2002). http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/GrazReport1Final.pdf	
	The Roles of Municipalities in the Energy Sector. (2002) http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/GrazReport2Final.pdf	
	A number of more detailed but also popular articles in newsletters are available on http://www.ieadsm.org/ViewTask.aspx?ID=17&Task=9&Sort=1#ancPublications3	

10 – Performance Contracting	The original documents are available on http://www.ieadsm.org/ViewTask.aspx?ID=17&Task=10&Sort=1	This task was reported 2003 and 2004 but has been superseded by task XVI. The final report is still a good primer to the concept of ESCOs and how it has developed. http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/TX_SummaryReport_May03.pdf
11- Time of Use Pricing and Energy Use for Demand Management Delivery	The original documents are available on http://www.ieadsm.org/ViewTask.aspx?ID=17&Task=11&Sort=0#ancPublications3	This task was reported 2007 but has been superseded by and covered in Task XIII. The final report still has some interest in terms of concept descriptions. http://www.ieadsm.org/Files/Tasks/Task%20XI%20-%20Time%20of%20Use%20Pricing%20and%20Energy%20Use%20for%20Demand%20Management%20Delivery/Reports/Task%20XI%20Final%20Report%206%20Nov%2007.pdf
12 - Cooperation on Energy Standards	This task was prepared but not launched. The work is now considered by the 4E Programme.	-
13 - Demand Response Resources	**Demand Response Resources - Guidebook (2006)** Section 1 - Background Information Section 2 - Getting Started Section 3 - DR Resource Base Section 4 - Market Potential Section 5 - DR Valuation Section 6 - Technologies Section 7 - Market Barriers and Solutions Section 8 - Drafting the Business Plan DRR Guidebook - Appendices **Communication Toolkit (2006)** Toolkit (pdf) Guide, Template and Forms (pdf)	DRR provide the long-term risk management insurance that is needed if competitive electricity markets are to work. The ability to call upon thousands of megawatts contractually, on short notice and in specific locations provides a virtual storage asset that can be used for short duration demand peaks, facilitate power restoration, and provide a means of transition to, or possibly prevent, new power system upgrades. Recognizing the urgent need for demand side participation in electricity markets to ensure energy security and mitigate price volatility in liberalized electricity markets.
14- Market Mechanisms for White Certificates Trading	Market Mechanisms For White Certificates Trading - Task XIV Final Report. http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/TaskXIVFinalReport.pdf	White Certificates are certificates issued by a regulatory or other public Agency, against the fulfilment of obligations on energy savings targets. These targets are expressed in terms of an amount of energy that should be saved as a result of energy efficiency programs, promoting and facilitating the provision of energy services and energy efficiency measures to all end-use sectors (including the domestic and commercial sectors, the public sector, and small and medium-sized enterprises).
15 - Network Driven	Report No 1: Worldwide Survey of Network-driven Demand-side Management Projects. Second edition	Problems in electricity networks are becoming significant where electricity demand is

DSM (2008)		increasing and network infrastructure is ageing. As loads grow and infrastructure reaches the end of its economic life, the potential cost of augmenting and providing support services for electricity networks is increasing exponentially. DSM measures which can be used to relieve constraints on electricity networks . All types of constraint are being addressed, including capacity limitations, voltage fluctuations, reliability issues, etc. Such network-driven DSM measures are often more cost-effective, and may also have lower environmental impacts, than network augmentation
	Report No 2: Assessment and Development of Network-driven Demand-side Management Measures. Second edition	
	Report No 3: Incorporation of DSM Measures into Network Planning. Second edition	
	Report No 4: Evaluation and Acquisition of Network-driven DSM Resources. Second edition	
	Report No 5: The Role of Advanced Metering and Load Control in Supporting Electricity Networks	

16 - Competitive Energy Services (Energy Contracting, ESCo Services) ACTIVE: http://www.ieadsm.org/ViewTask.aspx?ID=16&Task=16&Sort=0	Report of Phase 1 (July 2006 – June 2009) with a focus on the key results of the task work: "Integrated Energy-Contracting" model, "Comparison of Financing Options", "Comprehensive Building Refurbishment through EPC", "Energy-Contracting in the Residential Sector" and "Opportunity Cost Tool". http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/100608_T16-ExCo_Final%20Task%20Report%20(2006-2009).pdf Comprehensive Refurbishment of Buildings through Energy Performance Contracting. A Guide for Building Owners and ESCos. http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/IEAdsm-TaskXVI_Bleyl,%20Schinnerl_Comprehensive%20Refurbishment%20of%20Buildings%20through%20EPC_081118_vers2.pdf What is Energy-Contracting (ESCo or Energy Efficiency Services)? Concept, Definition and Two Basic Business Models http://www.ieadsm.org/Files/Tasks/Task%2016%20-%20Competitive%20Energy%20Services%20(Energy%20Contracting,%20ESCo%20Services)/Publications/What%20is%20Energy-Contracting_Task16-Discussion%20paper-Rev.3_131014.pdf The Life of ESCo Project Facilitators (Task 16 and 24) http://www.ieadsm.org/Files/Tasks/Task%2016%20-%20Competitive%20Energy%20Services%20(Energy%20Contracting,%20ESCo%20Services)/Publications/Task24-T16_ESCo%20facilitators_(5-pager)_1407.pdf	An Energy Service Company (ESCo) takes over the technical and commercial implementation and operation risks and has to guarantee for it's cost and results. ESCo services are also well suited to implement innovative energy technologies and renewable energy systems. The ESCo industry is an expanding business throughout the world contributing to the improvement of energy efficiency, control of energy costs and reduction of greenhouse gas and other emissions. The models of offering these services can get various forms like Energy Supply Contracting (ESC) or Energy Performance Contracting (EPC) resulting in diverse contract models and financing arrangements. ECEEE-papers: • A role for facilitators http://www.ieadsm.org/Files/Tasks/Task%2016%20-%20Competitive%20Energy%20Services%20(Energy%20Contracting,%20ESCo%20Services)/Publications/Bleyl%20et.al_ESCo%20Facilitator_ECEEE_130322[2]%20kopia.pdf • Conservation First! The New Integrated Energy- Contracting Model to Combine Energy Efficiency and Renewable Supply in Large Buildings and Industry http://www.ieadsm.org/Files/Tasks/Task%2016%20-%20Competitive%20Energy%20Services%20(Energy%20Contracting,%20ESCo%20Services)/Publications/1106_ECEEE%20(paper%201-485)_Bleyl_Integrated%20Energy-Contracting.pdf
17 - Integration of Demand Side Management, Energy Efficiency,	State of the art report. http://www.ieadsm.org/Files/Tasks/Task%2017%20-%20Integration%20of%20Demand%20Side%20Management,%20Energy%20Efficiency,%20Distributed%20Generation%20and%20Renewable%20Energy%20Sources/Final%20reports/Synthesis%20Report%20Final.pdf	Implementing an energy policy to promote energy efficiency, distributed generation and renewable energy resources, the share of distributed energy will increase, including the intermittent energy sources such as wind, solar, small hydro and combined heat and power (small and micro-CHP).

Distributed Generation and Renewable Energy Sources ACTIVE http://www.ieadsm.org/ViewTask.aspx?ID=16&Task=17&Sort=0	Annexes - Country reports - List of software tools for the analysis of integration of DR, DG, smart grids and energy storages - List of pilots and case studies http://www.ieadsm.org/Files/Tasks/Task%2017%20-%20Integration%20of%20Demand%20Side%20Management,%20Energy%20Efficiency,%20Distributed%20Generation%20and%20Renewable%20Energy%20Sources/Final%20reports/Synthesis%20report%20-annex%20final.pdf Summary and conclusions http://www.ieadsm.org/Files/Tasks/Task%2017%20-%20Integration%20of%20Demand%20Side%20Management,%20Energy%20Efficiency,%20Distributed%20Generation%20and%20Renewable%20Energy%20Sources/Final%20reports/Subtask%209%20Summary%20final.pdf	Intermittent types of electricity generation are difficult to predict. This makes electrical networks and market turn to integrated distributed energy resource as a solution. By combining distributed generation with energy storage and demand response, a country can decrease problems caused by distributed generation and increase the value of intermittent energy in the market. Microgeneration and new end-use technologies can present significant effects to several stakeholders. Most importantly, the consumer himself, network companies and electricity supplier (retailer) are involved. Network companies may either benefit or suffer from the introduction of microgeneration, heat pumps and Electric Vehicles, depending on the specific technology and how it is used. The consumer can contract an aggregator to sell the microgeneration or load flexibility to competitive energy market participants or network companies.
18 - Demand Side Management and Climate Change (2010)	Report No 1: Interactions between Demand Side Management and Climate Change Report No 2: Principles for Assessing Emissions Reductions from DSM Measures Report No 3: Mitigating GHG Emissions and Delivering Electricity System Benefits Report No 4: Funding DSM Programs with Revenue from Carbon Trading	This will enable countries and organizations to: • Understand the interactions between DSM and climate change. • Develop **methodologies for assessing** the GHG emissions reductions available from specific DSM measures. • Gain information about using DSM programs to **mitigate GHG emissions**, and about using GHG emission mitigation programs **to deliver benefits to electricity systems.** • Identify **opportunities for funding** DSM programs with revenue from GHG emissions trading schemes. • Explore whether **time of use pricing** can be used to achieve mitigation of GHG emissions. • Gather the information necessary to **launch and participate in deployment programs** for demand-side technologies.
19 - Micro Demand Response and Energy Saving	Evaluating The Business Case for Micro Demand Response and Energy Saving (2010). http://www.ieadsm.org/Files/Exco%20File%20Library/Key%20Publications/XIX%20Evaluating%20The%20Business%20Case%20_October%202010_.pdf	The domestic and SME sectors alone consume up to 50% of the electricity generated in developed countries, and are good targets for energy saving measures. The involvement of those demanding energy can help to improve overall system balance and thus reduce the peak generation capacity and

	Requirements and Options for Effective Delivery http://www.ieadsm.org/Files/Tasks/Task%2019%20Micro%20Demand%20Response%20and%20Energy%20Saving/Publications/Task%20XIX%20Evaluating%20The%20Business%20Case%20_October%202010_.pdf	spinning reserve. For domestic and SME customers to achieve these benefits, it is necessary to influence millions of micro loads. Relatively small amounts of demand flexibility can have large benefits in reducing peak capacity requirements.
20 - Branding of Energy Efficiency	Final report on Branding of energy efficiency http://www.ieadsm.org/Files/Tasks/Task%2020%20-%20Branding%20of%20Energy%20Efficiency/Publications/Task20_Report-on-Best-Practices-in-Branding-of-EE.pdf Case studies on branding of energy efficiency http://www.ieadsm.org/Files/Tasks/Task%2020%20-%20Branding%20of%20Energy%20Efficiency/Publications/Task20_Report-on-Case-Studies-in-Branding-of-EE.pdf Check also Task 5 and Task 7 with related material.	Branding of energy efficiency products and services would increase their visibility and credibility. The task will explore the avenues available to national governments to promote branding of energy efficiency. To be successful at branding, it would be necessary to work on three levels: • products/services and suppliers, • consumers • strategic or policy level. At product/service level, one will have to be deal with several problem areas such as lack of accurate definition of product/service, strong relationship with maturity of electricity market, lack of awareness, lack of appeal, etc. At consumer level, it may be necessary to understand the consumer behaviour across markets as well as societal strata, by employing advanced marketing/branding theories such as cognitive information processing, emotion driven choice, etc.
21- Standardisation of Energy Savings Calculations	Harmonised Energy Savings Calculations for selected end-use technologies, key elements and practical formulas http://www.ieadsm.org/Files/Tasks/Task%2021%20-%20Standardisation%20of%20Energy%20Savings%20Calculations/final%20public%20version/Report%20on%20Energy%20savings%20calculation%20final%20version.pdf Roadmaps for improved Harmonised Energy Savings Calculations http://www.ieadsm.org/Files/Tasks/Task%2021%20-%20Standardisation%20of%20Energy%20Savings%20Calculations/final%20public%20version/Roadmaps%20improved%20harmonised%20ESC%20final.pdf	Estimations concerning (projected) energy savings, emissions reductions or financial gains from energy efficiency measures are now rather common. But these estimations are conducted in such a broad range of approaches that they hinder (international) comparison of calculated energy savings. The overall aim is to identify basic concepts, calculation rules and systems for Energy Savings Calculations (ESC) standards. Both energy savings, emissions avoidance calculation methods and standards will be evaluated for efficiency activities. In addition to this a methodology should be developed to nominate and describe the several Demand Response products. Country reports available for France, Norway, Spain, Korea, USA and The Netherlands.
22 - Energy	Best practices in designing and implementing energy	Many countries have set policy targets for reducing emissions and have identified

