

MINUTES 17 - 18 March 2016 Stockholm, Sweden

47th Executive Committee Meeting IEA Demand Side Management Technology Collaboration Programme



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DISCLAIMER: The IEA enables independent groups of experts - the Technology Collaboration Programs, or TCPs. Information or material of the TCP focusing on demand-side management (IEA-DSM) does not necessarily represent the views or policies of the IEA Secretariat or of the IEA's individual Member countries. The IEA does not make any representation or warranty (express or implied) in respect of such information (including as to its completeness, accuracy or non-infringement) and shall not be held liable for any use of, or reliance on, such information.

1. GENERAL BUSINESS

Welcome

The meeting was opened by Maria Alm who welcomed the participants to Stockholm, Sweden on behalf of the Swedish Energy Agency, the host for the meeting. Rob Kool, Executive Committee Chairman, welcomed Josephine Maguire, Sustainable Energy Authority Ireland (SEAI), the newly appointed Executive Committee member from Ireland, Simone Maggiore, RSE, Italy, who attended the meeting in the absence of Marco Borgarello and Diego Garcia Carvajal who attended the meeting in the absence of Hans De Keulenaer, European Copper Institute. The newly appointed representative from New Zealand, Simon Arnold was unable to attend and was represented by the alternate Executive Committee member Sea Rotmann. Maja Dahlgren, Swedish Energy Agency, attended the meeting to help present and support the initiation of Task 26 on Multiple Benefits.

The meeting was well attended with 12 countries and sponsors present out of 18. India, Korea, RAP, Spain, USA and the UK were unable to attend the meeting. Korea and the UK sent their views and votes by e-mail prior to the meeting. See Attachment (E).

The participants are listed in Attachment (A).

Pre-Meeting Information

Anne Bengtson, the Executive Secretary, provided via e-mail to all members, a Pre-Meeting Document (PMD) containing material associated with the Executive Committee meeting.

Adoption of the Agenda

The Agenda was reviewed and approved as shown in Attachment (B).

Approval of the Minutes from the 46th Executive Committee Meeting

The Minutes from the 46th Executive Committee Meeting were distributed earlier and were approved at the meeting.

Addition of a glossary to the Minutes

The Executive Committee members decided to add a glossary to all future Minutes, to explain the numerous abbreviations of the Implementing Agreement, other IAs, organisations and working groups. See Attachment (C).

Status of the Agreement

- The Sustainable Energy Authority Ireland (SEAI) has completed the paper work to join the DSM TCP.
- The Korean Contracting Party has changed their alternate member and the change will be formally documented in the next six months. The new member is Ms. Su-Hyeon Jung, Korea Energy Agency and will replace Ms. Hjojin Lim.
- Simone Maggiore informed the Executive Committee members that Walter Grattieri, Italy, will retire soon and a new Executive Committee member will be appointed.
- Intelen Inc., a New York based company, with corporate SME instances in Greece and Cyprus, are very active in energy utility consumer engagement and data-driven behavioural science, with deployments in USA and Europe, and are very engaged in H2020 and

behavioural-based energy efficiency EU projects and related sectors (game mechanics) with cases and customers + applied R&D. They have shown interest in joining Task 24. Sea Rotmann will follow up.

Contacts with China have been enabled through the IEA Secretariat in the past six months. Dr. Zhou Fuqiu, Director of the Energy Systems Analysis Center, Energy Research Institute, National Development and Reform Commission stated in an e-mail that the Tasks of the DSM TCP are very comprehensive, and some of which are innovative and interesting. Given the on-going energy revolution, electricity reform, new economy and electricity supply/demand situation in China, the DSM activities may focus upon the following aspects during the 13th five-year period.

1) Conduct DR pilot programs to explore interaction of RE electricity use with DR.

2) Develop innovative electricity price policies encouraging implementation of DSM.

- 3) Development and application of Internet + DSM/DR technologies.
- 4) Build DSM MIS network.

5) Explore market-based, innovative DSM financing mechanisms, e.g., EPC, PPP, green bond, etc.

6) DSM capacity building, including DSM master degree programs, cultivation of various DSM technical and commercial service institutions.

Several countries are not participating in any Tasks at the moment and the Chairman reminded all participating countries and Sponsors that they need to participate in at least one Task. These countries are: Belgium, India, Italy, Spain, UK and USA. The Chairman encourages these countries to delve deeper into the material of new Tasks, find funding and join.

IEA Secretariat News

An IEA Secretariat overview report of current and future energy efficiency projects was provided by the IEA Secretariat for the Executive Committee meeting and was included in the Pre-Meeting Document. See pages 12 - 18 in the Pre-Meeting Document (PMD). Desk Officer, Tyler Bryant was unable to attend the meeting due to illness.

As of January 1, 2016, the Energy Efficiency Unit has been expanded to the Energy Efficiency Division (EEfD) and repositioned within the IEA. The EEfD has been moved from the Sustainable Technology and Outlooks Directorate to the Energy Markets and Security Directorate. Brian Motherway is the new Division Head and joins the IEA from the Sustainable Energy Authority of Ireland where he was the CEO. Brian recently sent an introduction email to IEA DSM members and is keen to hear any feedback you may have.

The 2015 IEA Ministerial meeting (held fourth quarter of 2015) included a session dedicated to international collaboration with special focus on the TCPs. A short animated film portraying the TCPs was shown during the Ministerial meeting. Recognising the importance of multi-lateral collaboration to accelerate energy technology development, demonstration and deployment, faster cost reduction, and appropriate policies, Ministers asked the IEA to strengthen its energy technology outreach activities and expand participation of Member and non-Member countries, the science and research communities, industry partners and other stakeholders. Ministers endorsed the rebranding of the Implementing Agreements as IEA Technology Collaboration Programmes (TCPs) and asked the Secretariat, the Governing Board (GB) and the relevant Standing Groups and Committees to strengthen the energy technology and innovation-related activities of the Agency. The choice of the new TCP brand, marking a 'new era of technology collaboration', reflects enhanced effort to strengthen the TCPs and to better communicate related outcomes to policy makers and external stakeholders.

At the CERT 16-17 February meeting the IEA Executive Director made the opening remarks, sharing his vision for making the IEA the leading international hub for clean energy technology and energy efficiency. He referred to the TCPs as the hidden gems of the IEA as they not only support the IEA's work, but they are also highly valued by many partners. He added that it is time these gems shine for all the world to see, and that we must strengthen their role in the work of the agency. A workshop was held on the margins of the meeting on the theme of "Maximising the Impact of IEA's Technology Collaboration Programmes through Enhanced Co-operation in the

Energy Technology Network". The event provided an opportunity for eight TCPs with end-of-term dates within the next 24 months to share recent activities and achievements with CERT delegates. The 16-17 February 2016 CERT meeting resulted in two important decisions concerning TCPs:

- New, simplified procedures for TCP requests for extensions, effective for TCPs with end-of-term dates after 1 November 2016.
- A new "communications framework" for enhanced communication between the TCPs (with guidance from the Working Parties) and the CERT.
- The Secretariat will be providing details of the new RfE procedures, communications framework and use of the TCP name at each of the Working Party meetings March-July 2016.

In the overview report of current and future IEA energy efficiency projects, several **coordination opportunities** between the IEA Secretariat and the DSM IA were pointed out:

- <u>Energy Efficiency Division Work</u>
 Coordination opportunity: Provide feedback to EEfD on the Division's strategy program through Tyler or sent directly to Brian Motherway See page 13 14 in the pre Meeting Document.
- Leveraging IEA contacts for new membership Coordination opportunity: Tyler is willing and able to discuss IEA DSM with potential partners. If you have recommendations please email him.
- Energy Efficiency Market report
 Coordination opportunity: The Market Report is interested in relevant EE market data and findings. We are currently collaborating with Task 25 to produce content but if you know of interesting research and data on energy efficiency markets, businesses, impact evaluations, etc. please let Tyler know.
- <u>WEO & ETP publications</u>
 Coordination opportunity: There is an opportunity to consult on ETP 2017 along the behaviour analysis and content. Daniele Poponi is the project manager.
- Policy Mapping, Pathways and Roadmaps Coordination opportunity: Could IEA DSM help contribute to a piece on market instruments for energy efficiency?
- 6. Multiple Benefits

Coordination opportunity: The Secretariat is looking forward to research and outputs from Task 26 with the potential for cross-promotion and partnerships on disseminating findings from the Task.

