

ANNEX XIII: TOOLS FOR ANALYSIS OF A FUTURE ENERGY REVOLUTION

**ETSAP - ENERGY TECHNOLOGY SYSTEMS ANALYSIS PROGRAMME**  
Implementing Agreement of the INTERNATIONAL ENERGY AGENCY - IEA/AIE

**MINUTES OF THE 70<sup>TH</sup> EXECUTIVE COMMITTEE MEETING**

*held on Friday, November 18, (14.00 - 18.00), 2016, at  
CIEMAT, Madrid, Spain.*

TABLE 1: PARTICIPANTS

N.	Country	Participant	Delegate	Attended	Stand-ins
1	Australia	CSIRO	Mr. Luke REEDMAN	Yes	
2	Belgium	VITO/SPW/Brussels	Mr. Jan DUERINCK	Yes	
3	Denmark	DEA	Mr. Aksel Laurids BECK	Yes	Mr. Kenneth Karlsson
4	EC	JRC Directorate	Mr. Andreas ZUCKER	Yes	Mr. Wouter Nijs
5	Finland	VTT/TEKES	Ms. Pia SALOKOSKI	Yes	Ms. Tiina Koljonen
6	France	ADEME/EDMP/ DGEMPEAD	Ms. Nadia MAIZI	Yes	Ms. Sandrine Seloisse
7	Germany	IER	Mr. Markus BLESLE, Vice chair	Yes	
8	Greece	CRES	Mr. George GIANNAKIDIS, OA	Yes	
9	Italy	ENEA	Ms. Maria Rosa VIRDIS, Vice Chair	Yes	Ms. Maria Gaeta
10	Ireland	SEAI	Mr. Brian Ó GALLACHÓIR, Chair	Yes	
11	Japan	IEEJ	Mr Yuhji MATSUO	No	
12	Kazakhstan	NURIS	Mr. Yerbol AKHMETBEKOV	Yes	Mr. Bakytzhan Suleimenov
13	Korea	KEA	Mr. HoChul Shin	Yes	
14	Netherlands	ECN	Mr. Bob van der ZWAAN	No	
15	Norway	IFE	Ms. Kari Aamodt ESPEGREN	Yes	Ms. Eva Rosenberg
16	Russian Fed.	ERI-RAS	Mr. Sergey FILIPPOV	No	
17	Spain	CIEMAT	Ms. Helena CABAL	Yes	
18	Sweden	STEM	Ms. Josefin THORESSON	Yes	
19	Switzerland	PSI	Ms. Anne-Kathrin FAUST	Yes	Mr. Tom Kober
20	UK	DECC	Mr. Alec WATERHOUSE	Yes	Mr. Paul Dodds
21	US	DOE	Mr. Carmine DI FIGLIO	No	
22	Sponsor	ENEL Foundation	Mr. Carlo PAPA	Yes	Mr. Mariano Morazzo
23	Sponsor	GE Global Research	Mr. Trevor KIRSTEN	Yes	Mr. Miquel Gonzalez
<b>Officers:</b>					
		Mr. Gary Goldstein	ETSAP, Liaison Officer, GAMS, MARKAL, DWI		
<b>Guests:</b>					
	Mr. Kannan	PSI, Switzerland	Mr. James Glynn	UCC, Ireland	
	Mr. Socrates Kypreos	PSI, Switzerland	Ms. Rikke Næraa	DEA, Denmark	
	Ms. Maryse Labriet	ENERIS, Spain	Mr. Maurizio Gargiulo	E4SMA, Italy	
	Ms. Kathleen Vaillancourt	ESMIA, Canada	Ms Martha Cadena Barros	Bruxelles Environnement, Belgium	