Efficiency Portfolio Standards	efficiency obligation scheme 2012 June http://www.ieadsm.org/Files/Tasks/Task%2022%20-%20Energy%20Efficiency%20Portfolio%20Standards/Publications/RAP_IEADSM_Best%20Practices%20in%20Designing%20and%20Implementing%20Energy%20Efficiency%20Obligation%20Schemes%202012%20June.pdf	energy efficiency as one of the measures along with coordinated efforts to secure funding arrangement for these programmes. Several states in the United States and European countries have adopted Energy Efficiency Portfolio Standards (EEPS) like programmes as part of their efforts to mobilise energy efficiency improvements. These programmes provide market based instrument to utilities to achieve defined target for energy savings.
23 - Role of the Demand Side in Delivering Effective Smart Grids COMPLETED http://www.ieadsm.org/ViewTask.aspx?ID=16&Task=23&Sort=0	*This task is co-ordinated with ISGAN. Check also task XIX.* Final Report: Smart Grid Implementation: How to engage consumers – June 2014 http://www.ieadsm.org/wp/files/Smart-Grid-Implementation-Version-1.0-Issued-02-June-2014.pdf International report: The Impact of Electricity Markets on Consumers – January 2012 http://www.ieadsm.org/wp/files/Subtask-1-International-Report-Version-1-0-_ExCo-approved_-with-appendices.pdf Interaction between Customers and Smart Grid Related Initiatives – November 2013 http://www.ieadsm.org/wp/files/Sub-Task-2-Report-V1.1-with-appendix.pdf How risks and rewards from the perspective of customers affects the decision to engage in Smart Grids – December 2013 http://www.ieadsm.org/wp/files/Sub-Task-3-Report-v1.1.pdf	The aim 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.
24 - Closing the Loop - Behaviour Change in DSM, From Theory to Policies and Practice ACTIVE	Subtask 1 Analysis - Final Report (“Most of the time what we do is what we do most of the time. And sometimes we do something new”) http://www.ieadsm.org/Files/Tasks/Task%2024%20-%20Closing%20the%20Loop%20-%20Behaviour%20Change%20in%20DSM,%20From%20Theory%20to%20Policies%20and%20Practice/Publications/Task%2024%20Subtask%20I%20Final%20Report.pdf	Closing the loop between behaviour change research theory, successful policy implementation and positive outcomes for the energy user from DSM projects. Key questions: • Understanding which categories of (energy) behaviours need to be addressed to maximise impact • How these behaviours come about and why more sustainable behaviours are shunned by energy users • How decisions come about, and what the roles of norms, values and attitudes are;

http://www.ieadsm.org/ViewTask.aspx?ID=16&Task=24&Sort=0	The little monster - Subtask 1 case study storybook http://www.ieadsm.org/Files/Tasks/Task%2024%20-%20Closing%20the%20Loop%20-%20Behaviour%20Change%20in%20DSM,%20From%20Theory%20to%20Policies%20and%20Practice/Publications/The%20Little%20Monster%20storybook%20copy.pdf	what the individual and more systemic barriers and drivers to these behaviours are • What (policy) instruments could be effective and efficient in reducing or removing these barriers or facilitating the drivers; and
25 - Business Models for a more effective uptake of DSM energy services ACTIVE http://www.ieadsm.org/ViewTask.aspx?ID=16&Task=25&Sort=0		This task sets out to identify proven and potentially successful business models for energy services for DSM on a national level, and develop effective policy strategies, stakeholder roadmaps and business models to upscale and mainstream these energy services on a national (ecosystem) level. The main objectives of this Task are to: • What works, how does it work and what kind of framework conditions do we need? Identify proven and potential business models for energy services on (first phase) issues of common interest in different countries, with special focus on how to create conducive different market dynamics and policies in different countries; • Analyze acceptance and effectiveness of these business models in creating lasting load reduction, or generation and other non-energy benefits and in creating a market; • Research success and failure factors by means analyzing business models in their socio-technical or ecosystem context; • Develop canvas for energy service businesses to be able to more effectively develop business models and value networks able to mainstream and upscale on a national level and disseminating it through national workshops; • Creating a set of guidelines, and advice supporting the creation of policies to encourage market creation and mainstreaming of business models in different countries; • Creating and maintaining a digital platform for shared learning, best practices and know-how with national sub departments focused on bringing knowledge to the national market, including banks and other funders; • Develop a database (as far as possible) including (national context sensitive) useful contractual formats, business plans etc.

Document F

BIG DATA ON ENERGY USE

Input for a draft Work Plan – prepared by Harry Vreuls, RVO.nl

Introduction

“Big data” is a concept of developing and analysing large sets of data. As such Big Data is a ‘container’ concept and is determined by the so-called 3 V: volume (large number of data), variety (data related to very different topics) and velocity (quick availably of data)
Not only the amount of data is increasing, but also the production of these data is continues speeding up. These two developments make it possible that one can (re)act earlier to changes. The energy users, energy deliverers, and service companies can initiate such actions. Additional (software) tools can be used to make these actions easier or more cost efficient.

Big Data is often the combination of data from different sources as well as the use of data for other purposes then those were these data were collected for.

Motivation

We are in the middle of a data revolution and never before we have been able to collect and analyse as much information that is related to the amount of energy use, the time of use and the availability of energy efficient product.

The introduction of smart meters to energy end users generates the availability of data on energy use in small time periods. New smart appliances, smart grids and software tools are developing in a high speed and generate additional data.

These developments are on going in all countries that are participating in this Demand-Side Management Energy Technology Initiative, but the speed and geographical coverage as well as the areas where big data on energy use are applied are different.

What is common is the high speed of developments in the different areas of Big Data. Due to this high speed there is a high chance that the global available experiences and knowledge is not use in national project and that a lot of work in this area is done less (cost) efficient or that work is unnecessary doubled.

This Task should make the new information on Big Data on energy use and energy efficiency quick and easy available. Additional it should provide information on trends and areas where actions is on going and areas there are (still) blank.

As the topic of this Task is developing in a high speed, the work programme should be restricted to a two years period and at the end it should be evaluated whether the work should be continued, whether other and/or additional topic should be included or that the way the work is organised should be changed.

Objective

This Task should make the new information on Big Data on energy use and energy efficiency quick and easy available. This should reduce the risk of doubling work, support ideas for new research areas and stimulate the use of recent research results.
The collected information will be analysed in combination with countries expert’s knowledge to generate information on trends, on areas where actions is on going and on areas where development is lacking

The research areas for Big Data are:

1. Smart meters introduction
2. Data access and privacy
3. Combination of different data sources
4. Web crawling on energy efficient products
5. Program evaluations
6. Market potentials for energy efficiency improvements in end-users markets

Approach

Given the fast developments in the research area of Big Data, the Task should concentrate on providing frequent relevant information and not in in-depth analyses.

The Operating Agent and the country experts collect recent relevant information on Big Data and energy efficiency and make this available on the website

– A place for research reports, articles etc. dealing with Big data and energy efficiency: clear section of the IEA DSM site

Four times the Operating Agent and the country experts will evaluate the collected information and discuss developments, global and country specific. This will result in a 2 pager on trends.
Each half year a flyer holding an evaluation or trends on the topics:

– Smart meters introduction
– Data access and privacy
– Combination of data sources
– Web crawling on EE products
– Program evaluations
– Market potentials

From the collected information the Operating Agent will select a ' hot' topic to be presented in a webinar. The author of the chosen research report, paper or article will be invited to present his/her research results to a wider audience.

– Webinars (6-8 in the two years period) on hot topics

At least Monthly there will be experts contact by website and/or web meetings to ensure delivery of information for the web site, to discuss hot topics for the webinars and the trend paper.

– Web meetings and email are the main communication tools for experts

There will be two experts meetings: one in the beginning of the Task and having the discussion on the first trend paper and one after one and a half year discuss the third trend paper and to evaluate the Task and advise on potential future work.

– Two experts meetings

How open or restrictive should the information be?

Option1
During two years the information on the website, the trend papers and webinars will be restricted to the participating countries.

Option 2
Open for non-participating countries and ExCO will be charge e.g.

– 3,000 euro for country access to the website
– 200 euro for each download of a trend paper
– 100 euro a participant from the country for each webinar

Option 3
Combination of 1 or 2 and additional

– Open for experts from developing countries on request to the Operating Agents

Subtask 1: Collect Big Data information and make it available

Subtask objectives

The objectives of this subject are:

- To collect the most recent information (research reports, articles etc.) dealing with Big Data and energy efficiency in the participating countries and in other relevant countries;
- To present the information on a separate section of the IEA DSM website;
- To present the information in such a way that the following topics are visual:
  - Smart meters introduction
  - Data access and privacy
  - Combination of different data sources
  - Web crawling on energy efficient products
  - Program evaluations
  - Market potentials for energy efficiency improvements in end-users markets

Subtask Deliverable

Special section on the IEA DSM website with information on Big Data and energy efficiency.

Regular updates of information in the special section of the website.

Work to be carried out

The Operating Agent and the country experts collect recent relevant information on from the participating counties and global.

The Operating Agent subcontracts the development of the special section on the IEA DSM website for Big Data information.

The Operating Agent and the country experts feed the website with Big Data information.

In case the information is only available in another languages than English, a summary in English will be added on the web site.

Subtask 2: Analyse and generate information on trends in the areas of Big Data

Subtask objectives

The objectives of this subject are:

- To analyse the information in the database filled with the information collected under subtask 1
- To generate information on trends related to:
  - Smart meters introduction
  - Data access and privacy
  - Combination of different data sources
  - Web crawling on energy efficient products
  - Program evaluations
  - Market potentials for energy efficiency improvements in end-users markets

Subtask Deliverable

Four 2 pager on trends in Big Data and energy efficiency

Work to be carried out

The Operating Agent will conduct the draft analyses and discuss these on-line with the experts.

The Operating Agent will prepare draft two-pagers for commenting by the experts. The first draft two-pager will be discussed during an expert meeting. The country experts will provide comments to the other drafts.

The Operating Agent will publish the trend papers on the IEA DSM website.

Subtask 3: Organise webinars on selected topics

Subtask objectives

The objective of this subject is to distribute the recent knowledge and development for the selected topics Big Data and energy efficiency by webinars.

Subtask Deliverable

6-8 Webinars on selected topics

Work to be carried out

The Operating Agent will discuss potential topics for webinars with the country experts.

The Operating Agent will contact the speakers for the selected topics for the webinars.

The webinars will be organised, using the exiting framework of the Technology Initiative and by or in co-operating with Leonardo Institute.

Subtask 4: Communication and information

The Operating Agent is responsible for the communication of the Task. He will produce two articles and present these on international conferences or publish these in a journal.

The Operating Agent will contribute to the Annual Report, Spotlight and workshops organised by the IEA DSM ETI.

The Operating Agent will produce a leaflet of the Task and update this

The Operating Agent will attend the EXCO meetings and report to the EXCO.

Timetable

October 2015	EXCO Approval of the input for the work plan
April 2016	EXCO Approval of work plan
May 2016 – May 2018	Task implementation, Subtasks 1-4
October 2018	EXCO decision to close the Task or initiate new subtasks

Costs

The breakdown of the Operating Agent's budget is as shown in the following table and is specified for manpower and for project cost.

		Manpower (€)	Project costs (€)	Total (€)
Subtask 1	Collect Big Data information and make it available	30,000	10,000	40,000
Subtask 2	Analyse and generate information on trends in the areas of Big Data	40,000	10,000	45,000
Subtask 3	Organise webinars on selected topics	15,000	5,000	20,000
Subtask 4	Communication and information	20,000	15,000	35,000
TOTAL		105,000	40,000	145,000

Assuming 6 participating countries and a two years period, the contribution will be € 24,170 a country. The annual contribution will be € 12,085.

The expert's time depends on the country specific situation. The approach restricts the number of experts meeting to two and concentrates on electronic contacts and discussions.
The major effort for the experts will be on the collection of the national information. For this the experts should use their contact network to increase the efficiency of the collection process.
For subtask 1 the expert's time needed is estimated on 3-4 man weeks, for subtask 2 about 1-2 weeks and for subtask 3 no additional work. In total it will be about 4-6 men week in a period of two year. Additional are the travel cost for the two meetings.

Task information plan

The Task will result in:

- The information on Big Data and energy efficiency on the IEA DSM website
- Trend two-pagers
- Webinars on the selected topics
- A leaflet about the project
- A final management report.

The Operating Agent will present at two conferences the (interim) results of the Task.

The products from the subtasks will be available at the Website for the IEA DSM Agreement.