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

Username: Forum (case sensitive) Password: network (case sensitive)

Sustainable Energy Authority Ireland (SEAI) joins the DSM TCP

The Sustainable Energy Authority Ireland (SEAI) has completed all the necessary paper work to join the DSM IA. Participation formally begins on the date of the signed signature page. Executive Committee member will be Josephine Maguire <u>josephine.maguire@seai.ie</u> and alternate Executive Committee member will be Jim Scheer <u>jim.scheer@seai.ie</u>

Contacts with interested countries and sponsors

Contacts with the National Development and Reform Commission (NDRC) China (through the IEA Secretariat), have taken place. During the past year contacts have also been established with (IBM) Germany, Intellen (Cyprus/Greece), Australia and Portugal and contacts have continued with, South Africa (SANEDI), Thailand (EGAT).

Rob Kool stated that the IEA requires that all countries invited to participate in the DSM IA be formally invited and recorded in the Minutes on a regular basis. Therefore, the Executive Committee decided to again formally invite the following countries to join the IEA DSM IA either as a Contracting Party or Sponsor:

IEA Member countries that are not yet participating in the DSM Energy Technology Initiative:

Australia, Canada, the Czech Republic, Cyprus, Germany, Greece, Hungary, Poland, Slovakia, Portugal and Turkey.

Non-member countries that participate in other Energy Technology Initiatives:

Russia, South Africa, Mexico, Venezuela, Algeria, Brazil, Peoples Republic of China, Croatia, Egypt, Israel, Lithuania, Ukraine and the United Arab Emirates (UAE).

APEC countries:

Chile, Estonia, Hong Kong, China, Singapore, Kuwait and Thailand

Non-OECD countries:

Saudi Arabia Serbia

The Executive Committee members renewed their invitation to the above-mentioned countries and/or any entity they may designate, to become Contracting Party to the DSM ETI.

The Executive Committee unanimously:

RESOLVED that IBM (research), Germany:

 (hereafter 'The Potential Sponsor') be invited to join the DSM IA (Energy Technology Initiative) for Co-operation on Technologies and Programmes for Demand-Side Management on the terms as set out below:

If the Potential Sponsor joins the IEA DSM IA, they will:

- a) Have no greater rights or benefits than Contracting Parties from OECD member countries. No representative of any Sponsor may be designated as Chair or Vice Chair of the IA, nor vote on the accession of new Sponsors or Contracting Parties or on the election of existing Sponsors or Contracting Parties;
- b) Pay an annual fee of USD 11,000 to the Common Fund

- c) Be recognized as a Sponsor from the date they sign the IA;
- d) Be entitled to send a representative and an alternate representative to the twice-yearly Executive Committee meetings of the IEA DSM IA;
- e) Have a full single vote in the Executive Committee, equal to that of a Contracting Party on matters pertaining to the IEA DSM IA Programme of Work. This will enable Sponsors to make proposals for the work Programme, participate in the voting on all topics and all other matters excepting those items defined in item a) above; and
- (2) RESOLVED that Rob Kool, Chairman of the DSM Executive Committee, will expedite and finalise the formal procedures of membership on behalf of the Executive Committee.

DECISION:

- unanimously resolved to invite non-participating countries and sponsors to participate in the DSM IA (see above list of countries)
- renewed Executive Committee approval of the resolution to invite Sponsors

ACTION:

 maintain contacts with China (NDRC), South Africa (SANEDI), Thailand (EGAT), IBM Germany, Australia and Portugal.

TCP relations, BCG and ECG

Rob Kool, Chairman, attended the latest Buildings Co-ordination Group (BCG) meeting but not the Electricity Coordination Group (ECG) meeting.

The DSM TCP Task 26 is currently trying to set up a joint Task together with the Industrial Energy-Related Technologies and Systems (IETS) IA. The Chairman and the Advisor have actively been participating in those meetings.

The Chairman attended the latest EGRD meeting and EGRD's latest report on smart grid's is available on the DSM website.

ISGAN and ECES have indicated that they would like to become DSMU partners.

The Chairman attended the Clean Energy Forum in Bali.

Project Preparatory Committee (PPC) report

The Chairman reminded the Executive Committee of their decision to set up a Project Preparatory Committee (PPC) consisting of the Chairman, the Vice-Chairs, the Advisor and the Visibility Chair. The aim of the group is to prepare work prior to Executive Committee meetings to avoid duplicate reporting and solve common problems that Tasks may have.

In the past six months the PPC has had two conference calls to primarily discuss: (1) Next Executive Committee meetings; (2) consequences of the new strategy of Fatih Birol; (3) membership; (4) new Tasks; (5) EUWP and BCG; (6) finances; (7) website; (8) communication; and (9) collaboration with others. See page 19-20 in the PMD for details.

The Executive Committee members **approved** the PPC Report.

DECISION:

• The Executive Committee members approved the PPC Report.

International DSM Day, Stockholm, Sweden

The International DSM Day was hosted by the Swedish Energy Agency on 15 March and was very well attended by Swedish businesses and organisations as well as Executive Committee members and Operating Agents. See presentations:

http://www.ieadsm.org/workshop/dsm-day-stockholm-sweden/

2. OPERATING AGENTS MEETING

The Operating Agents meeting was briefly held on 15 March, prior to the Executive Committee meeting. The Chairman, one Vice Chairman, the Advisor, and four Operating Agents were present.

Issues discussed were:

- > How sure is a yes (lacks guarantee for final participation and funding in a Task)?
- Do we need a warranty fund?
- Is there a budget competition between Tasks?
- > EU co-funding: who is willing to help build a consortia?

3. EXTENSION OF WORK AND NEW WORK

Task 26: Multiple Benefits of Energy Efficiency

A proposed work plan & dissemination plan for Task 26: Multiple Benefits of Energy Efficiency was provided on pages 21 - 26 in the Pre-Meeting Document and was presented by Operating Agent Catherine Cooremans, Switzerland.

Catherine started her presentation by stating that the easiest, quickest and cheapest way to reduce energy consumption and to decrease greenhouse gas emissions is to improve energy efficiency. Further, the DSM TCP is well situated to take on the supervisory Task "Multiple Benefits in Action" and Task 26 will be run jointly with the IETS IA.

The objectives (deliverables) of the proposed "Joint Annex" are the following:

- 1. **Toolbox conception Subtask 1.** The first main objective is to provide businesses' internal staff (energy managers, facility managers) as well as the external consultants advising them and public programmers, with an analytical tool to be used upstream to better identifying and assessing the MBs.
- 2. **Toolbox delivery Subtask 2.** The second main Task objective is double: 1) to develop templates for workshops, webinars and online courses in collaboration with DSM University; 2) to communicate on the MB of energy efficiency to public programmers and policy-makers, as well as to the energy efficiency and climate change financial community.
- 3. Learning Base Subtask 3. The third main Task objective is to provide practitioners and policy-makers with a Multiple Benefits Learning Base, which will contain data collected in the participating Member States, organized by business activity & municipality type, energy-efficiency measure type and geographical location.
- 4. Dissemination & reporting Subtask 4. The fourth main objective regards the organization of
 - one-day "Toolbox Training Sessions" in each participating Member State to enable engineers to take ownership of the MB toolbox;
 - webinars and online courses, in collaboration with DSM University.

Subtask 4 is also dedicated to updating and delivering the Learning Base to Member States and to producing a final report on the Multiple Benefits project and on possible further steps.

The overall work will cover the three following MB categories:

- **MB for municipalities:** impact on local public budget of energy-efficiency projects in public buildings and facilities, heating installations, sewage treatment plants, municipal lighting, transport, etc.
- **MB for business sector,** with an enlarged perspective on 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 (i.e. municipalities and businesses).

A revised budget was presented in which comments on dissemination and knowledge development were taken into account. The new budget was roughly 25% less than the one originally presented.

The Task will be run jointly with IETS. For the administration there should be an advisory board with one Executive Committee member from each participating country/sponsor.

Austria, Norway, Sweden were all in favour and should seek the necessary experts and funding to participate in the Task. Positive interest was noted from Nova Scotia and Ireland. The chair will approach the countries that were absent. All countries are welcome to join.

Maria Alm stated that the Swedish Energy Agency will cover the costs for the Co-operating Agent Maja Dahlgren.