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TABLE 2: AGENDA

No.	ITEM	DOCS
1	<b>QUORUM COUNT</b>	
2	<b>ADOPTION OF THE AGENDA</b>	
3	<b>FOR THE RECORD</b>	
3.1	<i>Minutes of the 69th Executive Committee</i>	F1
4	<b>IEA-ETSAP IMPLEMENTING AGREEMENT</b>	
4.1	<i>Communication from the Secretariat</i>	F2
4.2	<i>Strategic approach to ETSAP Participation</i>	F3
5	<b>ANNEX XIII (2014-2016): TOOLS FOR ANALYSIS OF A FUTURE ENERGY REVOLUTION</b>	
5.1	<i>Progress of current projects and ETSAP tools</i>	F4
5.2	<i>Annex XIII 2015 Budget Report</i>	F5
5.3	<i>Selection of new projects</i>	F6
6	<b>ANNEX XIV (2017-2019): UNDERSTANDING AND FACILITATING THE ENERGY TRANSITION TO ACHIEVE THE 'WELL BELOW 20C' GOAL</b>	
6.1	<i>Annex XIV 2017 Draft Programme of work and budget: discussion and adoption</i>	F7
6.2	<i>Confirmation of the participation fee for 2017</i>	
6	<b>OTHER BUSINESS</b>	
6.1	<i>Next workshop and ExCo meeting: 10-11 July 2017 Maryland, USA together with IEW 2017</i>	
6.2	<i>Successive meetings: Fall meeting 2017: Zurich November 2017.</i>	
6.3	<i>Others.</i>	
<b>ATTACHMENTS</b>		
F1	<i>Minutes of the 69th ExCo meeting, held in Cork Monday, May 30, 2016 and approved text of Annex XIV.</i>	
F2	<i>Communication from the Secretariat</i>	
F3	<i>Strategic Approach to ETSAP Participation enhancement</i>	
F4	<i>Progress of current projects and ETSAP tools</i>	
F5	<i>Annex XIII Budget report for 2016</i>	
F6	<i>Selection of new projects</i>	
F7	<i>Annex XIV programme of work and budget for 2017</i>	

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### Opening

The Chair, Mr. Brian Ó Gallachóir, opened the meeting at 14:00 welcoming the delegates and guests and thanking CIEMAT for organising the workshop. A tour de table followed. The Chair welcomed the representatives of Australia and GE Global Research who participated for the first time in the ExCo as CPs.

#### 1. Quorum Count

ETSAP has twenty three Participants comprising twenty one Contracting Parties (CP) and two Sponsors. The quorum is one half of the members plus one, i.e. twelve. Eight delegates attended in person and eleven Participants through their stand-ins (see above, Table 1). A quorum was present.

#### 2. Adoption of the agenda

The Chair presented the agenda of the Executive Committee (ExCo) meeting. Mr. Kober proposed to include under “Other Business” TIMES coding and Mr. Goldstein the strategy for tools development. The agenda with these additions was adopted by the delegates.

#### 3. For the record

##### 3.1 Minutes of the 69th Executive Committee - for the record (*Attachment F1*)

The minutes of the 69<sup>th</sup> Executive Committee meeting (held on May 30<sup>th</sup> 2016 in Cork) were distributed to the CPs, three comments were received and were incorporated in the minutes, and the final version was adopted in September 2016.

The following *matters arising* from the minutes were pointed out by the Chair and discussed by the delegates:

- 1) According to the Cork ExCo meeting two working groups were proposed, one focussed on tools development and a second focussed on promoting ETSAP to developing countries. The agreed mechanism for the first working group was via the forum. However, there was no engagement since Cork on the forum regarding tools development. The delegates discussed the need for a multi-year strategy for the development of the tools and methodologies. After discussion the delegates decided to:
  - a) Assign to the Project Head (PH) the responsibility of engaging with the Participants in order to assemble a list of issues, challenges, problems and possible solutions for the ETSAP tools (model generators, VEDA, handling large problems, more capacity with GAMS TIMES coding etc.) and bring forward and distribute the collated list and a multiyear strategy document on the development of tools and methodologies for discussion at the next ExCo. Mr Goldstein offered his assistance to this process.
  - b) Assign to the PH the responsibility to compile a list of immediate improvements to VEDA and to allocate a budget for these improvements. These will be collected by the PH by March 2017 and will be forwarded to KANORS in order to proceed with the priorities in the list that can be accommodated by the allocated budget.
  - c) Assign to the PH the responsibility of investigating how to improve access to the community’s outputs on the ETSAP website. This will be coordinated with the gathering of information for the final report of Annex XIII, where the possibility of have a web based version of the list of publications with links to the related sites could be incorporated on ETSAP’s website together with a smart searching engine. Furthermore, the PH will collect input from the Participants on the desired structure of a password protected member’s space which could hold information, data and reports that the Participants would like to share with the community.