Matters for the ExCo

- Discuss whether the objective is interesting
- Discuss how open/closed the information would be during the Task:
- Restricted to participants
- Non-participating countries: EXCO will pay if people in their country use products
- Free access for developing countries on request
- Clear indication of interest in participation
- Decide on a start now or decide at the next EXCO

TASK 17 – INTEGRATION OF DSM, DISTRIBUTED GENERATION, RENEWABLE ENERGY SOURCES AND ENERGY STORAGE – PHASE 3

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1. Summary

Phase 3 of IEA-DSM Task 17 will address the current role and potential of flexibility in electricity demand and supply of systems of energy consuming/producing processes in buildings (residential, commercial and industrial) equipped with DER (Electric Vehicles, PV, storage, heat pumps, ...) and their impacts on the grid and markets. The interdependence between the physical infrastructure of grid and the market side will also be looked upon. The scalability and applicability of conducted and on going projects with respect to specific regional differences and requirements will be explored (see *http://www.ieadsm.org/ViewTask.aspx?ID=16&Task=17&Sort=0*)

2. Objectives for the last six months

Subtask 10 – Role and potentials of flexible consumers

Deliverable of Subtask 10: *Current role and potentials of flexible consumers and producers in commercial segments, households, communities and buildings*

Assess the concepts and implementations of customer and home energy management systems (CEMS/HEMS), possibly linked to the smart meter, in different (participating) countries by:

- Comparing DR and DG specific requirements in households, communities, functional (office) buildings and industrial processes
- Role of Smart Meters (SM), (CEMS/HEMS gateways) and their interaction with flexible demand/supply devices as well as distributed energy resources in the terms of technical concepts
- Role of telemetry and existing process control systems and their interface to the HEMS or SM
- Evaluating strengths and weaknesses of ICT enabled aggregations of flexible demand and controllable DERs in the form of energy communities

Progress towards Subtask objectives

- The delivery document structure and content has been discussed and commented by the experts. A second draft has been commenced and is expected to be shared for comments and inputs at mid October.

Subtask 11 - Changes and impacts on grid and market operation

Assess the impact on grid and market operation based on technology penetration scenarios developed in subtask 5 and 9 (developed in phase 2) by investigating the following areas of interest:

- Energy balancing possibilities and potentials for commercial and grid operation optimization objectives of CEMS.
- Optimization potentials from a technical and market point of view using the SGAM framework

– Design a methodology to estimate potential and to cost effective activation in-line with SGAM and SGMM.
– Regulatory and market design issues for grid and (local) market operations

Progress towards Subtask objectives

– The Task started and inputs from the experts, studies and workshop participants have been received by the OA. First draft is prepared for mid October.

Subtask 12 - Sharing experiences and finding best practices

Based on the collected pilots and case studies from the previous subtasks, the results and findings of the finished projects in term of successful implementations, barriers and effectiveness will be analyzed.
– Lessons learned from existing pilots derived from workshops (e.g.; E-Energy Germany, EcoGrid-EU Bornholm, PowerMatchingCity-I and –II, NL-TKI, model city Salzburg, Amsterdam SmartCity, …)
– Innovation projects with large scale demand response in industry
– Comparisons and analysis of country specific differences in the implementation
– Assessment and development of a methodology to apply different demand response mechanism to individual countries.
– Extrapolation of the results from previous collected projects on applicability on a large scale.

Progress towards Subtask objectives

– Important and representative projects have been collected from the expert's presentation and inputs.
– Interviews to specific projects have been carried out and results have been analysed (as a part of a master thesis).
– The selected pilot projects are taken for the analysis part of the deliverable from Subtask 10.
– Additional input from international workshops have been gathered and compiled for the document.

Subtask 13 – Conclusion and Recommendations

Recommendations will arrived at in close interaction with the experts' opinions and will at least provide a ranking based on impacts, costs and likely future penetration of the technologies.

Progress towards Subtask objectives

This Subtask has not yet commenced.

Experts meetings/seminars/conferences held in past six months

Experts meetings

Date	Place	# of Experts	Type of meeting	Govern-ment	Industry	Academic
13.3.2015	Webconference	7	Web Meeting	0	3	4
09.06.2015	Webconference	7	Web Meeting	1	2	4
29.06.2015	Expert Meeting	13	Task Meeting	2	3	8

Seminars/Conferences

Date	Place	Partcipants	Type of meeting	Govern-ment	Industry	Academic
29.06.2015	Eindhoven, NL	100+	Workshop (organizer)	20	35	45
10.9.2015	EPFL, Lausanne, CH	100+	Conf. (public)	20	40	40
11.9.2015	EPFL, Lausanne, CH	25	Workshop (invited)	5	10	10
30.9.2015	Australia	20	Lecture	0	12	3
15.10.2015	Webinar	50-100(?)	Webinar	20%	40%	40%

Reports produced in the past six months

– Short Summary of public Workshop on DR – Dream or Reality (IEEE PowerTech)

3. Objectives for the next six months

Subtask 10 - Role and potentials of flexible consumers

Deliverable of Subtask 10: *Current role and potentials of flexible consumers and producers in commercial segments, households, communities and buildings*
The final discussion and finishing of the document is expected for the next expert meeting at the end of 2015.

Subtask 11 - Changes and impacts on grid and market operation

Prepare and Discuss Deliverable of Subtask 11: *Financial and maturity assessment of technologies for aggregating DG-RES, DR and electricity storage systems*

Subtask 12 - Sharing experiences and finding best practices

Update and Analyse projects.

Experts meetings/seminars/conferences planned in the next six months

Planned Experts meetings

Date	Place
November 2015	Expert Meeting
Spring 2016	Expert Meeting
Summer 2016	Final Expert Meeting

Planned seminars/conferences

Date	Place
30.9.2015	Lecture on IEA Task 17 (Australia)
15.10.2015	Leonardo Webinar on DR Task 17
Summer 2016	Final public Workshop/Conference Maybe in conjunction with other IEA ETIs / Tasks

Reports/Publications planned for the next six months

- Deliverable of Subtask 10+11 (final)
- Deliverable of Subtask 12
- Deliverable of Subtask 13 (recommendations)
- (Conference article about state of the art / projects in DR of participating countries)

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4. Outreach

- Workshop on DR: Dream or Reality – IEEE Eindhoven
- On going exchange with potential new participating countries
  - Contact with Australian Expert – Lecture on Task 17 / Joining highly possible
  - Contact with Serbia – no funding but high interest
  - Contact with experts from Finland → Highly probable to join in Spring 2015
- Member of the *'Flexibility in Power Systems Advisory Panel'* for Ecofys study (Matthias) – Flexibilty Roadmap published.
- Leonardo Energy Webinar - Integrating renewables and enabling flexibility of households and buildings – IEA DSM Task 17
- Presentation at the Workshop DEMAND-SIDE FLEXIBILITY FOR ENERGY TRANSITIONS (EPFL Energy Center and International Risk Government Council)

5. Ideas for new work

- Following-up activities: (see document attached)
  - Evaluation, Measurement and Verification (EM&V) of DR – associated difficulties on how to measure the effects of a DR services
  - Forecast and Reliability – associated power system reliability issues and DR.

New Task proposal: Big Data for Energy Efficiency (see document attached)

6. Finance

AIT:
- Realization AIT (total/spent): 55k/~35k Euro
- OA contribution (total/spent): 45k€/ ~15k Euro

TNO
- OA Realization TNO: spent 50 k/ 20 k Eur in last 6 months

AIT and TNO offers sent and invoices of AIT have been sent; invoices of TNO have partly been sent, rest will be sent shortly.

7. Activity Time Schedule

IEA-DSM TASK XVII - Phase 3	Q2 14	Q3 14	Q4 14	Q1 15	Q2 15	Q3 15	Q4 15	Q1 16	Q2 16
Subtasks									
Subtask 10 - Role and potentials of flexible consumers									
Subtask 11 - Changes and impact on the grid and market operation									
Subtask 12 - Sharing experiences and finding best practices									
Subtaks 13 - Conclusion and recommendations									
Expert meetings									
Biannual country expert meeting									
Workshops									
Workshops with stakeholders and experts									
Reports									
Subtasks reports									
Final report									

8. Matters for the ExCo

Recommend the ExCo to approve the Task Status Update Report'.

9. Participating countries

Status of participating countries:

Country	Commitment
Austria	Y
Switzerland	Y
Sweden	Y
Copper Alliance	Y
The Netherlands	Y
USA	Y
Italy	N
Belgium	N
Serbia	N
India	N
Germany	N
Finland	N
Australia	N

Document H

POTENTIAL FOLLOW-UP ACTIVITIES ON TASK 17

Author: Matthias Stifter (AIT, Austria)
Version: 2015-09-24 First draft

Evaluation, Measurement and Verification (EM&V)

EM&V is a key requirement for establishing successful DR programs. The following topics need to be covered with respect to this problem:

- Quantification of expected gains
- Identification of customer's baseline demand/usage
- How are energy consumption reductions measured – no common standards exists.
- Different evaluation criteria between TSO, BRP and retailer may exist
- Level of measurement & verification: aggregator vs. household (pre-qualification requirements)
- Lack of EM&V is seen as a market barrier for consumer centered DR services

One of the *main objectives* of EM&V is to quantify the provision of a service according to the product specification:

- Qualify potential resources as an entry gate to participation
- Verify resource conformance during and after participation
- Determine amount of product delivered as part of financial settlement

From the above mentioned issues the following EM&V *requirements* can be derived in order to qualify and deploy DR services and products:

- Methodology of baseline metering (i.e. metering configuration)
- Measurement / Metering of DR product delivery
- Communication requirements i.e. availability, control signal response, security (CIA)
- Exchanging the metered information, including format and protocol
- Measurement interval, reading frequency / sampling and accuracy
- SLAs of the DR product

DR Forecast & Reliability

In Power System Operation an important part is the day ahead forecast of the load for the next 24 hours. This influences many planning processes from dispatch, scheduling and optimization of generator operation points to market related decisions on energy provisioning. Accuracy has a strong impact on operational issues from activating balancing reserves to optimizing network operation like reactive power flows and transformer tap position.
DR can be used to deliver ancillary services for a number of the mentioned processes e.g., balancing reserve, participate in energy market, emergency services and so on. On one hand it can be used to mitigate and integrate volatile generation on the other hand it could lead to problems in system stability like oscillations in load variations. Thus the following research questions have to be addressed:

- Accurate DR forecasting and modeling of DR behavior for integration into power system operation
- Understanding the external parameter dependencies;

- Reasons for variations and deviations of estimated DR behavior
- System interaction and critical parameters e.g., penetration levels, communication latency, price variations, DR signal intervals or durations, temperature, rare events
- Reliability of forecasts and impact assessment in case of different behavior failure of DR service
- Mitigation and control of problems due to DR failures

Background information

Additional Information to the "Baseline Methodology"

- Historical baseline can be used as a reference
- No "one fits all" approach possible
- Statistically valid and consistent results / un-biased to over/under-prediction needed
- Examples:
    - Consumption of previous (ten) days / average of highest 5 days
    - Above + weather factor
    - Compare before/after signal
- Good Design: accuracy, simplicity and integrity
- DR event phase:
    - Ramp up
    - Sustained response period
    - Recovery period (rebound)
- NAESB (US) definition of 5 categories:
    - Baseline Type I: base on historical interval meter (+ weather)
    - Maximum Base Load ("Firm Service Level"): constant max. level of electricity demand (remain or below)
    - Before – After: immediately preceding an event
    - Baseline Type II: statistical sampling for portfolio (no individual metering available)
    - Generation: on-site generation
- Examples of US TSO Definitions
-

References

[SEDC] 4 Steps and 10 Guidelines for enabling DR:

- Step 3) Develop measurement and verification requirements
- Rule 6: Establish appropriate and fair measurement and communication protocols
- Member Status: Austria: EM&V: Changes in TOR in 2015?

http://sedc-coalition.eu/wp-content/uploads/2014/04/SEDC-Mapping_DR_In_Europe-2014-04111.pdf

[EED] Energy Efficiency Directive (15.8) drafted to the Grid Codes before fully implemented in Member States.

TASK 24 – PHASE II – HELPING THE BEHAVIOUR CHANGERS

1. Summary

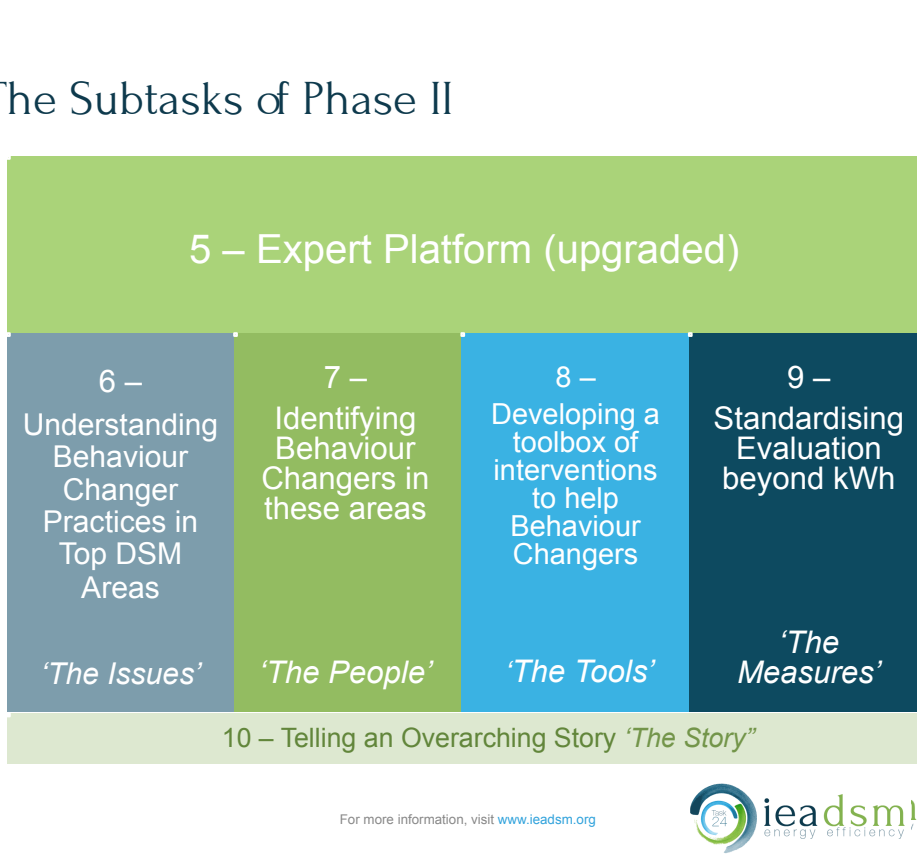
There is no behaviour change 'silver bullet', like there is no technological silver bullet that will ensure energy efficient practices. Designing the right programmes and policies that can be measured and evaluated to have achieved lasting behavioural and social norm change is difficult. We believe that this Task, and its extension, helped address these difficulties by developing guidelines, recommendations and examples of best (and good) practice and learnings from various cultures and contexts. We rely on a large, global network of 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.