Catherine was asked to summarise the discussions and suggestions from the meeting and update the budget accordingly and send out a new Status Report as quickly as possible, so the Task can start by 1 June 2016.

The IETS IA Executive Committee members will meet in May 2016, where the further developed proposal for Task 26 will be presented.

DECISION:

• Executive Committee members asked Catherine to summarise the discussions and suggestions from the meeting and update the budget accordingly and send out a new Status Report as quickly as possible, so the Task can start by 1 June 2016.

ACTION:

 summarise the discussions and suggestions from the meeting and update the budget accordingly and send out a new Status Report as quickly as possible

Tracking flexibility in electricity systems with increasing renewables

A concept paper on "Tracking flexibility in electricity systems with increasing renewables" was provided on pages 27-28 in the Pre-Meeting Document and was presented by Diego Garcia Carvajal, Copper Alliance, Madrid, Spain.

Diego presented an idea for a "flexibility tracker" as a tool to identify the readiness for an energy system to handle a growing amount of variable resources. Two phases of an existing project areavailable on http://j.mp/flexreport and http://j.mp/

The aim of this tool is to assess periodically the flexibility readiness of different country energy systems as a means to build an international community to share best policies to handle near 100% of variable renewable generation.

This has a resemblance with the recent IEA Publication "Repowering Markets"¹ which shows that there are several stakeholders that need to be addressed for a future Market Design and where DR (load level) should be a part.

Most participants expressed that it was an interesting subject but should be investigated together with ISGAN and that the DSM-part needed to be more clarified.

It was decided that Diego Garcia Carvajal, Rob Kool, Matthias Stifter, and Hans De Keulenaer will further explore the topic in the next six months.

Decision:

> Further explore the topic

Action:

Diego Garcia Carvajal, Rob Kool, Matthias Stifter, and Hans De Keulenaer will further explore the topic in the next six months

DSM University

The Status Update Report for the DSM University was provided on pages 58-61 in the Pre-Meeting Document and was presented by Hans Nilsson, Advisor to the DSM IA.

Hans Nilsson started his presentation by saying that the DSM University is developing at a steady pace and largely according to plan, making it possible to deliver in a way that creates confidence in users and interested parties, thanks to the Leonardo Energy's webinar platform provided by the European Copper Institute.

The webinars are considered to be the "heartbeat" of the DSM University and have so far attracted close to 3000 active participants. The webinars can also be reached through www.dsmu.org and www.dsmuniversity.org

https://www.iea.org/publications/freepublications/publication/REPOWERINGMARKETS
.pdf

The webinars are divided into 6 themes:

- Theme 1: The logic of DSM
- Theme 2: Governance (Energy Management)
- Theme 3: Energy Efficiency (load level)
- Theme 4: Flexibility (load shape)
- Theme 5: Integration
- Theme 6: Business models

The first 21 webinars have been broadcast and the schedule continues to have one webinar each month. Guest opportunities are continuously provided.

- > A basic course (DSM 101) is under development
- The development of "MOOC" as part of specific Tasks (e.g. 25 and 26) and in collaboration with the DSM University has been investigated.

The Executive Committee members approved the Status Report.

DECISION:

The Executive Committee:

approved the Status Report

ACTION:

 Hans De Keulenaer and Hans Nilsson should continue to move forward as planned with the DSM University

Big Data Analysis – a research area for the DSM TCP

The Executive Committee members had an orienting discussion of the importance and possibilities with exploring "Big Data" as an instrument.

Svetlana Gross moderated and Daniel Gillblad and Theodoras Vasiloudis, SICS Swedish Institute of Computer Science were invited to facilitate the discussion.

A summary of the discussion concluded that:

Big Data (BD) analysis is a trendy topic and there is a broad consensus that it is a tool that can solve many of the imbalances and inefficiencies in different areas starting from diagnosing patients to growing more nutritious vegetables. The hopes and expectations are built on new possibilities of gathering and correlating data that the (so far) exponentially growing computing power has offered. The notion of "Big Data" describes digital or digitalised data that has potentially large volume and variability. But in order to take advantage of the analysis methods, the data doesn't have to be "big", it just has to be descriptive of the population or the group/activity that is being studied. A key question for potential applications of data analysis in the energy efficiency field is identifying the right kind and the right scale of a "population" to get the data from.

The possibilities can be presented in the following continuums:



Based on the presentations from the DSM Day, the following issues/questions were prepared for discussion:

Data reflects people's actions. In the case of the music streaming service the data can be gathered regarding all aspects of users' interaction with the service – both quantitative (how often they use the service, at which times and what duration, how many tracks etc) and qualitative (what music they listen to, what characteristics such as beat rate, genre, artist etc. the music has). Each such measurement is a data point that can be gathered and related to another data point by analysis tools. In relation to the energy field – which are those data points? Where can we "see what people do?" The traditional view of energy data is the electricity meter but our energy practices can be observed through our cars, mobile phones, home and office appliances and all else that has inbuilt sensors or can be sensed by them.

- Data points can describe any single aspects of human activities and it is important to separate which of the aspects are meaningful or interesting in a given context. It is not feasible to collect and analyse all data potentially available avoiding unnecessary calculations is key to the efficiency of the BD analysis itself. In the music streaming service, there are several data-driven features that roughly speaking offer personalisation of the music choices (features, or services that are created automatically for each user based on the data available for analysis without direct human intervention). In relation to the energy field, what could the meaningful "features" or services be? What could be improved based on the exact knowledge or our practices?
- As far as data goes, anything can be analysed and correlated as long as one owns the data and can create their own code. Far from all correlations till be meaningful but the possibilities of experimenting are unlimited. Important questions to ask with regards to the energy field are depending on what data points are identified who owns the data and who writes the code? By writing the code here meaning framing data sets, identifying user clusters and data streams, and created the analysis tools (the code itself).
- So far the technologies that support computing power have been growing exponentially, allowing for smaller and cheaper hardware. The development curve is unlikely to remain exponential but development will continue, which makes it interesting to talk about its implications on future data points, for example as a consequence of a wider spread IoT.
- Financing of energy efficiency and flexibility is a complicated issue since the direct and auxiliary benefits of such activities often get allocated to actors outside of the traditional energy market players. New ways of describing energy practices and behaviour with the help of data can yield new types of beneficiaries from various sectors of economy (for example insurance companies or appliances manufacturers) and hence new potential financiers and result -oriented financing solutions.

General discussion:

- The data can be proprietary, it can be existing (available) or non-existing (not available), it can also be decentralised. The data can also be obtained; we as users have the data and can share it if we chose to even if we don't own it. In order to obtain data one can design services through which data can be obtained.
- The use of data analysis should be subject to considerations of how much effort the analysis itself will take in relation to the potential effect (cost-benefit analysis).
- As government agencies with certain sustainability promotion goals we should focus more on the potential societal benefits of activities we develop and finance rather than the immediate commercial benefits. Societal benefits can be described as satisfying people's needs.
- Interesting and important to ask ourselves what data we gather and own as government agencies and what can be done with it. We should also actively work to develop and secure policies of product data availability that can create data sources (or rather open up black boxes and make them to data sources).
- An interesting discussion is how much we should work for impacting conscious behaviour change versus automating certain practices. How should we stimulate "energy efficient convenience" as a default choice?

Recommendations:

- > Create and test several use cases where data analysis is applied.
- Try connecting the micro level (users) with the macro level with relation to energy use and sustainability.
- > Test a number of research questions in pilot projects.
- Learn from other areas where data is being "created" such as the open government concept that work for democratising data. Look at what is being done at labs and universities, for example MIT Senseable City Lab <u>http://senseable.mit.edu/</u>

> Demonstrate the use of data analysis rather than discuss.

The Executive Committee thanked Svetlana and invited guests and decided to bring the topic up at future Executive Committee meetings.

DECISION:

Bring the topic up at future Executive Committee meetings and elaborate further

4. CURRENT TASKS – LOAD SHAPE CLUSTER

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

The Task Status Report for Task 17 – Integration of Demand Side Management, Distributed Generation, Renewable Energy Sources and Energy Storages was provided on pages 29 – 33 in the Pre-Meeting Document and was presented by Matthias Stifter, AIT, Austria.