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- 2) It was agreed that the work of the second working group on promoting ETSAP to developing countries would be discussed under item 4.2. The Participants agreed that the PH will have a pro-active engagement role with existing and potential new members in context with the IEA policy for approaching new countries.
- 3) The point on the cost of workshops will be discussed under item 5.2 and 6.1.
- 4) The proposal for a side event at the Habitat III that ETSAP supported was not accepted.

### 4. IEA-ETSAP Implementing Agreement

#### 4.1 *Communication from the Secretariat (Attachment F2)*

Mr Remme was not able to attend, but he distributed a document with the communication from the IEA Secretariat (see *Attachment F2* for details). The Chair presented the main points of the communication which included: the approval of CERT for the participation of GE Global Research as a Sponsor Participant within ETSAP; the inclusion of Singapore and Morocco as association countries to the IEA together with China, Mexico, Indonesia, and Thailand. ETSAP has contacts and collaborations with four out of the five of these countries and will extend these in future.

CERT will conduct a survey of outreach activities among the TCPs and ETSAP will report for the next CERT meeting. It would be to ETSAP's benefit to collectively organise workshops with the IEA in countries where there is common interest. An annual report of activities of ETSAP will be submitted to CERT for the next meeting in February and on an annual basis from now on.

According to the Legal Office of the IEA the legal text of the IA should be adjusted to include Sponsors. The Legal Office will provide suggested amendments to the legal text of the IA.

#### 4.2 *Strategic Approach to ETSAP Participation*

The Chair mentioned the increase in participation with two new Participants joining in 2015 (Kazakhstan and ENEL Foundation) and two in 2016 (Australia and GE Global Research), along with reengagement of Japan. In addition, an invitation to join ETSAP was sent to S. Africa after the Cork workshop and to Portugal in November 2016. On the other hand Canada left some years ago and there is a pending issue with the CP from USA since discussions with EPA about their potential involvement are still ongoing. More countries expressed interest to participate in ETSAP like Mexico and Brazil and there is increased demand for training in ETSAP's tools (four trainings planned during the next three months in Madrid, Japan, Brazil and Torino as well as training in Argentina).

The PH will request for testimonials from the CPs on their gains from ETSAP participation which can be used as showcase on the website but also can identify areas in which new CPs can benefit from ETSAP.

A discussion was initiated by the Chair on the strategy that ETSAP can follow in order to engage with developing countries. Some of the points raised by the delegates were:

ETSAP can leverage upon what CERT and IEA are doing in order to engage with new partners and can where appropriate align the targetted priority countries of the IEA. The PH will liaise with Ms Carrie Pottinger in the IEA exchanging information on the calendar of activities of the agency and of ETSAP in order to exploit synergies. The post-Paris agreement NDC design and assessment process offers an opportunity for ETSAP's involvement and there is a need for being pro-active.

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Mr Kober presented briefly some points from the working group on the enhancement of ETSAP's reach to developing countries. The main points were: to engage with multi-national organisations (presentation to the Africa Indaba, engage with the WB SCPP). Mr Goldstein will inform the participants of the upcoming World Bank PMR workshop that there was interest expressed from ETSAP partners in exploring the option of teaming up with developing teams in the framework of the PMR initiative of the World Bank which funds NDC development and monitoring. The Participants agreed to update the ETSAP website with a page dedicated to newcomers where the starter model, publications and resources will be available for new users. A matrix will also be available showing which CPs have expertise in which countries/regions in order to promote collaboration since knowing more on who can do what and where can help in teaming up.

After discussing the delegates decided:

- To maintain the Tosato grant at €10,000 and limit the allocation to €1,500 per person for 2017 as the first year of implementation of the scheme and make it visible on the website.
- Mr Kober will coordinate the activity of creating a matrix showing the countries in which CPs are active and could contribute to the capacity building process.
- A couple of slides will be developed that can be used to promote ETSAP's activities and will include the activity matrix mentioned above.
- A webpage for "New to ETSAP" will be developed to include specific information for new comers. This will be coordinated by the PH in collaboration with Mr Kober.
- The Annex reports will be available on the documentation page of the website, and the report of the previous Annex will be available on the Applications page.
- A brochure including the achievements of ETSAP tools users (testimonials collected from the CPs) will be developed and will be available on the Applications page and also as a flyer.

### 5. Annex XIII (2014-2016): Tools for Analysis of a Future Energy Revolution

#### 5.1 Progress of current projects and ETSAP tools (*Attachment F4*)

The O.A presented the progress of the currently funded projects by ETSAP (details in Attachment F4). The delegates reported on the expected completion date of the ongoing projects.