This Task (Phase I) had several Deliverables, including the expert network and platform for continued exchange of knowledge and successes, the large-scale analysis of the helicopter overview and case studies, several reports, factsheets and guidelines on how to evaluate behavioural interventions and the country reports with specific to do's and not to do's, future research questions and re-iterated case studies following our best practice recommendations. Phase I of this Task is now finalised and Phase II (How to help the Behaviour Changers) has commenced.

Phase II of Task 24 takes the theory into practice. Building on the solid theoretical foundations of Phase I, we now look at the:

- What?
- Who?
- How?
- Why? and
- So What?

We use a *Collective Impact Approach* methodology and *storytelling* as the overarching language and bring together Behaviour Changers from all sectors (industry, government, research, middle actors and the third sector) with the end users whose behaviour they are ultimately trying to change.



2. Objectives for the last 6 months

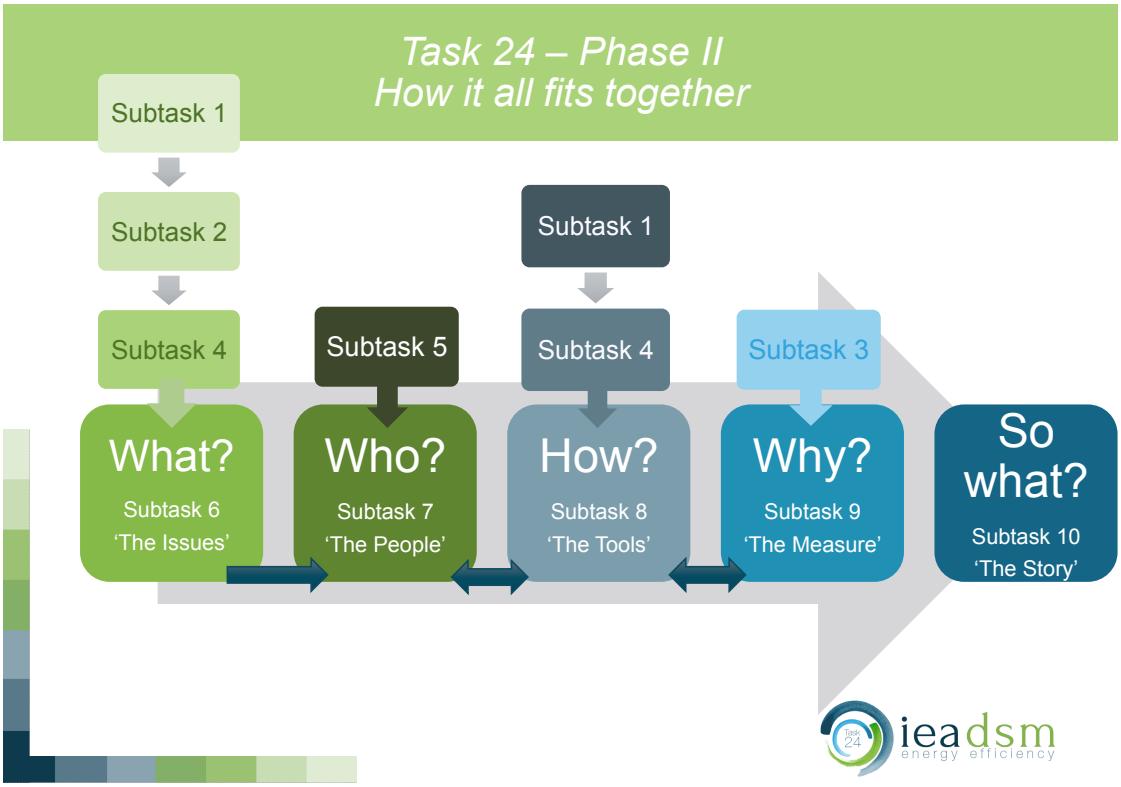
Subtask 5

Objectives

- Expert platform continually growing and getting used
- New content including presentations, videos and reports uploaded
- Continue publicising and dissemination of Task 24, including at international conferences

Progress towards Subtask objectives

Progress in last six months was highly satisfactory, we now have >230 experts on the expert platform and professional films from all presentations of the Graz and Toronto workshops online. All other final reports are on the IEA DSM website, which has been updated for both Phase I and Phase II. Google Analytics show continued strong utilisation of the ning website, especially after broadcast emails with links to all new content are sent (time spent on site usually around 10 minutes). We continue having great successes in matchmaking experts, with several spending time at each others' Universities, for example, or developing new research collaborations. We recently hosted Katy Janda, from Oxford University (our 'fairy godmother' of storytelling) in New Zealand, as well as Malcolm McCulloch, also of Oxford University who partook in our NZ Task 24 workshop and Aimee Ambrose, our UK National Expert from Sheffield Hallam University. The dissemination of the Task is going very well, there was another Spotlight article, EEIP magazine article on our ESCo report, two eceee summer study publications, a very successful informal eceee workshop with over 50 attendees, Karlin et al published an IEPPEC report on Subtask 9, Sea gave a BECC conference presentation and a lecture for the Australian International Energy Centre. In addition, Ruth gave our second Task 24 webinar for the IEA DSM University.



Subtask 6

Objectives

- Building on work from Subtasks 2 and 4, develop lists of common top 3 DSM implementable issues and their potentials in each country
- Use the Collective Impact Approach and the Task 24 Expert Platform to research and review current approaches and practices, nationally and internationally, on these top issues and provide feedback from the different disciplinary perspectives and their collaborative discussions and negotiations from available case studies and narratives that could illuminate some of the approaches (based on work in Subtask 1, 2 and 7)
- Feed these cases, and the ones analysed in Subtask 1 and 2 into a Toolbox of Interventions (ST 8)

Progress towards Subtask objectives

Subtask 6 has been kicked off with workshops in Toronto in May, Stockholm in June and New Zealand in September. We have started collecting lists of DSM interventions and energy efficiency and behaviour priorities in each of these countries. We have discussed the top 3 issues in each of these countries during workshops. In addition work has started in the Netherlands. Top issues are being discussed and a selection is made to focus on SMEs.

Subtask 7

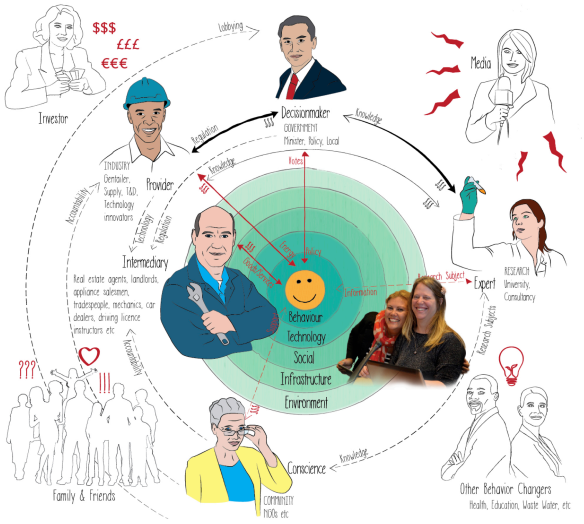
Objectives

- Identify, with help of the ExCo, National Experts and existing Expert Platform the most appropriate Behaviour Changers focusing on at least one of the top 3 DSM issues chosen by each participating country (can include the residential, business and transport sectors)
- Collect detailed information on their specific interests, organisations and past and current work, get each to tell their 'Sector Story'
- Use the Collective Impact Approach to initiate discussions between different disciplinary perspectives and sectoral contexts. An explicit focus will be on deepening the understanding of the political-institutional context Behaviour Changers are operating in and what it means for their capacity to take a more systemic approach to behavioural change

- Develop national Behaviour Changer dialogues in each participating country by holding (bi) annual workshops (1-2 days per country per year, all up maximum of 6 days per country - note some of this time includes work from ST 6 and 8)
- Foster mutual engagement, collaboration and shared learning amongst Behaviour Changers, enable them to build relationships on neutral, trusted ground
- Backbone support to set a common agenda, measurement systems, mutually reinforcing activities and ongoing communication between the Behaviour Changers
- Evaluate Behaviour Changers' impressions on the effectiveness of the Collective Impact Approach and use of narratives as a common language to overcome barriers
- Collect examples of successful matchmaking stories.

Progress towards Subtask objectives

Behaviour Changers have been identified for the top issues decided on in Subtask 6 for Canada, Sweden and New Zealand. Their sector stories have been told during workshops and we have initiated deep discussions around relationships, mandates, stakeholders, restrictions and value propositions for each of the Behaviour Changers using the 'Behaviour Changer Framework'.



Subtask 8

Objectives

- Use the Collective Impact Approach to unite Behaviour Changers from all 5 sectors on a specific DSM issue (both chosen in ST 6 & 7) and develop, in collaboration, a common agenda, shared measurement indices, mutually reinforcing activities (a 'roadmap'), continuous communication and the backbone support function necessary to make it happen. Evaluate this approach continually via stakeholder analyses
- Collect information for a Decisionmaking Tree to pick the most appropriate case studies and models of understanding analysed by Task 24 (ST 1, 2 and 6) and test its usability with the Behaviour Changers
- Develop the common language of storytelling further and provide different examples of using storytelling and narratives in practice and how to best do it in the specific areas of focus and each of the Behaviour Changers' sectors
- Identify all the tools in each Behaviour Changer's Toolbox of Interventions, analyse their pros and cons, risks and opportunities, where they fall short and how another tool from another Behaviour Changer could overcome this deficit
- Continued testing and development of the Evaluation Tools (ST 3) that can prove if a (toolbox of) intervention/s leads to actual, on going behaviour changes in practice. The Behaviour Changers will feed back on its potential applicability, risks and additional needs by working through (hypothetical or real life) examples chosen in ST 6 and using double-loop learning approaches to assess multiple benefits of interventions

- Collaborative development of a testable Toolbox of Interventions for each top DSM focus area, where each Behaviour Changer sector has clearly identified and measurable roles and responsibilities. This intervention may then be taken into a real-life setting and trialled in practice (either as ST 11 or outside of Task 24)
- The toolbox is built on national and sectoral context specificities but will be synthesised and tested (e.g. in the international conference (ST5)) for the general aspects that are of international validity (ST10 - the overarching story).

Progress towards Subtask objectives

Some work on continued development of the evaluation tools from Subtask 3, Deliverables 3A and B has taken place. Storytelling in Task 24 has been published and presented, to a lot of acclaim, at the eceee summer study. We are currently working on a Special Edition Issue on Storytelling for the Journal of Energy and Social Science Research. The Task 24 monitoring and evaluation work was also presented at the ECEEE summer study.

Subtask 9

Objectives

- The goal of this research is to develop and validate a set of tools and metrics that can be used consistently for the evaluation of behaviour-based energy programmes including but not limited to eco-feedback, home audits, information and rebate programmes, and social games
- An in-depth assessment of current (best) practice, cultural and disciplinary idiosyncracies, country drivers and needs and the best possible international standard (along the lines of psychometric tools like the IQ test - arguably not a perfect indicator of intelligence, but valuable in terms of enabling measurement and comparison).

Progress towards Subtask objectives

Karlin (the Principal Investigator of this Subtask) et al have published a paper at the IEPPEC conference in August that outlines the basics of the Beyond kWh toolkit they are developing for Subtask 9. It is co-funded to the tune of USD$100,000 by PG&E and Southern California Edison and will be tested and validated in our Task 24 countries in 2017.

Subtask 10

Objectives

- Collate, analyse and distil all information collected in Subtasks 6-9. Develop an international, interactive handbook with guidelines and recommendations including:
- Evidence of the usefulness of following a Collective Impact Approach to solve complex whole-system, societal energy problems in practice.
- A decisionmaking tool from 75+ cases collected in Subtasks 1, 2 and 7.
- A practical guide on storytelling with the many examples and stories collected here.
- Overview of countries' and sectors' toolboxes of interventions, common findings and learnings.
- Overview of usefulness of the evaluation tools for each country and sector (as developed in ST 3 and ST 9).