Matthias started his presentation by reminding the Executive Committee members that Phase 3 of the DSM IA 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 the grid and the market side will also be looked at. 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/task/task-17-integration-of-demand-side-management/)

Progress towards objectives during the past six months include:

> Subtask 10 – Role and potentials of flexible consumers:

(1)The final structure of the ST-10 deliverable (Residential Demand Response: Roles and Interactions of Flexible Consumers and Prosumers; subtitle: Potentials of Distributed Energy Resources and Distributed Demand in Households and Buildings) now has been composed after a number of consultation rounds with the country experts. The contents are also settled now and the parts where the final input from CEs are necessary until 1 week before the expert meeting. A near-to-final draft version of the deliverable has been prepared together with the experts giving the view on the objectives and a discussion on overall developments in the field.

> Subtask 11 – Changes and Impacts on grid and market operation:

(1) A lay-out of the planned deliverable and first content has been prepared together with the experts; this will be further developed during the expert meeting in March 2016 in Stockholm; and (2) a cost benefit analysis (CBA) framework has been developed to be fed with results from the analytical framework for assessing the projects with respect to a CBA (from ST 12).

> Subtask 12 – Sharing experiences and finding best practices:

(1)this activity is a parallel activity and has been started from the beginning by the OAs and expert during the workshops and expert meetings; (2) 2 web conferences with experts have been organised; and (3) an analytical framework for assessing projects with respect to the CBA has been developed.

In the past six months the Task has produced the following reports:

- Master Thesis: Lessons learned from European pilot projects: Recommendations on market access requirements for electricity consumers (Julia Schmidmayer, Vienna University of Technology)
- ➢ ST 10: Final Draft
- > ST 11: Draft Structure including CBA Methodology
- > ST 12: Analytical Framework for ST 12 input on ST11

Objectives for the next six months include:

Subtask 10 – Role and potentials of flexible consumers: (1) this Subtask will be closed with the delivery of the Subtask 10 report (15 March 2016).

Subtask 11 – Changes and Impacts on grid and market operation: (1) prepare final version of the Subtask 11 deliverable (15 March 2016).

Subtask 12 – Sharing experiences and finding best practices: (1) finalise deliverable of Subtask 12; (2) update and analyse projects; and (3) organise a symposium and experts meeting.

Further, bilateral meetings and conversations with other related implementing agreements and Tasks will take place. These are in particular:

- ISGAN Annex 2
- PVPS Task 14 Integration of High PV Penetration
- EBC Annex 58 / Annex 52
- ECES-DESIRE Annex

The Task will also contribute to a publication at the Energy Innovation Conference at the Technical University in Graz

- Lessons Learned from European Pilot Projects – Recommendations on Market Access Requirements for Electricity Consumers

A symposium in Linz is planned on 9 May 2016 and the fifth Experts meeting will be held on 10 May 2016.

The participating Executive Committee members **approved** the Task Status Report.

DECISION:

The Executive Committee members approved the Task Status Report

Potential Follow-Up Activities in Task 17

Several activities were proposed:

- Evaluation Measurement and Verification of DR
- Forecast and Reliability (of power systems)
- Cost Benefit Analysis for DR

Matthias will continue to develop the proposal in the next six months and present at the next Executive Committee meeting.

ACTION:

Matthias to continue to develop the proposal and present at the next Executive Committee meeting.

Task 24 – Behaviour Change in DSM – Helping the Behaviour Changers

The Task 24 Phase II Status Report on Behaviour Change in DSM – Helping the Behaviour Changers was provided on pages 34 – 40 in the Pre-Meeting Document and was presented by Sea Rotmann, New Zealand.

Sea Rotmann started her presentation by saying that 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. This Task, and its extension, has helped address these difficulties and has come up with guidelines, recommendations and examples of best (and good) practice and learnings from various cultures and contexts.

Phase II of Task 24 takes theory into practice, building on the solid theoretical foundations of Phase I. Phase II is looking at: a) what; b) who; 3) how; 4) why; and 5) so what.

Progress towards objectives during the past six months include:

Subtask 5 – (1) Expert platform continually growing (>235 experts) and getting used (2) new content including 145 presentations and videos have been uploaded (3) continue publicising and dissemination of Task 24, including at international conferences.

Subtask 6 – (1) workshops have taken place in the Netherlands and New Zealand in February and workshops will take place in Ireland, and Sweden in April/May ; (2) collection of lists of DSM interventions and energy efficiency and behaviour priorities in each of the participating countries has commenced and a report template has been created; (3) top three issues in each country have been discussed during workshops and the following main interventions have been decided:

- Powering tomorrow's neighbourhoods via smart grid sharing New Zealand
- Supporting building management operators in hospitals to produce better documentation and communication of energy savings – Canada
- Landlords and tenants co-designing green leases in commercial buildings Sweden
- Promoting better use of ICT in universities the Netherlands

Task 24 still needs to develop the top three issues in Austria and Ireland.

Subtask 7 – (1) Behaviour Changers have been identified for the top issues decided on in Subtask 6 for Canada, Sweden, the Netherlands and New Zealand. Their sector stories have been told during workshops and deep discussions have been initiated around relationships, mandates, stakeholders, restrictions and value propositions for each of the Behaviour Changers using the 'Behaviour Changer Framework'.

Subtask 8 – (1) work on continued development of the evaluation tools from Subtask 3 have taken place; (2) Task 24 is currently working on a Special Edition Issue on Storytelling for the Journal of Energy and Social Science Research.

Subtask 9 – (1) Karlin (the principal investigator of this Subtask) et al have published a paper at the IEPPEC conference in August 2016 that outlines the basics of the Beyond kWh toolkit which is being developed for Subtask 9. The toolkit will be tested and validated in Task 24 countries during 2017.

Further, during the past six months: (1) Task 24 helped the IEA Secretariat organise a behaviour change workshop in November; (2) gave more seminars and lectures in Australia, Ireland and the Netherlands; (3) made contact with 4E in Australia and the Queensland Government to dicuss potential collaboration; and (4) Task 24 was contacted by the Department of Energy in the US, Chinese Operating Agents from ECB Annex 66 and a German University who is interested in participating in the Task.

Work planned for the next six months include:

Subtask 5: (1) continue attracting experts to the experts platform; (2) update Wiki with latest case studies and rebrand; (3) use TEAMWORK project managements tool to project manage national experts; and (4) collaborate with Annex 66 from EBC and (5) work on special edition on storytelling and start organising international Task 24 conferences in line with the Energy cultures and BEHAVE conferences and the ACEEE summer study.

Subtask 6: (1) continue with issues definition including countries that haven't started yet (Austria/Ireland); and (2) start writing issues reports and collate DSM lists in New Zealand, Sweden, Netherlands, and Canada.

Subtask 7: (1) hold another 5 workshops (New Zealand, Netherlands, Sweden, Austria and Ireland, to pull together most relevant Behaviour Changers in each participating country; (2) write up workshop notes; (3) finalise workshop protocols; and (4) animate all Behaviour Changer Frameworks (BCFs) in presentations.

Subtask 8: (1) continue working on storytelling and evaluation guidelines; and (2) start work on decision-making tree for Subtask 1 and 2 case studies and models of understanding behaviour.

Subtask 9: (1) continue working on the 'Beyond kWh' toolkit.

Further, Task 24 will present a paper and poster at the ACEEE summer study and run two international workshops at some of the largest behaviour change conferences during 2016.

Task 24 asked Executive Committee members to agree to have only one official Operating Agent for Task 24 (Sea Rotmann), whereas Ruth Mourik will become a project partner and national expert for the Netherlands and will be involved to 25% (as per work plan for 4 countries).

The Executive Committee members **approved** the Phase II Task Status Report and agreed to have only one official Operating Agent (Sea Rotmann) for Task 24.

DECISION:

• Executive Committee members **approved** the Phase II Task Status Report and **agreed** to have only one official Operating Agent for Task 24 (Sea Rotmann).

5. CURRENT TASKS – LOAD LEVEL CLUSTER

Task 16 - Competitive Energy Services - Phase 4

Task 16, Phase 4 was provided on pages 41 – 47 in the Pre-Meeting Document and was presented by Jan W. Bleyl, Energetic Solutions, Austria.

Jan started his presentation by stating that the extension of Phase IV will continue with the wellestablished structure already available in earlier Phases of Task 16. Phase IV will focus on Life-Cycle Cost Appraisals; 'Deep Retrofit'; Simplified M&V; (Crowd)-Financing & Taxonomy of Energy Services and be disseminated via the DSM University. Phase IV was initiated in July 2015 and will end June 2018.