#### 5.2 Annex XIII 2016 Budget Report (*Attachment F5*)

The O.A. presented the total income of ETSAP for 2016 so far, comprising of the fees of 15 contracting parties and the fees of the training courses (Attachment F5). The representatives of the other CPs present confirmed that the fee for 2016 will be paid within the year.

The project "Linking TIMES and CGE Models - Moving towards best practice" generated two workshops, two collated presentations and two book chapters without utilising the full budget and €45,370 were returned to the ETSAP budget.

The delegates approved the request of the Chair to transfer the amount of €4,000 allocated to UCC for the project "Introducing external costs for Local Atmospheric Pollution (LAP) in TIAM-MACRO to study synergies and co-benefits of climate change mitigation" to fund Mr Kypreos participation in writing up a journal publication.

Regarding the expenses for the workshops, the delegates agreed that a detailed breakdown of the expenses will be reported at the end of each year showing the amount spent for each trip and workshop where ETSAP officials participated on separate lines for

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the semi-annual workshops and the other workshops. For the additional workshop which will be held in December 2016 in Japan the traveling expenses of the Chair will be covered by ETSAP.

### 5.3 Selection of new projects (*Attachment F6*)

The delegates approved the funding of projects using the ranking approach, in the following order, provided that funding is available through the participation fees (see Attachment F6):

1. TIMES Migration Feasibility Study (€6500).
2. Second ETSAP book - focus on applications (short and long term changes needed to achieve a well below 2C World). (€7500).
3. ETSAP-TIAM update and re-calibration - Phase 1 (€45875). The proposer offered to request only the budget of Phase 1 in order to have enough budget for funding the other projects.
4. Workshop on Sustainability Performance of Energy Systems (SPES) (€29450).
5. Addressing Uncertainty in TIMES Using Monte Carlo Analysis (€52000).
- 6 Enhancing the TIMES New User Experience - Second Step, a VEDA TIMES Starter Model & Roadmap (€44050).
7. TIMES-GTAP soft-link methodology and interface (€58900).
8. Enhancing and Preparing TIMES for High Performance Computing (HPC) (€10970).

The projects will be contracted by the new Operating Agent.

The delegates decided to allocate the amount of €15000 for the development of the Annex XIII final report to Ms Kathleen Vaillancourt.

The delegates decided to allocate an amount of up to €25000 for the immediate tool improvements that will be promoted from the process described in point 3 of the agenda, by March 2017. The delegates decided that the amount of €20000 will be allocated to tools improvement in the summer 2017 meeting. The delegates also discussed the possibility of allocating part of the budget for enlarging the team that is competent in the TIMES code development.

## 6. Annex XIV (2017-2019): Understanding and facilitating the energy transition to achieve the “well below 2°C” goal.

### 6.1 Annex XIV 2017 Draft Programme of work and budget: discussion and adoption (*Attachment F7*)

The O.A. presented the budget for the operational expenses for 2016 which was approved unanimously by the delegates (Attachment F7). The budget includes the amount of the Tosato grant, a separate line for the IEW workshop sponsoring, the cost of the ETSAP workshops and an increased budget for training in 2017 since there are already five training sessions foreseen.

### 6.2 Confirmation of the participation fee for 2017

The participants confirmed the participation fee of €20,000 for CPs and €30,000 for sponsors for 2017.

## 7. Other business

### 7.1 Next workshop and ExCo meeting: Maryland USA, 10-11 July 2017.

The next meeting will be held in the Univ. of Maryland, USA, on 10-11 July 2017, before IEW 2017 (12-14<sup>th</sup> July 2017). The ETSAP tools training will take place on 12-14 July 2017.

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### 7.2 *Successive meetings:*

The fall meeting of 2017 will be held in Zurich, Switzerland, hosted by PSI in November 2017. An invitation was offered by the delegate of Belgium to host a workshop in the new premises of VITO and an invitation was offered by Univ. Autonoma del Etsados de Morellos in Mexico to host one of the future workshops.

The delegates agreed that ETSAP should positively be engaged with the EXPO 2017 in Kazakhstan working together with the CP from Kazakhstan.

### 7.3 *Other Topics*

The other topics were covered in the discussion of the tools development.

The Chair closed the meeting at 18:15 thanking the participants and CIEMAT for the organisation of the meeting.