Progress towards Subtask objectives

This Subtask will not start until end of 2017.

3. Objectives for the next 6 months

Subtask 5

Continue attracting experts to expert platform, update visual branding to new IEA DSM brand. Update Wiki with latest case studies, rebrand. Use TEAMWORK project management tool to

project manage national experts (Subtask 0). Work on special edition on storytelling and start organising International Task 24 conference (maybe in line with next BEHAVE conference).

Subtask 6

Continue with issues definition including in countries we haven't started in yet (Austria and the Netherlands). Start writing issues reports and collate DSM lists in New Zealand, Sweden and Canada.

Subtask 7

Will hold another 4 workshops at least in next 6 months (New Zealand, Canada, Netherlands, Sweden, hopefully Austria). Will pull together most relevant Behaviour Changers in each participating country. Workshop notes all written up, workshop protocol finalised, all Behaviour Changer Frameworks (BCFs) animated in prezis.

Subtask 8

Continue working on storytelling and evaluation guidelines. Start working on decisionmaking tree for Subtask 1 and 2 case studies and models of understanding behaviour.

Subtask 9

Continue working on 'Beyond kWh' toolkit.

Subtask 10

Not until 2017.

4. Outreach

Outreach of this Task was highly successful and manifold. We had a very strong presence at the eceee summer study, presented at the Swedish Energy Agency on our storytelling work, presented at DECC with support of our UK Task 24 experts, helped the IEA Secretariat organise a behaviour change workshop, gave more webinars and lectures, invited and hosted several Task 24 experts in New Zealand and made contact with 4E in Australia to discuss potential collaborations. We will also run a paid Task 24 workshop at BECC, the largest behaviour, energy and climate change conference with over 700 attendees. We will have a Task 24 expert dinner there as well and lead the social media presence at BECC. There will also be a Task 24 talk at a large conference with US industry organised by PG&E in November.

Experts meetings/seminars/conferences held in past six months

Experts and stakeholder meetings

Date	Place	# of Experts	Type of meeting	Government	Industry	Academic
27/05/15	Toronto, Canada	13	SHM	2	9	2
03/06/15	Eceee summer study	50	Experts	10+	5+	30+
11/06/15	Stockholm, SE	8	SHM	3	4	1
14/06/15	London, UK	12	SHM	3	2	7
23/09/15	Wellington, NZ	12	SHM	3	6	3
18/10/15	Sacramento, US	25	Experts			

Seminars/Conferences/Lectures

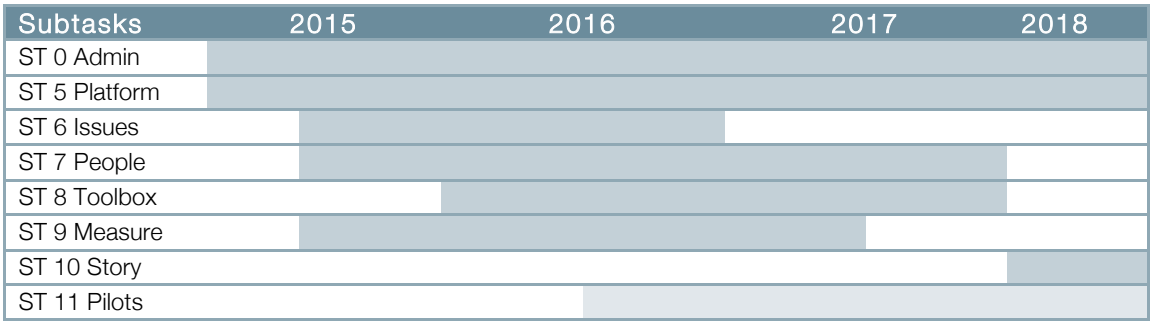
Date	Place	Partcipants	Type of meeting	Government	Industry	Academic
26/05/15	Toronto, CA	40+	Seminar	10	25	5
11/06/15	Stockholm, SE	20	Seminar	20		
13/05/15	DSM University	>100	Webinar			
02 to 06/06	Eceee summer study	500	Conference			
19/10/15	BECC	700	Conference			
28/09/15	Australia	20+	Lecture			

5. Ideas for new work

Task 24 plans to support the new Task 26 on Multiple Benefits Analysis.

6. Activity Time Schedule

Based on 4 participating countries.



7. Finance

We have invoiced and received payment from 3 out of 4 countries (Austria is being invoiced in October). Budgets are on-track.

8. Matters for the ExCo

Please finalise Task 24 Phase I officially (we have now received the Austrian reports for Subtasks 2 and 4). Please accept this Status Update.

9. Participating Countries

Austria
New Zealand
Sweden
The Netherlands

Hopefully soon: Canada, US, UK, Norway
Interested: Australia, Ireland

Document J

TASK 16 – INOVATIVE ENERGY SERVICES – PHASE III ENERGY EFFICIENCY AND DEMAND RESPONSE (end) PHASE IV LIFE-CYCLE COST; 'DEEP RETROFIT'; SIMPLIFIED M&V; (CROWD)-FINANCING & ES TAXONOMY (start)

Operating Agent:

Jan W. Bleyl - Energetic Solutions
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1. Summary

In Task 16 "Innovative Energy Services", energy service experts and partners from countries around the world join forces to advance know how, experiences and market development of performance-based energy services.

Main subtasks are individual National Implementation Activities, an Energy Services Expert Platform for mutual exchange and support as well as national & international dissemination activities including the DSM University. Furthermore national & international stakeholder workshops are organized to discuss energy service topics relevant to the host country and to present and disseminate results of Task 16.

The Think Tank is the common research platform with previous publications such as the 'Integrated Energy-Contracting' business model, the 'Facilitator' concept, 'Simplified Measurement & Verification' of energy savings or Comprehensive Refurbishment ('deep retrofit') business models.

The Think Tank in Phase IV will focus on Life-Cycle Cost appraisals, 'Deep Retrofit' of buildings; Simplified Measurement & Verification of savings (M&V); (Crowd)-Financing for EE & RE projects and a journal paper on energy services taxonomy.

2. Objectives and accomplishments since last report (Phase III + IV)

Subtask 13 – Energy Service Expert Platform

Objective: The platform is the internal and external communication hub of Task 16. It consists of the national experts, the operating agent, invited guests and cooperation partners. The platform hosts the internal experts meetings as well as public stakeholder workshops and other seminars.

Progress towards Subtask objectives

– Execution of the 18th experts meeting held in France May 30 – June 1 2015 (back to back with ECEEE summer studies). The main agenda items were presentation and discussion of national

implementation activities, current Think Tank topics and dissemination activities and plans for Task 16 Phase IV

- Preparations started for the 19th experts meeting, to be held in Spring 2016 (exact date and location tbd)

Subtask 13 + 17 – Stakeholder workshops (national & international)

Objective: The expert platform hosts a series of public national or international stakeholder workshops. They are held either back to back with expert meetings or as national stand alone events to discuss energy service topics relevant to the host country of the meeting and to present and disseminate results of Task 16.

Progress towards Subtask objectives

- Execution of a national stakeholder workshop "ESCo Themenwerkstatt" in the framework of the GIZ MATA in Bad Lauterburg, Germany on 08 July 2015
- Preparation of a national stakeholder workshop "Bankable Calculation & Financing of Energy Efficiency Projects" during the GIZ Renewable Energy Week in Berlin, Germany to be held on 14 October 2015
- Preparation of a national stakeholder workshop "Einsparcontracting in öffentlichen Gebäuden" to be held in Ittingen near Bern, Switzerland on 25 November 2015

Subtask 14 - Think Tank for innovative Energy-Contracting models and support tools

Objective: Applied research, development and testing of innovative, performance-based energy service models and tools and publication of the results.

Progress towards Subtask objectives

- Publication of a Task 16 discussion paper on Simplified measurement & verification + quality assurance instruments for energy, water and CO_2 savings. Methodologies and examples. Including examples and national perspectives of Task 16 experts. (Further additions from new Task 16 participants possible and welcomed)
- Work continued on business models for comprehensive building refurbishment ('deep retrofit'): Further development of an economic feasibility evaluation tool including sensitivity analyses for deep retrofit application. Application of the tool in several case studies, e.g. in Denmark, Germany and Austria. First bankable project calclulations performed. Work in close cooperation with IEA ECB Annex 61
- Drafting of a Taxonomy paper on Energy Services to be published in a peer-reviewed journal in cooperation with Linköping University
- Work kicked off on Crowd-Financing for Energy efficiency and renewable investments: What can Crowd-Financing contribute? Access to CAPEX for smaller projects in SME, communities? Bridge the mezzanine financing gap? Reduce risks and transaction cost? In cooperation with GIZ

Subtask 15 - Demand Response Services business models

Objective: Assessing economic pre-feasibility of demand response energy services business models

Progress towards Subtask objectives

Work finalized:

– Publication of a Task 16 discussion paper Demand Response Services: Economic Pre-Feasibility Model and Case Studies for Austria September 2015

Subtask 16 - Coaching of individual National Implementation Activities (NIA)

Objective: Implementation of country specific national activities to develop know how and energy service markets

Progress towards Subtask objectives

– Implementation of the individual NIA plans to develop know how and energy service markets were followed up, the experts gave detailed presentations and exchanged experiences and good practices during the last platform meeting and through teleconferences in between meetings

Subtask 17 – Dissemination and cooperation

Objective: Dissemination of Task 16 results and experiences through presentations, stakeholder workshops, publications, cooperation with other ES projects and the DSM University

Progress towards Subtask objectives

Publications and presentations at various national and international conferences and seminars were given, e.g.:

– Co-operation with other ongoing energy service projects and institutions:
  - ECB Annex 61 => Deep retrofit feasibility analyses and business models
  - IEA IETS Annex 16 Energy Efficiency in SMEs => business models
  - Linköping University => ES taxonomy and other topics
  - dena (German Energy Agency) => Simplified M&V guidebook (in German language)
– Continuation of know how transfer and supervision for a start-up ESCo in Croatia on a 1 MW_{el} wood chip gasification CHP project
– ESCo manager trainings in Medenec, South Africa, Carribean in coperation with GIZ: Investment grade Calculation, Analyses & Financing of ESCo Projects (for EPC and ESC Business Models). Introduction & hands-on training
– New Life-cycle cost workshop for evaluation of energy efficiency and renewable projects an introduction presented in Vienna and Salzburg

Subtask 18 - Management and Reporting

Objective: Project management and reporting

Progress towards Subtask objectives

– No particular activities in addition to regular work, besides
– Preparation of Task 16 Phase IV: 2,3 countries committed so far

Experts meetings/seminars/conferences held in past six months

Experts meetings

Date	**Place**	**# of Experts**	**Type of meeting**	Govern-ment	Industry	Academic
30.05-01.06.15	Hyères, France	12	Experts meeting	5	5	2

Seminars/Conferences/Workshops

Date	**Place**	**Partcipants**	**Type of meeting**	Govern-ment	Industry	Academic
24.-25.03.15	Durban, SA	40	Workshop	25	15	0
30.03 - 03.04.15	Capetown, South Africa	30	Workshop	5	23	2
08. April 15	Vienna, Austria	10	seminar	3	6	1
09. April 15	Vienna, Austria	15	seminar	5	9	1
15. July 15	Bad Lauterburg Germany	60	workshop	40	15	5
15. Sept. 15	Salzburg, Austria	5	seminar	3	2	0

Reports produced in the past six months

- Task 16 discussion paper Demand Response Services: Economic Pre-Feasibility Model and Case Studies for Austria September 2015
- Simplified measurement & verification + quality assurance instruments for energy, water and CO_2 savings. Methodologies and examples. Including examples and national perspectives of Task 16 experts June 2015

3. Objectives for the next six months (Phase IV)

Subtask 19 – Energy Service Expert Platform

- Expert platform teleconferences (to integrate new Task 16 members)
- Preparation of the 19th experts meeting, to be held in 2016 (exact date and location tbd; preliminary planning for Spring in the Netherlands)
  The main agenda items will be presentation and discussion of national implementation activities, discussions on current Think Tank topics and dissemination activities

Subtask 19 + 23 – Stakeholder workshops

- Execution of a national stakeholder workshop “Einsparcontracting in öffentlichen Gebäuden” to be held in Ittingen near Bern, Switzerland on 25 November 2015
- Execution of a national stakeholder workshop “Bankable Calculation & Financing of Energy Efficiency Projects” during the GIZ Renewable Energy Week in Berlin, Germany to be held on 14 October 2015
- Preparation of the 19th stakeholder workshop, to be held in 2016 (exact date and location tbd; preliminary planning for Spring in the Netherlands)