Three countries have committed so far GIZ (until 16 April 2016), Nova Scotia (in kind only), Netherlands, Norway and Switzerland. Talks are currently underway with Austria and Belgium.

Work accomplished in the past six months:

Subtask 19: (1) preparation of the 19th Experts meeting was held in Brussels, Feb 22-24; and (2) preparations started for the 20th Experts meeting (date and location tbd).

Subtask 19 + 23: (1) contribution to a national stakeholder workshop "Einsparcontracting in öffentlichen Gebäuden" held in Ittingen near Bern, Switzerland on 25 November 2015; (2) execution of a national stakeholder workshop "Bankable Calculation & Financing of Energy Efficiency Projects" during the GIZ Renewable Energy Week in Berlin, Germany held on 14 October 2015; (3) preparation of a life-cycle cost contribution for the Building Deep Retrofit - Investors Day (Stakeholder workshop organized by Building Performance Institute Europe (BPIE); Investors Confidence Project Europe; KEA and IEA ECB-Annex 61); and (4) the preparation of Task 16 Phase IV has been completed.

Subtask 20: (1) Life-cycle costing & 'Deep Retrofit': Submission of an abstract for ECEEE Industrial Efficiency 2016 Conference: Economic Pre-Feasibility Life-Cycle Cost Methodology for Decision Makers and ,Deep Retrofit' Case Study Paper submission in cooperation with IEA ECB Annex 61; (2) Life-cycle costing & 'Deep Retrofit': Application of pre-feasibility and bankable life-cycle cost tools to Annex 61 case studies. Work in close cooperation with IEA ECB Annex 61; (3) Simplified measurement & verification: Research started for a peer-reviewed journal publication. Working title: Simplified measurement & verification + quality assurance instruments for energy, water and CO₂ savings. Methodologies and examples. In close cooperation with EfficiencyOne, Nova Scotia, Canada; and (4) Crowd-Financing for Energy efficiency and renewable investment: Identification, analyses and modeling work of 2–3 cases studies. In close cooperation with GIZ.

Subtask 21: (1) Implementation of the individual NIA plans to develop know how and energy service markets were followed up, the experts gave presentations and exchanged experiences and good practices during the last platform meeting and through teleconferences in between meetings.

Publications and presentations at various national and international conferences and seminars were given, e.g.: (1) ESCo and investor trainings in Morocco, Germany, Jordan, Thailand: Investment grade Calculation, Analyses & Financing of ESCo Projects (for EPC and ESC Business Models). Introduction & hands-on training in cooperation with GIZ; (2) Life-cycle cost analyses presentation for IG Lebenszyklus (October 2015); (3) JRC workshop Energy Services Market in the EU: Economic Pre-Feasibility Check: Life-Cycle Cost and –Savings. ,Facilitators' as EE + RE Project Enablers (October 2015); (4) Chairing of finance session during European Utility Week 2015 in Vienna (November 2015); (5) Contribution to a national stakeholder workshop "Einsparcontracting in öffentlichen Gebäuden" held in Ittingen near Bern, Switzerland (November 2015); (7) Continuation of know how transfer and supervision for a start-up ESCo in Croatia => 1 MW_{el} wood chip gasification + CHP for heat & green electricity supply project (5,5 Mio EUR investment) (ongoing); (8) Co-operation with other ongoing energy service projects and institutions:

- ECB Annex 61 => 'Deep retrofit' business models

- Linköping University => ES taxonomy and other topics

- FH Pinkafeld - applied science university => Master class on energy services

Work planned for the next six months includes:

Subtask 19: (1) preparation of the 20th experts meeting and stakeholder workshop to be held in the Fall2016; (2) hold expert platform teleconferences on demand.

Subtask 19 + 23: (1) hold a national stakeholder workshop in Berlin, Germany in October; (2) hold national stakeholder workshop in Switzerland in November 2015; and (3) prepare the 19th stakeholder workshop to be held in the Spring of 2016 (preliminarily in the Netherlands).

Subtask 20: See Subtask 20 above.

Subtask 21: (1) continue implementation of individual NIA plans to develop energy services know how and markets; and (2) follow-up, experts will give detailed presentations and exchange

experiences and good practices during the next platform meeting and through teleconferences in between meetings.

The Executive Committee members **approved** the Task Status Report.

DECISION:

• The Executive Committee members **approved** the Task Status Update.

ACTION:

Operating Agent should continue current talks with interested countries

Task 25 – Business models for a more effective market uptake of DSM Energy Services

The Task 25 Status Report on Business models for a more effective market uptake of DSM Energy Services was provided in the Pre-Meeting Document on pages 48 - 53 and was presented by Ruth Mourik, DuneWorks, the Netherlands.

The Task focuses 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 the 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.

Accomplishments in the last six months include:

Subtask 1: (1) overall project coordination and management, including contact relationship management is on-going; (2) attendance at Executive Committee meetings, conference and reporting to the Executive Committee is ongoing; and (3) the set-up of an advisory board of stakeholders is on-going.

Subtask 2: (1) identifying country specific suppliers, clients and their stakeholder networks and trying to establish national advisory expert networks; (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; (3) clarifying how the different parameters of success of business models and services will relate to each other in the analysis; (4) develop a Task specific typology or categorisation of business models and services for EE; (5) develop an overview of existing energy service business models in the participating countries and their frameworks/ecosystem and how they meet and incorporate clients needs; (6) review global existing business models; (7) conducting in-depth comparative analysis of around 4 similar business models in different countries and around 12 per country; (8) identify key factors that make services succeed in the participating countries; and (9) organising country workshops with service providers and clients.

Subtask 4: (1) set up a stakeholder communication and engagement plan has been completed; (2) traditional dissemination to external stakeholders and academia is taking place; and (3) creating and facilitating a good connection to existing digital and off-line expert platforms within the IEA, e.g. the expert platforms of Task 16 and 24 and other relevant Task s and expert platforms for other IAs.

In the past six months many teleconference and Skype meetings have been held with individual experts and three experts meetings have been held in Austria, Sweden and Switzerland.

Reports produced in the past six months include: (1) Literature review user centric design in business models; (2) Presentation of Task 25 as a webinar (online publication); (3) Presentation of Task 25 at IEA workshop on influencing business behaviour and decision making towards increased energy efficiency; (4) Presentation at IEA DSM EXCO Canada DSM day; (5) Thesis with analysis of Dutch shortlisted cases and impact of user centered design and service orientation on business models; (6) First Task 25 newsletter; (7) Global analysis of business models, longlist and

shortlist (confidential for now, distributed amongst partners only); and (8) Spotlight issue on results of analysis.

Objectives for the next six months include:

Subtask 1 Task Management: (1) overall project coordination and management, including contact relationship management; (2) attendance at Executive Committee meetings, conference and reporting to the Executive Committee members; and (3) Set-up Task Advisory Board (AB) of stakeholders (Executive Committee members, IEA, intermediaries from research, industry, government, community sectors).

Subtask 2: (1) create draft report with all the national examples, best practices and the analysis, incl. useful tips and tricks; and (2) organising country workshops with service providers and clients in Sweden, Norway, Switzerland, Austria, the Netherlands and Korea.

Subtask 3: (1) start developing frameworks for potentially effective business models and services with national stakeholders; (2) create policy guidelines with necessary policies and strategies of different stakeholders; (3) contribute to the setting up of piloting activities in each participating country.

Subtask 4: (1) continue to link to existing DSM IA expert platforms and experts and maintain a section for Task 25.

Reports in the next six months include: (1) Article in the Swedish Magazine Energy Efficiency on the Task 25 work in Sweden; (2) D2: report with typology and description of existing services and business models in each participating country and their framework/ecosystem; (3) D3: report with review of global business models and services in non-participating countries and their framework/ecosystem; (4) D4: DRAFT report with comparative analysis and key factors for success, including overview of success parameters to assess effectiveness of business models and services; (5) Chapter in the Energy Efficiency Market Report of the IEA; (6) Presentation of Task 25 at Linz symposium May 2016; (6) Spotlight issues on results of analysis; and (7) National publications in sectoral journals.

Dissemination: (1) disseminate a newsletter every month or two to several hundred stakeholders internationally; and (2) together with Leonardo Energy create a series of web presentations for the different business models that Task 25 investigates.