Subtask 20 - Think Tank for innovative energy service models and support tools

- Simplified measurement & verification + quality assurance instruments for energy, water and CO_2 savings. Methodologies and examples. Including examples and national perspectives of Task 16 experts. => Further additions from (new) Task 16 participants
- Continue work on business models for comprehensive building refurbishment ('deep retrofit'): Application of pre-feasibility and bankable tools to more case studies. Work in close cooperation with IEA ECB Annex 61 => Further case studies from (new) Task 16 participants
- Finalize draft of a Taxonomy paper on Energy Services to be published in a peer-reviewed journal in cooperation with Linköping University
- Continue work on Crowd-Financing for Energy efficiency and renewable investments: What can Crowd-Financing contribute? Access to CAPEX for smaller projects in SME, communities? Bridge the mezzanine financing gap? Reduce risks and transaction cost? In cooperation with GIZ

Subtask 21 - Coaching of individual National Implementation Activities (NIA)

- Continue implementation of individual NIA plans to develop know how and energy service markets.
- To follow up, experts will give detailed presentations and exchange experiences and good practices during the next platform meeting and through teleconferences in between meetings

Subtask 22 – Dissemination and cooperation

Publications, presentations or workshops planned:

- Co-operation with other ongoing energy service projects and institutions:
  - ECB Annex 61 => Deep retrofit pre-feasibility and bankable project analyses
  - Linköping University => ES taxonomy and other topics
  - FH Pinkafeld - applied science university => Master class on energy services
- Economic appraisals to communicate between technicians and management. Methods, calculation and examples – an introduction. Seminar for energy technicians in industry (December 2015)
- Continuation of know how transfer and supervision for a start-up ESCo in Croatia => 1 Mw_{el} wood chip gasification + CHP for heat & green electrictiy supply project (3,5 – 4,0 Mio EUR investment)
- ESCo manager trainings in Marokko, Thailand, Jordan in cooperation with GIZ: Investment grade Calculation, Analyses & Financing of ESCo Projects (for EPC and ESC Business Models). Introduction & hands-on training
- Chairing of finance session during European Utility Week 2015 in Vienna (November 2015)
- Task 16 Leonardo ENERGY IEA DSM University webinar on Simplified M&V 16 December 2015
- Present Life-Cycle Cost workshop for evaluation of energy efficiency and renewable projects an introduction

Subtask 23 - Management and Reporting

- in addition to regular management and reporting activities: Continue preparation of phase IV One or two more countries needed.

Experts meetings/seminars/conferences planned in the next six months

Planned Experts meetings

Date	Place
25.11.15	National stakeholder workshop Ittingen bei Bern, Switzerland
Spring 2016	Tbd

Planned seminars/conferences

Date	Place
14.10.15	Nat. Stakeholderworkshop, Berlin, Germany
Spring 2016	Tbd
003 Dec. 2015	Gmunden, Austria (Seminar)
Dec. 2015 Jan. 2016	FH-Pinkafeld, Austria (Lecturing)
Sept., Nov., Dec. '15, January '16	Marokko, Pakistan, Jordan. Thailand (Trainings + workshops)

Reports/Publications planned for the next six months

- 3rd edition of IEA DSM Task 16 discussion paper: Simplified measurement & verification + quality assurance instruments for energy, water and CO_2 savings. Methodologies and examples. Including examples and national perspectives of Task 16 experts
- First draft for a Taxonomy paper on Energy Services for internal discussion
- Contributions to IEA DSM Spotlight and other shorter formats

Overview of Think Tank topics and research questions (Phase IV)

1. Life Cycle Costing and economic rationale of EE and RES:
   - 3 Methodologies how to perform Life-Cycle Cost appraisals: 1. Pre-feasibility, 2. Comparisons, 3. „Bankable" incl. financing
   - Communication with financial decision makers
   - Case studies from different DSM applications: Re-lighting, PV, CHP, HVAC, deep retrofit ...
   - Comparison of tools: Own tools, RETScreen ...
2. ‚Deep Retrofit' of buildings (Comprehensive refurbishment, NZEB) through Energy Services (in coop. with EBC Annex 61):
   - Economic pre-feasibility and opportunity cost to wait (case studies)
   - Investment-grade calculation & financing (case studies)
   - Business model advancement with stakeholders including financiers
   - How to factor in Multiple Energy Benefits?
   - Policy implications & recommendations
3. Simplified M&V (continued):
   - Deepening & more examples
   - Adaption and publication of national versions + academic journal
   - Dialogue with IPMVP + other stakeholders
4. Financing: Crowd-financing for EE and RES investments, e.g.
   - What can Crowd-Financing contribute? Access to CAPEX for smaller projects in SME, communities? Bridge the mezzanine financing gap? Reduce risks and transaction cost?

- Building on a study in cooperation with GIZ: National perspectives …

5. Energy Services Taxonomy for an academic journal paper
6. Knowledge exchange + transfer to developing markets + DSM-University
   - Simplified M&V, Lessons learned for project & market development (e.g. 'Facilitators')
   … other topics on demand

4. Outreach

Please refer to previous sections for an overview on outreach activities.

5. Ideas for new work

Currently no ideas for new work (besides new Phase IV work).

6. Finance

Phase III: An overview of the budget situation (total budget, cumulative spending and remaining budget) is as displayed in the following table:

(Budget and cost accumulation by item in EUR excl. VAT as of 30 June 2015)

Subtask unit	**Total budget** EUR	**Cumulative spending** EUR	**% spent** %	**Remaining** EUR
13 Energy Services Expert Platform	**36.000**	**37.600**	**104%**	**-1.600**
14 Energy Services Think Tank	**87.000**	**85.600**	**98%**	**1.400**
15 Demand Response ES Business Plans	**27.200**	**26.400**	**97%**	**800**
16 Coaching of National Implementation Activities	**12.800**	**14.200**	**111%**	**-1.400**
17 Dissemination (Internat. + Nat.)	**13.000**	**13.700**	**105%**	**-700**
18 Management & Reporting	**42.000**	**39.800**	**95%**	**2.200**
Subtotals	**218.000**	**217.300**	**100%**	**700**
Travel costs	**28.000**	**28.400**	**101%**	**-400**
Printing&other	**9.000**	**7.600**	**84%**	**1.400**
Totals	**255.000**	**253.300**	**99%**	**1.700**

The spending of the last reporting period was 42,400 EUR adding to total expenditure of 253,300 EUR, which equals 99 % of the total budget.

The income during last reporting period was 26,988 EUR (against 45,015 EUR billed). This adds to a total to be realized income of 255.00 EUR (assuming the outstanding bills get paid) against a total budget of 255,000 EUR.

The surplus of 1.700 EUR is proposed to be transferred to Phase IV (again assuming the outstanding two bills get paid).

Phase IV: There is no final budget for Phase IV yet. As of 15 September the preliminary budget is 104.500 EUR for the entire 3 year period. This consists of full contributions from

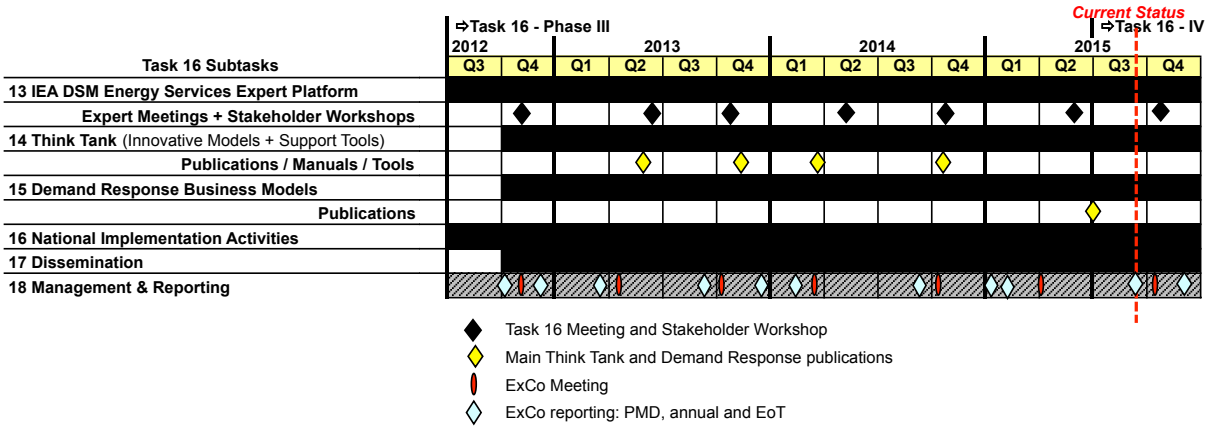
Netherlands and Switzerland (3 x 14.500 EUR each) + 1st year from GIZ (14.500,- EUR) + surplus from Phase III (1.700 EUR).

A more detailed budget will be provided upon other countries decisions for participation. The plan is to have 4 to 5 cost sharing countries, which would lead to a total budget of between 174.000 and 217.500 (all denominations in EUR).

7. Activity Time Schedule

Phase III started on 1 July 2012 and has ended on 30 June 2015.

Task 16 - Phase III+IV Timetable (as of September 2015)



All scheduled events and reporting targets have been met.
Phase IV has started operation on 01 July 2015 and will end 30 June 2018 *(c.f. section 3 ff. for more details).* A more detailed schedule will be provided after next ExCo upon other countries decisions for participation or not.

8. Matters for the ExCo

Recommend the ExCo to approve the Task Status Update Report

9. Participating Countries

Phase III: Austria (since 2014), Belgium, GIZ (since 2014), Korea, The Netherlands, Sweden and Switzerland *(in alphabetical order)*.

Phase IV (as of 15. Sept. 2015): GIZ (until April 16), Switzerland, The Netherlands *(in alphabetical order)*.

At least two more countries expected (currently talks with Austria, Belgium, Canada (Nova Scotia), England & Norway)

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TASK 25 – BUSINESS MODELS FOR A MORE EFFECTIVE MARKET UPTAKE OF EE ENERGY SERVICES

Operating Agent

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1. Summary

This Task will focus on identifying existing business models and customer approaches providing EE and DSM services to SMEs and residential communities, analysing promising effective business models and services, identifying and supporting the creation of national energy ecosystems in which these business models can succeed, provide guidelines to remove barriers and solve problems, and finally working together closely with both national suppliers and clients of business models. The longer-term aim of this Task is to contribute to the growth of the supply and demand market for energy efficiency and DSM amongst SMEs and communities in participating countries.

2. Objectives for the last six months

This Task started November 1st 2014.

Subtask 0: Pre-scoping

The focus of this task was on making a first inventory of issues of common interest regarding business models and Service Value propositions on Energy efficiency. The main objective of this subtask was to map valuable knowledge, identify country specifics and general objectives.

Progress towards Subtask objectives: subtask completed

- O1: Writing work plan, in close cooperation with team (DuneWorks, Ideate, TU/e) and interested countries: final work plan available, completed.
- O2: Performing a quick scan of country specifics (relevant policy and regulation, research, business models. energy targets etc.). Completed and integrated in work plan.
- O3: Attendance (virtual) of ExCo meeting in 2014: completed.

Subtask 1

This subtask is dealing with all management issues.

Progress towards Subtask objectives

- Overall project coordination and management, including contact relationship management: ongoing
- 1.2 Attendance of ExCo meetings, conferences and reporting to IEA DSM ExCo: ongoing

- 1.3 Set-up Task Advisory Board (AB) of stakeholders (ExCo, IEA, intermediaries from research, industry, government, community sectors): ongoing

Subtask 2: Identify proven and potential business models for energy services

There are many energy service business models "out there" and often they are closely linked to existing market structures and policies. In other words, business models are often country and context specific. We will start with an inventory of different existing business models, both in the participating countries and also including global examples of successful business models. In the different participating countries we will analyse what business models exist, and what frameworks (market and policy) accompany them.

Progress towards Subtask objectives

1. Identifying country specific suppliers, clients, and their stakeholder networks and trying to establish national advisory expert networks to continue working with throughout the task: stakeholder lists are being set up and will have been completed before the EXCO meeting in Canada. Ongoing, completed before Exco meeting.
2. Narrowing down the focus of both services, target groups and typology of business models in close cooperation with national experts and other relevant stakeholders: initiated and translated into what information to collect in longlist, narrowing down took place during first expert workshop March 9-10th 2015.Completed
3. Clarifying how the different parameters of success of business models and services will relate to each other in the analysis – economic profitability, scale of impact and real savings, business creation, growth rate, synergies with other values, adoption rate etc. Discussed during workshop March 10th, and through literature review being conducted. Completed.
4. Developing a task specific typology or categorisation of business models and services for EE. Completed.
5. Developing an overview of existing energy service business models in the participating countries and their frameworks/ecosystems and how they meet and incorporate client needs.
    a. Longlist overview of existing services and business models completed for all countries except Norway (joined later)
    b. Shortlist overview of services completed for all countries except Norway
6. Reviewing global existing business models and their frameworks/ecosystems with a clear focus on quantifying and qualifying effectiveness (e.g. amount of customers reached, market share, savings aimed for, other outcomes, ROI). Completed

Subtask 3

Not yet started

Subtask 4

- *See dissemination activities section and conferences*

Experts meetings/seminars/conferences held in past six months

Experts meetings

- January 8th 2015 Online webinar kick off Task 25
- March 10th 2015 Eindhoven Netherlands, Subtask 2
- Many teleconferences and Skype meetings with individual experts

Seminars/Conferences

Date	Place	Partcipants	Type of meeting	Govern-ment	Industry	Academic
30-03-2015	Cape Town	mixed	Conference	>20?	>40?	>40?

Reports produced in the past six months

- Literature review user centric design in business models
- First Task 25 newsletter
- Global analysis of business models, longlist and shortlist (confidential for now, distributed amongst partners only)
-

3. Objectives for the next three months

Subtask 1 Task management

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

Subtask 2: Identify proven and potential business models for energy services

1. In-depth comparative analysis of around 4 similar business models in different countries and around 12 per country. Determining patterns, drivers and pitfalls. Started
2. Identifying key factors that make services (and their vendors) succeed in the participating countries through an in-depth analysis of country specific markets and policies for energy services and their influences on business models; Started
3. Organising first country workshops with service providers and clients. Workshops are planned in:
    a. Switzerland: 2-3 November
    b. Austria: 4-5 November
    c. Sweden: 7-8 December
4. Creating a draft report with all the national examples, the best practices and the analysis including useful tips and tricks etcetera.

Subtask 4 expert platform

- Link to existing DSM IA expert platforms and experts and maintain a section for Task 25. **Started**

Experts meetings/seminars/conferences planned in the next six months

Planned Experts meetings

Date	Place
19-11-2015	Webinar Task 25 DSM University
Ocotber and november	Meetings with experts in Sweden, Austria and Switzerland prior to the workshops with stakeholders

Reports/Publications planned for the next six months

- Draft Review report subtask 2
- Spotlight issue on results of analysis
- National publications in sectoral journals

4. Outreach

- We plan to disseminate a newsletter every month or two to a group of several hundred stakeholders internationally.
- Together with the Leonardo Academy we have decided to create a series of web presentations for the different business models we investigate.

5. Ideas for new work

- There is a new Horizon 2020 call, opening beginning of next year, closing in the fall of 2016, where our task 25 work would fit fantastically and we could expand to other countries with very good financing from the European Commission. We would like the Exco to express their interest in participating.
- We would like to add two subtasks in the future:
    1. Subtask 5: this subtask would focus explicitly on how to address issues of multiple benefits in business modelling and service design for energy efficiency. A proposal for this will be presented and if Exco approves we will work this into an official proposal for the next Exco in Sweden.
    2. Subtask 6: this subtask would follow once a large part of the subtask 2 and 3 work has been performed. The subtask would focus on performing an in-depth empirical end-user analysis for the 5 types of propositions we will have been focused on. The aim of this subtask would be to provide policymakers and entrepreneurs more insight in the perspective of very concrete end-users of very concrete type of energy efficiency services. A proposal for this will be presented and if ExCo approves we will work this into an official proposal for the next ExCo in Sweden.

7. Finance

- Austria. Sweden and Switzerland have paid the first 50% of their contribution. A second invoice will be sent end of 2015, November or December.
- Copper institute is delivering in-kind and has decided to extend its participation in the Task
- In addition a pre-seed payment of 7500 euro was received in 2014.

- Netherlands is in the process of securing 50% funding, and we have submitted a proposal for research for the Netherlands with a subsidy scheme which would provide the other 50%. Results of the evaluation are expected beginning of October.
- Norway has joined the Task and a first payment is expected before the end of the year.

8. Activity Time Schedule

Subtask 1: Management of the task	Nov-dec 2014	Jan-feb	Mar-may	June-july	Aug-sep	Oct-nov	Dec-jan 2016	Feb-mar	Ap-may	Jun-jul	Aug-sep	Okt-nov
1.1 Set-up of an advisory board (AB)												
1.2 Annual Advisory Board (AB) meetings, exco meetings												
1.3 Overall projectmanagement and financial and administrative duties												
Subtask 2	Nov-dec 2014	Jan-feb	Mar-may	June-july	Aug-sep	Oct-nov	Dec-jan 2016	Feb-mar	Ap-may	Jun-jul	Aug-sep	Okt-nov
2.1 Identifying relevant stakeholders and establishing national advisory expert networks												
2.2 Narrowing down the focus												
2.3 Clarifying parameters of successful business models and services												
2.4 Developing a typology of existing energy service business models												
2.5 Identifying existing business models and frameworks in participating countries												
2.6 reviewing global business models and services and frameworks												
2.7 In-depth comparative analysis												
2.8 Identifying key factors on national level												
2.9 organising regular workshops												
2.10 reporting results												
Subtask 3	Nov-dec 2014	Jan-feb	Mar-may	June-july	Aug-sep	Oct-nov	Dec-jan 2016	Feb-mar	Ap-may	Jun-jul	Aug-sep	Okt-nov
3.1 Developing potentially effective business models/services for each country												
3.2 creating policy guidelines/ roadmaps for policy makers and stakeholders												
3.3 contributing to setting-up piloting activities												
Subtask 4	Nov-dec 2014	Jan-feb	Mar-may	June-july	Aug-sep	Oct-nov	Dec-jan 2016	Feb-mar	Ap-may	Jun-jul	Aug-sep	Okt-nov

4.1 Design of a Stakeholder Engagement Plan												
4.2 Dissemination to academic journals, participation in conferences, creation of outreach material												
4.3 Connection to and utilisation of IEA expert platforms												

9. Matters for the ExCo

- Approval of Task Status Update Report.
- Approval of the start of a H2020 proposal.
- Decide upon extension of the Task with 1 year with the joining of Norway and possibly the Netherlands. We would like to still do most of the work next year, but would require some time to arrange for a good catch-up of Norway and Netherlands, and would use the final months of the extension to work on dissemination, outreach, and starting up of additional subtasks.
- Approval of definition of new subtasks.

10. Participating countries

1. Switzerland
2. European Copper Institute
3. Austria
4. Sweden
5. Norway
6. Netherlands (n the process of joining)
7. India is participating in kin in Subtask 2

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IEA DSM PROGRAMME VISIBILITY COMMITTEE REPORT

Submitted by Dr Sea Rotmann, Visibility Committee Chair

Annual Report

The 2014 Annual Report, including a Theme Chapter on "DSM priorities in participating countries" was made available electronically to Executive Committee members, Operating Agents and the EUWP and EEWP by the end of January 2015 and was uploaded to the IEA DSM website. Printed copies will be sent out to the EUWP, EEWP, Executive Committee Members and Operating Agents in March 2015. Executive Committee Members and Operating Agents should ensure that copies are distributed widely to all interested parties.

Issues

Executive Committee members need to suggest a topic for the Theme Chapter of the 2015 Annual Report

Website

The website has been updated and has been operational since July 2015. 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

Statistics to be sent out separately

Downloaded reports for Tasks – to be sent out separately.

Website Solstice and Weber Web

Solstice has handed over the original website and all its data to Weber Web (Australia/NZ) and the new website has been operational since July.

Issues

Members should review the website regularly and update their own work/interests, especially reports, any filmed workshops for youtube, presentations for slideshare etc

Spotlight Newsletter

In 2015 four DSM Spotlight newsletters will be published in total.

To date, the following 2015 newsletters have been published and are posted on the DSM website:

- Issue 56/published March 2015
- Issue 57/published June 2015
- Issue 58/published September 2015

The next issue will be published in December 2015. Articles due November 2nd.

Articles in Issue 56: – March 2015

- Note from the Chairman: We got a new logo
- Task 25: Beware! Energy Efficiency Services in the Making!
- DSM University
- Task 24: Did you behave as we designed you to?
- South Korea – Energy Paradigm Shifts from Supply to Demand
- Italy – IEA National Day

Articles in Issue 57 – June 2015

- Note from the Chairman: We don't google!
- Task 15: Network-Driven DSM
- Task 17: Demand Flexibility – Dream or Reality?
- Task 16: Facilitators

Articles in Issue 58 – September 2015

- Note from the Chairman: Is DSM getting old?
- Task 16: Second article in facilators series focused on national perspectives
- Task 16: Phase 4 - New Partners Welcome
- Task 24: Helping the Behaviour Changers
- Task 26: Multiple Benefits of EE

We are grateful to all the Executive Committee members and Operating Agents who have contributed articles to the Spotlight Newsletters in 2015 and hope they will continue to do so in 2016. In 2016, the Editor looks forward to highlighting not only the Task work, but also DSM work in the Member countries and any other articles of interest that our ExCo or Operating Agents are involved in. The newsletter is currently being reviewed to be shorter and in a more concise, electronic format that incorporates hyperlinks.

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].

Issues

With four newsletter issues published in 2015, it is proposed that the same be done in 2016.

Proposed 2016 schedule:

- Issue 60/March 2016 - articles due Jan 15
- Issue 61/June 2016 - articles due May 15
- Issue 62/Sept 2016 - articles due Aug 15
- Issue 63/Dec 2016 - articles due Nov 15

Brochure

The brochure and inserts have been updated with the new logo and branding.

Task Flyers

Task flyers have been updated in March 2015.

Social Media

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

- Facebook (IEA DSM Group) with 157 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 37 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 292 followers and 956 tweets. This is the fastest growing social media platform and has fostered some good engagement, re-tweets and mentions. Sea Rotmann is posting for this group.
- IEA DSM Youtube Channel with 50 videos – 35 are Task 24 videos and 15 are DSM University webinars. We need more content from other Tasks. If we start filming some Executive Committee workshops, this would be a great channel to distribute visual information fast.
- Slideshare IEA DSM Programme Bengtson: only recently launched (Dec 2014) and already highly successful. 142 slideshares, 14 followers and we are in the top 5% most viewed slide shares. Since December 2014 the total number of views are 16,899.
- IEA DSM Task 24 Expert Platform - 230+ members, invite-only (www.ieadsmtask24.ning.com). Very successful multi-media platform to distribute findings from Task 24. The platform is also linked to a dropbox, a Wiki (www.ieadsmtask24wiki.info) and a Twitter account and includes 145 videos and presentations, 125 photos, 6 blog posts, over a dozen discussions, all events associated with the Task, 4 Subtask Groups and member chat and email functions and all expert's short biographies and interests.

Communications Plan and Dissemination Strategies

The Visibility Committee Chair has drafted a communications plan for the Implementing Agreement and it has been presented to the ExCo. In it, we 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 should 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. The communications plan has been updated in August 2015.

Dr Sea Rotmann Visibility Committee Chair

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TASK ZERO – RUNNING THE IMPLEMENTING AGREEMENT

1. Summary

Task ZERO was presented to the ExCo at the 44th ExCo-meeting in Graz. The ExCo agreed for establishment of the task to administer the common fund and the common tasks and a letter explaining the reasons has been distributed to the delegates (see appendix). The comments received have been in favour for this organisation and for a raise of the fee for participation to 11000 USD per year.

This decision was confirmed by the 45th ExCo and explained more in detail in a letter that has been distributed to all.

2. Objectives (reprint from 44th and 45th ExCo)

The mission of the IEA DSM-Programme is to deliver to its stakeholders, materials that are readily applicable for them in crafting and implementing policies and measures.
In order to do so we have several tools that we need to maintain but also develop to ensure that results are disseminated in ways that are useful for people in everyday practice.

This concerns our:

- Administration
- Informational tools
- Our networks and in particular the local ones run by ExCo-participants
- Dissemination and the extension with the "DSM-University"

To ensure that the activities are coherent it is proposed to gather all these actions in a context that we call "Task ZERO". A task that is a mandatory for participants and builds on both cost-sharing and task-sharing.

The management of the IEA DSM-Programme requires the following responsibilities to be executed (text deducted from the Strategic work plan delivered to the IEA EUWP and CERT in September 2014).

Administration

Executive Secretary:	Cost-shared	Task-shared
➢ Make and distribute agendas, minutes and other documents of Executive Committee meetings	X	
➢ Prepare decisions and recommendations	X	
➢ Assist the Executive Committee and its Chairmen in carrying out their responsibilities including the running of the Project Preparatory Committee (PPC)	X	
Output and visibility (technical facilities and content)		
➢ Website,	X	(x)
➢ Spotlight newsletter,	X	X
➢ Social media,	X	X
➢ Flyers	X	

Dissemination

	Cost-shared	Task-shared
Improved dissemination by development and running of the DSM University	X	X
Local dissemination and "anchoring" within the areas of the participants and to support them in recruiting the expertise necessary for tasks in which they have decided to participate, but also to gather material of interest for other tasks who need local points of contact for their work (Task-sharing)		X

3. Management

The Task is lead by the Chair who may delegate responsibilities in particular to the secretary and the vice-chairs and who has the Project Preparatory Committee, PPC, as "steering committee".

The Programme Secretary is the co-ordinator for Task ZERO. The co-ordinator together with the "Visibility Committee", gathers the necessary information from those concerned with subtasks described above in order to produce a work-plan and a budget for the Executive Committee members to decide upon annually.

4. Finance (reprint from 44th ExCo)

The costs for the administration has developed as follows (USD)

2012		2013		2014		2015
Budget	Performance	Budget	Performance	Budget	Performance	Budget
168,000	162,074	168,000	145,985	144,000	-	144,000

The value of work put into the DSM University is approximately 45,000 USD per year. Part of this is covered by in-kind contributions, and part of it is covered within the budget.