Ideas for new work: There is a new Horizon 2020 call, opening in March 2016 and closing in the fall of 2016, where Task 25 work fits well and could expand to other countries with very good financing from the European Commission. Several Executive Committee members have expressed their interest in participating. Task 25 will initiate the effort:

- EE 25 2016: Development and roll-out of innovative energy efficiency services:
 - <u>Scope</u>: Proposals aiming at developing, demonstrating and standardising new types of energy efficiency services and business models in all sectors (incl. mobility), which could better monetise the multiple benefits of energy efficiency.

Ruth to contact VTT and ask if they will join the consortia and lead the application phase.

The Executive Committee members **approved** the Task Status Report and the definition of new Subtasks.

DECISION:

 The Executive Committee members **approved** the Task Status Report and the definition of new Subtasks.

6. PROGRAMME VISIBILITY

Programme Visibility Report

The Programme Visibility Report was provided on pages 54 - 57 in the Pre-Meeting Document.

Sea Rotmann reminded the Executive Committee members that the members of the Visibility Committee are the Chairman Rob Kool, the Vice-Chairs Maria Alm, Andreas K. Enge, Chair of the Visibility Committee Sea Rotmann, the Executive Committee representative Harry Vreuls, the Spotlight Newsletter Editor, Pam Murphy, the Executive Secretary, Anne Bengtson, and the Operating Agent representative Sea Rotmann. The Visibility Committee met prior to the Executive Committee meeting.

Annual Report

The 2015 Annual Report, including a Theme Chapter on "DSM stories in participating countries" was made available electronically to Executive Committee members, Operating Agents and the EUWP and EEWP by the end of January 2016 and was uploaded to the IEA DSM website.

It was decided during the meeting that printed copies will not be available any longer, however the IEA would like to be able to print on demand and Anne Bengtson confirmed that a printable pdf version from the desktop publisher is already/will be provided every year.

Spotlight Newsletter

In the past six months two issues of the Spotlight Newsletter (Issues 59 and 60) have been published and posted on the IEA DSM website and distributed electronically. Executive Committee members were reminded that the Spotlight Newsletter should be distributed widely.

Topics in Issue 59 – December 2015:

- ➢ IEA: Energy Efficiency reducing bills
- > Note from the Chairman: Which way are we heading?
- > Bright Business: Showcases best in class for energy efficiency
- DSM University
- > Nova Scotia: Energy efficiency a source and a solution
- New publication: Austria Task 24 the Energy Hunt

Topics in Issue 60 - March 2016:

- > Task 16: Three more years of energy services work given thumbs up
- > Note from the Chairman: Billiards
- > Task 25: You have to re-invent yourself several times
- > Demand response: New opportunities for energy service providers?
- > Sweden: On the way to a fossil-free future
- International symposium: IEA energy experts exchange on Demand Flexibility and RES Integration

The next issue of the Spotlight Newsletter will be distributed in June 2016. Four issues of the Spotlight Newsletter are scheduled for 2016. However, this is only possible if everybody contributes. The IEA DSM Energy Technology Initiative (ETI) has tremendous news to share so please continue to think about, suggest and submit future articles to the Spotlight Editor Pam Murphy pmurphy@kmgrp.net

The next dates for submission to the Spotlight Newsletter issues are: Issue 61/June 2016 – articles due 15 May Issue 62/Sept 2016 – articles due 15 August Issue 63/Dec 2016 – articles due 15 Nov

The Spotlight has a new look and Pam is looking for articles on DSM work in different countries and other work Operating Agents and Executive Committee members are involved in.

Programme Brochure

The DSM Brochure is the DSM Programme's main PR document and is designed to last 3-5 years.

The brochure should be used in various forums, and is designed as a folder so that Executive Committee members and Operating Agents can add inserts, especially updated Task Flyers, as appropriate. The brochure has been re-designed with the new logo and branding and 3000 copies have been printed. However, the brochure is very expensive to send from New Zealand and also they are not the correct size.

Sea pointed out that the flyers are continuously updated and that it is important to visit the website flyer section to make sure that the latest version of the flyers are inserted into the brochure pocket at the time of dissemination at a conference or seminar. The main inserts and Task flyers were last updated in September 2015.

Key Publications

During the past six months one key publications has been added to the website: See latest publications: <u>http://www.ieadsm.org/publications/key-publications/</u>

Task 24: Subtask 2 – Austria's Energy Hunt & €CO2 Management

Executive Committee members and Operating Agents are reminded that it is up to them to nominate publications to become "key" to the Visibility Committee Chair, Sea Rotmann.

Website

Solstice has handed over the original website and all its data to WeberWeb and 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, like news and events. 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 <u>anne.bengtson@telia.com</u> and/or the Visibility Committee. In particular, we would be interested to know how useful the social network links are.

Statistics

Total website hits:

December 1, 2015 - February 14, 2016: 1894 sessions, 5125 page views

Hits per day:

December 1, 2015 - February 14, 2016: 25

Average time on website:

December 1, 2015 - February 14, 2016: 2min 44 sec

Google Analytics

GA from December 1, 2015 – February 14, 2016 show 5125 sessions (up from 5022) with 1327 users (down from 3386) who spent an average of under 3 minutes per sessionon the website. 68% of them were new visitors and ony 14% (previously just under 50%) of all visitors came from the US (9% from Sweden, and 7% from the UK). These stats are not very good and are significantly tracking down (most likely due to the Christmas break). There was a large spike of almost 150 site views on the 3rd of December.

Downloaded reports for Tasks – we had 91 total downloads since Dec 1, 2015 of which 56 were unique files (including legal texts but excluding Spotlight newsletters which do not show up in this analysis). Most files were downloaded from three Tasks (Tasks 13, 17 and Task 24).

Social Media

The IEA DSM technology Collaboration Programme is getting more traction on social media. We now have a presence on:

- Facebook (IEA DSM Group) with 171 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 33 members and reducing. 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 337 followers and 1073 tweets. This is the fastest growing social media platform and has fostered a lot of good engagement, re-tweets and mentions. Especially the Academic and Industry sectors seem to respond to this medium. Dr Sea Rotmann is posting for this group.
- IEA DSM YouTube Channel with 54 videos 35 are Task 24 videos and 19 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.
- IEA DSM SlideShare already highly successful. 142 slideshares, 16 followers and we are in the top 5% most viewed slide shares.
- IEA DSM Task 24 Expert Platform 235+ 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.
- Templates Templates have been developed for reports and power points, please use them and make sure to use the ones with correct fonts (NOT HelverticaNeuSt).

Sarah Mitchell suggested that Efficiency One's communications team take a look at the IEA DSM's social media presence and LinkedIn strategy and she will set up a Skype meeting in the next month or so with the Chairman and Visibility Committee Chair.

Communications Plan and Dissemination Strategies

The Visibility Committee Chair has drafted a communications plan for the DSM TCP and has been presented to the Executive Committee earlier. In the plan, 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 and signed-off by the Executive Committee members in 2015.

Any comments related to the visibility of the IEA DSM TCP should be sent to the Visibility Chair Sea Rotmann <u>drsea@orcon.net.nz</u>.

The Executive Committee members **approved** the Visibility Committee Report.

DECISION:

The Executive Committee approved the Visibility Committee Report

7. ADMINISTRATIVE MATTERS

Task Zero – Running the DSM TCP

The Task Zero Update was distributed separately and was presented by Hans Nilsson, Advisor.

Hans Nilsson started his presentation by stating that Task Zero is an effort to in a formal way create a comprehensive and coherent overview of the IEA DSM Technology Collaboration Programme (TCP) material and to ensure that resources are used in the most efficient manner.

The mission of the IEA DSM TCP 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 outreach 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, for example:

- Administration (Secretary and Advisor)
- Informational tools
- > Our networks and in particular the local ones run by Executive Committee participants
- Dissemination and the extension of the DSM University

To ensure that different activities are coherent all these actions will be gathered into a Task called Task ZERO. This Task is mandatory for participants and builds on both cost- and task-sharing.

The purpose of "Task ZERO" is to create a platform for dissemination of results from the IEA DSM Energy Technology Initiative in accordance with its mission.

- 1. Aims are to provide insights and transparency of the work. The main products for this are:
 - a) The Website
 - b) The Annual Report
 - c) The Spotlight Newsletter
 - d) Flyers about the Programme and the Tasks
- 2. Local networks to enable dissemination of results 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
- 3. The "DSM-University" as a way to communicate DSM material that is tailored to the circumstances of the receiver. The main thrust to reach a global audience are the webinars that are primarily designed for output, but may also be used for input in a way that

audiences can communicate back responses, needs and wishes. The DSM University should gradually build facilities for formal training and courses.

Responsibilities: 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.

Discussions also took place regarding how to build more faculties within DSMU/Leonardo Energy. ISGAN and ECES have indicated that they would like to become DSMU partners.

The presented report for the period October 2015 – February 2016 pulled Task Zero elements together and provided a comprehensive overview.

The Executive Committee members **approved** the Task Zero Status Update.

Strategy discussion – special session

Simone Maggiore, gave an inspirational presentation on current Ricerca sul Sistema Energetico (RSE) activities in Italy to kick-off the strategy session.

Executive Committee members had a first discussion on how to update the DSM Programme's strategy. Maria Alm and Andreas K. Enge will summarise the discussion and will provide a first draft to send out for comments and additional aspects. The work on the strategy will continue at the next Executive Committee meeting.

2015 Financial Report

Boris Papousek, Vice-Chairman, Austria, with support from Anne Bengtson, Executive Secretary prepared the financial report for the period 1 January through 31 December 2015. The Financial report was provided in part 2 of the Pre-Meeting Document.

The 2015 budget was overspent mainly due to additional work needed on the new website. The decision not to print the Annual Report and considering that most of the work on the website is now done, should decrease expenditure in 2016.

As discussed at the last Executive Committee meeting the timing of country payments into the Common Fund, and the difficulty in identifying which payments relate to what member countries is creating complications for budgeting and potentially masking the rate of depletion of the reserves. This has implications for the end-of-year balance as shown in the report.

Beginning in January 2016, the subscription of \$11,000/per country/year will be invoiced in accordance with the decision by Executive Committee members to raise the Common Fund. Invoices will be sent out at the beginning of January 2016 (instead of November the year before) to help overcome the problem of seeing which year a payment should be allocated to. It is requested that all member countries make payment promptly upon receiving the invoice.

In addition, in order to overcome the difficulty in identifying receipts from member countries as raised above, the following was agreed at the last Executive Committee meeting:

 When a country has paid their invoice, Executive Committee members are requested to send a copy of their invoice along with other payment proof to Joe Miller joe@accountaxent erprises.com with copies to anne.bengtson@telia.com.

Concerns related to the current end-of-year transaction practice were raised, and it was agreed that a summary of the background for the existing practice and a recommendation/alternatives for ways forward should be presented at the next Executive Committee meeting.

The Executive Committee members **approved** the financial report 2015.

DECISION:

- Executive Committee members approved the financial report 2015.
- Prepare summary of the background for the existing end-of-year transaction practice and present at next Executive Committee meeting.

ACTION:

- Executive Committee members should let Joe Miller know as soon as an invoice has been paid – with a copy to Anne Bengtson
- Prepare summary of the background for the existing end-of-year transaction practice and present at next Executive Committee meeting.

Common Fund Payments

A few countries have not paid their 2015 invoices but no problems are foreseen in receiving these funds. The Executive Secretary will continue to send out reminders to those failing to pay, until payments are received.

ACTION:

Executive Committee secretary should keep reminding those who have outstanding payments

Plans for the Forty-Eighth and Forty Ninth Executive Committee meetings

The 48th Executive Committee meeting will be held in Brussels, Belgium on 6 –7 October 2016. On the 5 of October a seminar is planned.

The Netherlands, tentatively offered to hold the 49th Executive Committee meeting in April 2017. Exact dates and location are still to be determined.

Ireland tentatively offered to hold the 50th Executive Committee meeting in October 2017.

8. OTHER MATTERS

Boris Papousek, Austria told members that he is stepping down as Executive Committee member and Vice Chairman. Maria Alm, Swedish Energy Agency has been asked to replace Boris, but needs to check back home before formally accepting.

The Executive Committee members thanked Maria Alm and Svetlana Gross for the excellent meeting arrangements and the Chairman adjourned the meeting.

9. ACTION ITEMS RESULTING FROM THE FORTY SEVENTH EXECUTIVE COMMITTEE MEETING

WHO	ACTION	WHEN
India Korea Spain	Pay Common Fund invoice for 2015	ASAP
Anne Bengtson	Keep reminding those who have outstanding payments to the Common Fund	On-going
ExCo members	Let Joe Miller and Anne Bengtson know when an invoice is paid	On-going
Rob Kool Sea Rotmann	Maintain contacts with China (NDRC), South Africa, Thailand, IBM (Germany), Australia, Portugal.	ON-GOING
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 Sarah Mitchell	Establish contact with Efficiency One social media team to help DSM TCP with their social media	ASAP
Operating Agents	Update a more clear definition in Legal Annex text of their Task	ASAP
Anne Bengtson Francois Brasseur Hans De Keulenaer	Prepare administrative details for the Forty Eighth Executive Committee Meeting in Brussels, Belgium	ASAP
Diego Carvajal Rob Kool Matthias Stifter Hans De Keulenaer	Further explore the topic of Tracking flexibility in electricity systems with increasing renewables	On-going
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 to Pam Murphy	On-going
All	Follow Visibility Committee Chair recommendations to update the website	On-going
Catherine Cooremans	Adjust financial structure/work plan and distribute to Executive Committee members after taking into account the discussion and suggestions at the Stockholm meeting	ASAP
Operating Agents	Prepare Task Information Plans and include in each Task Status Report.	On-going
Pam Murphy	Distribute issues of the DSM Spotlight Newsletter	June 2016 September 2016
Operating Agents	Include 1-2 slides in Task presentation, highlighting the main findings to date in respective Task(s).	Present at next ExCo meeting
Hans Nilsson Anne Bengtson Andreas K. Enge	Prepare summary of the background for the existing end- of-year transaction practice and present at next ExCo meeting.	
Ruth Mourik	Contact VTT to join consortium for application to H2020	ASAP
Matthias Stifter Svetlana Gross	Further develop paper on Big Data	Present at next ExCo meeting
Matthias Stifter René Kamphuis	Continue development of proposal for potential follow-up activities in Task 17	Present at next ExCo meeting
Jan W. Bleyl	Task 16 Phase IV: Continue talks with interested countries	On-going

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Hans Nilsson	Task Zero: Prepare Task Status Report and send to Anne	Friday 2
	Bengtson for inclusion in the Pre-Meeting Document.	September 2016
Hans Nilsson	Prepare Status Report on the development of the DSM	Friday 2
Hans de	University and send to Anne Bengtson for inclusion in the	September
Keulenaer	Pre-Meeting Document (PMD).	2016
Jan Bleyl-	Prepare a Task Status Report for Task 16 Phase 4 and	Friday 2
Androschin	send to Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	September 2016
Matthias Stifter	Prepare Task Status Report for Task 17 and send to Anne	Friday 2
René Kamphuis	Bengtson for inclusion in the Pre-Meeting Document (PMD).	September 2016
Rob Kool	Prepare PPC progress report and send to Anne Bengtson	Friday 2
	for inclusion in the Pre-meeting Document (PMD).	September 2016
Matthias Stifter	Prepare further developed proposal on further activities in	Friday 2
René Kamphuis	Task 17 and send to Anne Bengtson for inclusion in the PMD.	September 2016
Sea Rotmann	Prepare Task Status Report Task 24 Phase II and send to	Friday 2
Ruth Mourik	Anne Bengtson for inclusion in the Pre-Meeting Document (PMD).	September 2016
Ruth Mourik	Prepare Task Status Report for Task 25 and send to Anne	Friday 2
	Bengtson for inclusion in the Pre-Meeting Document (PMD).	September 2016
Catherine	Prepare Task Status Report for Task 26 and send to Anne	Friday 2
Cooremans	Bengtson for inclusion in the Pre-Meeting Document (PMD).	September 2016
Andreas K. Enge	Prepare Financial Report and send to Anne Bengtson for	Friday 2
Anne Bengtson	inclusion in the Pre-Meeting Document	September 2016
Sea Rotmann	Prepare Visibility Committee Report for inclusion in the Pre-	Friday 2
	Meeting Document.	September 2016
Weber Web	Provide statistics for every Task every six months and send	Friday 2
	to Anne Bengtson for inclusion in the Pre Meeting Document.	September 2016
	E-mail pdf file of Pre-meeting Document for the Forty Sixth	Monday 12
Anne Bengtson	ExCo meeting to the Executive Committee members and Operating Agents.	September 2016