The common fund presently, with 16 participants paying 8000 USD each, receives an income of 128,000 USD per year.[8]

The expenses between years fluctuates widely, partly because of fluctuations in exchange rates. The Programme has managed to meet rising costs and rising expectations during its life-time with rationalising the work not the least by making full use of the IT-development. During these years we have also managed to build a common fund that has been touching the limit of 300,000 USD. This has allowed the Programme to facilitate upstart of new tasks from a seed-fund.

It would however be irresponsible to base the budget by use of this fund for running costs. A total income of approximately 190,000 USD per year is required to safely cover all obligations as described. Divided on 17 participants the yearly fee to the common fund would be 11,000 USD per participant.

[8] The fee to the common fund has been 8000 USD per annum since the programme started more than 20 years ago.

5. Report

The following table is a first attempt to pull the task zero elements together and provide a comprehensive overview.

ISSUE	See agenda ITEM
Administration	6 Financial report Seedfunding has been approved by PPC for task 26
Informational tools	5 Programme visibility
Our networks and in particular the local ones run by ExCo-participants	(7 Special session)
Dissemination and the extension with the "DSM-University"	2c DSM University

6. Matters for the ExCo

Initiate Task ZERO and start invoicing USD 11,000/country as of 2016-01-01as agreed at 45th ExCo meeting.

Document N

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 challenges 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 ExCo members 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's for ExCo approval.

At the time of preparing the Pre-Meeting Document three nominations have been received by the Executive Secretary. All three persons would like to see Rob Kool continue as Chairman of the IEA DSM ETI for the next two-year term. October 2015 – September 2017.

MISCELLANEOUS

Action items resulting from the 45th Executive Committee Meeting

26 – 27 March 2015 – Cape Town, South Africa

WHO	ACTION	WHEN
Norway	Pay Common Fund invoice for 2013	DONE
See countries in Financial Report	Pay Common Fund invoice for 2014 Norway	DONE
Rob Kool	Maintain contacts with China (NDRC), Saudi Arabia, South Africa, Kuwait and Thailand	ONGOING
Hans Nilsson Hans de Keulenaer	Move forward with the DSM University according to plan – as well as continue to plan/hold webinars the first weeks of every month	ON GOING
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
Operating Agent	Update a more clear definition in Legal Annex text of their Task	NOT DONE
Anne Bengtson Sarah Mitchell	Prepare administrative details for the Forty Sixth Executive Committee Meeting in Halifax, Nova Scotia, Canada	DONE
Anne Bengtson	Prepare necessary paper work for Efficincy One, Nova Scotia, Canada to join the DSM ETI as a Sponsor.	DONE
Anne Bengtson Paul Atkins	Revise the Financial Report and send to Executive Committee Members	Send to ExCo DONE
Hans Nilsson	Write letter explaining Task Zero and raised contribution "in more detail", in particular the level of activities that need to be covered.	Send to ExCo DONE
Seppo Kärkkäinen	Write two articles for the Spotlight Newsletter highlighting the results of Task 17 Phase 2, and write a column for the DSM website	NOT DONE
Anne Bengtson	Keep reminding those who have outstanding payments to the Common Fund	DONE
ExCo members	Review website regularly and suggest further developments	On-going
ExCo members	Suggest topics for the Spotlight Newsletter and provide input for those articles	On-going
All	Follow Visibility Committee Chair recommendations to update the website	On-going
Catherine Cooremans	Start Task 26 – Multiple Benfits for Energy Efficiency	On-going
Operating Agents	Prepare Task Information Plans and include in each Task Status Report.	On-going
Sea Rotmann	Start Phase 2 of Task 24.	April 2015
Rob Kool Hans Nilsson	Multiple Benefits for Energy Efficiency: Develop 2-page proposal to be distributed to Executive Committee members	June 2015
Pam Murphy	Distribute issues of the DSM Spotlight Newsletter	June 2015 September 2015
Sea Rotmann	Launch IEA DSM ETI new website	DONE

Cont. Action Items

Operating Agents	Include 1-2 slides in their presentation, highlighting the main findings to date in their respective Task(s).	Present at ExCo meeting
Paul Atkins	Work together with Austrian and U.S. Executive Committee members to develop the concept of "Marketing Winners – seeling super efficiency with sport", further.	Present at ExCo meeting
Catherine Cooremans Rob Kool Hans Nilsson	Develop detailed proposal for Task 26 Multiple Benefits for Energy Efficiency.	Present at next ExCo meeting
Sea Rotmann	Update and finalise the communications plan for the DSM programme.	Present at ExCo meeting
Jan Bleyl	Prepare Task 16 Phase 4 Work Plan and present to Executive Committee members.	Present at ExCo Meeting
Harry Vreuls Matthias Stifter	Work together and develop the concept paper further on Big Data.	Present at ExCo meeting
PPC	IEA proposed 2-pager to replace Annual Report: PPC to prepare proposal on future needs of an extended Annual Report for the DSM ETI, incl. purpose, target, cost of the report.	To be presented at next ExCo
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 25 September 2015
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).	Friday 25 September 2015
Matthias Stifter René Kamphuis	Prepare Task Status Report and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	Friday 25 September 2015
Rob Kool	Prepare PPC progress report and send to Anne Bengtson for inclusion in the Pre-meeting Document (PMD).	Friday 25 September 2015
Sea Rotmann Ruth Mourik	Prepare Task Status Report Task 24 and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	Friday 25 September 2015
Ruth Mourik	Prepare Task Status Report for Task 25 and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	Friday 25 September 2015
Catherine Cooremans Hans Nilsson Rob Kool	Prepare further developed proposal for Task 26 and send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	Friday 25 September 2015
Paul Atkins Anne Bengtson	Prepare Financial Report and send to Anne Bengtson for inclusion in the Pre-Meeting Document	Friday 25 September 2015
Sea Rotmann	Prepare Visibility Committee Report for inclusion in the Pre-Meeting Document.	Friday 25 September 2015
Weber Web	Provide statistics for every Task every six months, send to Anne Bengtson for inclusion in the Pre Meeting Document.	Friday 25 September 2015
Anne Bengtson	E-mail pdf file of Pre-meeting Document for the Forty Sixth ExCo meeting to the Executive Committee members and Operating Agents.	Monday 5 October 2015

Participation Table

Participant	In force						Proposed Tasks / extension	
	16 Ext. Phase 3	17 Phase 3	24	24 Phase 2	25	26		16 Ext. Phase 4
	Competitive Energy Services Phase 3 – Energy Efficiency and Demand Response Services	Integration of DSM, Distributed generation, Phase 3	Closing the Loop: DSM From Theory to practice	Closing the Loop: DSM From Theory to practice	Business models and the effective market update of DSM Energy Services	Multiple Benefits of Energy Efficiency	DSM University	Competitive Energy Services Phase 3 – Energy Efficiency and Demand Response Services
Australia			◆					
Austria	X	X	X	X	X	◆	◆	◆
Belgium	X		X		◆			◆
Finland			◆	◆	◆		◆	
India		X						
Italy			X					
Korea	X				◆	◆	◆	◆
Netherlands	X	X	X	X	X	◆	◆	X
New Zealand			X	X		◆		
Norway			X	◆	◆	◆	◆	
Saudi Arabia							◆	
South Africa			◆	◆				
Thailand								
Spain								
Sweden	X	X	X	X	◆	◆	◆	
Switzerland	X	X	X	◆	X	◆		X
United Kingdom			◆	◆	◆	◆	◆	
United States		X						
RAP *			◆				◆	
European Copper Institute*		⊘			⊘	◆	⊘	
OPERATING AGENT (OA)	Jan W. Bleyl-Androschin	Matthias Stifter & René Kamphuis	Sea Rootmann &	Sea Rootmann & Ruth Mourik	Ruth Mourik	Catherine Cooremans	Hans Nilsson, Hans de Keulenaer	Jan W. Bleyl-Androschin

X = participant
◆ = interested
* = Sponsors
⊘ = in-kind

Glossary

Abbreviation	Explanation
APEC	Asia-Pacific Economic Cooperation
BCG	Buildings Co-ordination Group (consists of 7 Implementing Agreements)
CERT	Committee on Energy Research and Technology in the IEA
CIGRE	International Council on Large Electric Systems
CTI	Implementing Agreement on Climate Technology Initiative
DHC	Implementing Agreement on District Heating and Cooling
DSM	Implementing Agreement on Demand-Side Management
EC	European Commission
ECEEE	European Council for an Energy Efficient Economy
ECES	Implementing Agreement on Energy Storage
ECI	European Copper Institute
EEWP	Energy Efficiency Working Party in the IEA
ENARD	Electricity Networks Analysis, Research & Development
EOT	End of Term
ESD	Energy Services Directive in the European Commission
ETE	Energy Technology Essentials (3-4 page briefs)
ETSO	European Transmission System Operators
EU	European Union
EUWP	End-Use Working Party in the IEA
FBF	Implementing Agreement on Future Buildings Forum
GHG	Green House Gas
HPC	Implementing Agreement on Heat Pump Centre
ICLEI	International Council for Local Environmental Initiatives
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
ISGAN	International Smart Grid Action Network (ISGAN)
JFS	Japan Facility Solutions (Japanese Sponsors participating in Task XVI)

KIER	Korea Institute of Energy Research
NEET	New and Emerging Environmental Technologies (IEA networking project - Gleneagles G8)
NDRC	National Development and Reform Commission, China
PMD	Pre-Meeting Document
PVPS	Implementing Agreement on Photovoltaic Power Systems
REEEP	Renewable Energy and Energy Efficiency Partnership
SANEDI	South African National Energy Development Institute
SANERI	South African National Energy Research Institute
SHC	Implementing Agreement on Solar Heating and Cooling
TSO	Transmission System Operators

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Executive Committee Meetings of the IEA DSM Energy Technology Initiative

(table excludes the European Union)

Meeting #	Date	Country	Participants	Countries on ExCo
interim	1 –2 April, 1993	Stockholm, Sweden	14	14
1	28 – 29 October, 1993	Kerkrade, Netherlands	13	14
2	24 – 25 March, 1994	Madrid, Spain	12	14
3	13 – 14 October, 1994	Washington D.C., USA	14	15
4	23 – 24 March, 1995	Schaffhausen, Switzerland	15	15
5	19 – 20 October, 1995	Fukuoka, Japan	14	15
6	21 – 22 March, 1996	Paris, France	14	15
7	31 Oct – 1 Nov, 1996	Sydney, Australia	12	15
8	10 – 11 April, 1997	Helsinki, Finland	14	15
9	10 – 13 September, 1997	Oslo, Norway	9	15
10	25 – 27 March, 1998	Seoul, Korea	10	15
11	7 – 9 October, 1998	Chester, United Kingdom	12	15
12	14 – 16 April, 1999	Copenhagen, Denmark	12	17
13	28 – 29 October, 1999	Amsterdam, Netherlands	14	17
15	3 – 6 April, 2000	Ankara, Turkey	12	17
16	12 – 13 October, 2000	Athens, Greece	13	17
17	3 – 4 May, 2001	Eskilstuna, Sweden	12	17
18	3 – 5 October, 2001	Barcelona, Spain	13	17
19	18 – 19 April, 2002	Milan, Italy	15	17
20	3 – 4 October, 2002	Graz, Austria	15	17
21	8 – 10 April, 2003	Canberra, Australia	9	17
22	14 – 15 October, 2003	Paris, France	15	17
23	15-16 April 2004	Trondheim, Norway	16	17
24	13-15 October 2004	Atlanta, United States	13	17
25	20-21 April 2005	Saariselkä, Finland	15	17
26	October 2005	Madrid Spain	14	17
27	April 2006	Copenhagen Denmark	14	17
28	October 2006	Maastricht Netherlands	9	17
29	April 2007	Seoul Korea	10	18
30	11-12 October2007	Brugge Belgium	15	18
31	2-4 April 2008	New Delhi, India	11	19
32	October 2008	Milan Italy	13	19
33	April 2009	Vienna, Austria	11	20
34	September 2009	Chester, UK	11	20
35	April 2010	Paris, France	11	19
36	October 2010	Stockholm, Sweden	9	19
37	April 2011	Washington, USA	8	18
38	2 – 4 November 2011	Jeju Island, Korea	14	18
39	18 - 20 April, 2012	Trondheim-Tromsö, Norway	10	15
40	September 14-16 2012	Espoo, Finland	10	16
41	24 - 26 April, 2013	Utrecht, The Netherlands	11	17
42	16 – 18 October 2013	Lucerne- Rigi, Switzerland	11	17
43	17 – 21 March 2014	Wellington, New Zealand	9	16
44	15-17 October 2014	Graz, Austria	9	16
45	25 – 27 March 2015	Cape Town, South Africa	9	16

No's of Executive Committee meetings held in each country

Netherlands	4	Australia	2	Japan	1
Austria	3	Denmark	2	Turkey	1
France	3	Italy	2	South Africa	1
Finland	3	Switzerland	2		
Korea	3	UK	2		
Norway	3	Belgium	1		
Spain	3	Greece	1		
Sweden	3	India	1		
USA	3	New Zealand	1		

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