10. ATTACHMENT A

Participants

Executive Committee Members DSM Technologies and Programmes

*Participants at the Executive Committee meeting 17 – 18 March, 2016, Stockholm, Sweden

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DSM Implementing Agreement on Demand Side Management Technologies and Programmes – Operating Agents

* Participated at the Executive Committee meeting 17 – 18 March 2016, Stockholm, Sweden

Task 16 – Energy Performance Contracting - Competitive Energy Services - Operating Agent

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

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Task 24 – Closing the loop: Behaviour change in DSM – from theory to policies and practice - Operating Agent

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Project partner

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Task 25 – Business models for a More Effective Uptake of DSM Energy Services Operating Agent

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Task 26 – Multiple Benefits for Energy Efficiency Operating Agent

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11. ATTACHMENT B Agenda

IEA Demand-Side Management Energy Technology Initiative Forty Seventh Executive Committee Meeting

16 – 18 March, 2016, Stockholm, Sweden

WEDNESDAY 16 Marc	h				
09:00 – 17:00	Workshop Clarion Hotel Sign, Östra Järnvägsgatan 35, Norra Bantorg	get, Stockholm			
18:00 – 20:00	Operating Agents Meeting - Clarion Hotel Sign Visibility Committee Meeting – Clarion Hotel Sign				
THURSDAY 17 March	Venue: Clarion Hotel Sign, Östra Järnvägsgatan 35, Norra Stockholm	Bantorget,			
09:00 – 10:00	 1. GENERAL BUSINESS/WELCOME 1a. Welcome – Rob Kool 1b. ExCo approval of the Agenda 1c. ExCo approval of the Forty Sixth ExCo meeting Minutes – Halifax, Nova Scotia 1d. Status of the Implementing Agreement 1e. IEA Relations Secretariat news Contacts with possible sponsors/new participants Rob Kool IA relations, BCG and ECG, – Rob Kool Report from the Project Preparatory Committee (PPC) – Rob Kool Operating Agents meeting report – Rob Kool 	DOC A Distributed earlier DOC B DOC C			
10:00 – 10:30	Coffee break				
	2. NEW WORK				
10:30 – 11:00	2a. Task 26 on Multiple Benefits for Energy Efficiency – Catherine Cooremans, EcoDiagnostic, Switzerland	DOC D			
11:00 – 11:30	 2b. Concept paper on Tracking flexibility in electricity systems with increasing renewables – Diego García Carvajal, European Copper Institute 	DOC E			
11:30 – 12:30	2d. Discussion on Big Data – Svetlana Gross, Swedish Energy Agency – Matthias Stifter, AIT Austria (discussion to be continued at 16:00)				
12:30 – 13:30	Lunch				

3. CURRENT TASKS – LOAD SHAPE CLUSTER

13:30 - 14:00	3a. Task 17 – Integration of DSM with other Distributed DOC F
	Energy Resources – Phase 3
	– Matthias Stifter, AIT, Austria

The proposed New Tasks discussion will aim at one of the following decisions: 1. Decide to initiate the new Task based on work done to date. 2. Decide to initiate the Task Definition for a new Task. Interested countries must be prepared to assign the appropriate expert(s) to participate in that process. 3. Decide that additional work is needed on the concept paper. Interested countries must be prepared themselves, or to assign the appropriate Experts to help further develop the concept. 4. Decide to pursue the subject in co-operation with other parties within the IEA or elsewhere 5. Rejection (or moth-balling) 14:00 - 14:30 3b. Task 24 Closing the Loop – Behaviour Change in DSM: DOC G Helping the Behaviour Changers - Phase II. Task Status Report - Sea Rotmann, SEA - Sustainable Energy Advice, New Zealand - Ruth Mourik, DuneWorks, The Netherlands 4. CURRENT TASKS - LOAD LEVEL CLUSTER 14:30 - 15:00 DOC H 4a. Task 16 – Phase 4 – Competitive Energy Services - Task Status Report - Jan W. Bleyl, EnergeticSolutions, Austria 15.00 - 15:30 Coffee break 15:30 - 16:00 4b. Task 25 Business models for a more effective market DOC I uptake of DSM energy services. Task Status Report -- Ruth Mourik, DuneWorks, the Netherlands 16:00 - 17.00 Continued discussion on Big Data Svetlana Gross/Matthias Stifter 17:00 Adjourn 19:00 Hosted Dinner - Old Town, Stockholm FRIDAY 18 March 2016 09:00 - 10:00 **5. PROGRAMME VISIBILITY** 5a. Programme Visibility Report Sea Rotmann DOC J - Sea Rotmann Website statistics – see Attachment section 10:00 - 10:30 DOC K 5b. Development of the DSM University – Hans Nilsson

> 5c. How to build more faculties within DSMU/Leonardo Energy – Rob Kool, Hans Nilsson

11:00 – 12:00		6. ADMINISTRATIVE MATTERS	
		6a. Task Zero	PMD Part 2
		6b. Financial Report 2015 – Boris Papousek Accountax Status Report Status of Common Fund payments	PMD Part 2
		6c. Decision on plans for the Forty Eighth ExCo meeting October 2016	
		6d. Plans for the Forty Ninth ExCo meeting April 2017	
12:00 – 13:30	Lunch		
13:30 – 15:00		7. SPECIAL SESSION	
		7a. Discussion on how to develop and implement our str - Rob Kool/Hans Nilsson/Maria Alm	rategy further

7b. Collaboration with the IEA - Tyler Bryant/Rob Kool

8. OTHER ISSUES

Adjourn

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

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

Table 1. Task Work Plan Resource needs: Task or cost sharing

Table 2. 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

12. ATTACHMENT C

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
СТІ	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

r	
IPCC	Intergovernmental Panel on Climate Change
ISGAN	International Smart Grid Action Network (ISGAN)
JFS	Japan Facility Solutions (Japanese Sponsors participating in Task XVI)
KEA	Korea Energy Agency
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

13. ATTACHMENT D

Participation Table

Participant	ן							
	In force					Proposed		
							Tasks/	
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	17	24 Phase	25	26		16 Ext.		
	Phase 3	2				Phase 4		
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	Matthias Stifter & René Kamphuis	Sea Rootmann & Ruth Mourik	Ruth Mourik	Catherine Cooremans	Hans Nilsson, Hans de Keulenaer	Jan W. Bleyl- Androschin		
	Ka	Mc	Bu	Ca	Та Хе	An		

X = participant

interested

* = Sponsors

◀ = in-kind

14. ATTACHMENT E

Matters for the Executive Committee

Responses from absent countries

Document C – Project Preparatory Committee

Approve the Report

UK: The UK approves the Report.

Document D: Task 26 on Multiple Benefits for Energy Efficiency

Korea: Would like to join Task 25

Document E – Concept paper: Tracking flexibility in electricity systems with increasing renewables

UK: The UK is content for this work to proceed and considers it within scope of the DSM TCP and an issue worthy of further consideration though unable at present to commit to participation.

Big Data

UK: This is an interesting topic as reflected in the arguments set out in the paper that was circulated for the last meeting. We have not seen any further development of that paper so our previous comments around the broadness of the topic and ease of data collection and whether the envisaged programme of meetings and webinars would do more than scratch the surface unless targeted on more specific issues, still stand. Nevertheless, the UK has no issue in principle with a Task being developed in this area.

Document F – Task 17: Integration of Demand Side Management, Distributed Generation. Renewable Energy Sources and Energy Storages

UK: UK approves the Task Status Update Report.

Document G – Task 24 Phase II – Helping the Behaviour Changers

UK: Task Status Report approved.

We can support the move to a single official operating Agent (Dr Sea Rotmann)

Document H – Task 16: Innovative Energy Services: Phase IV Life-Cycle Cost; 'Deep retrofit*; Simplified M&V; (Crowd) – Financing & ES Taxonomy (start)

UK: UK approves the Task Status Update Report

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

UK: UK approves the Task Status Update Report

We welcome idea of exploring potential to access Horizon 2020 funding – a potential model for future support for DSM TCP activity.

Document J – Programme Visibility

UK: UK approves the Status Update Report

Document K – DSM University

UK: Task Status Report approved.

Document PMD Part 2 – Task Zero

UK: Task proposal approved

PMD Part 2 – Financial Report

UK: UK approves the financial report