

ANNEX XV (2020-2022):  
ENERGY SYSTEMS AND SUSTAINABLE DEVELOPMENT GOALS

### MINUTES OF THE 85<sup>TH</sup> EXECUTIVE COMMITTEE MEETING

Date: Wednesday, February 23, 2022 (08:00 - 10.00 CET)  
 Venue: Online meeting (via MS-Teams)  
 Contacts: Kari Espegren, ([kari.espegren@ife.no](mailto:kari.espegren@ife.no)), Brian Ó Gallachóir ([b.ogallachoir@ucc.ie](mailto:b.ogallachoir@ucc.ie)),  
 George Giannakidis ([ggiannakidis.gg@gmail.com](mailto:ggiannakidis.gg@gmail.com))

**TABLE 1: PARTICIPANTS**

N.	Country	Participant	Delegate	Attended	Stand-ins
1	Australia	CSIRO	Mr. Luke REEDMAN	Yes	
2	Belgium	VITO/SPW/Brussels	Mr. Frank Meinke-Hubeny	Yes	Pieter Lodewijks
3	Denmark	ENS	Mr. Kristoffer Steen Andersen	Yes	Simon Andersen
4	Finland	VTT/Business Finland	Jussi Mäkelä	Yes	Tiina Koljonen, Vice Chair
5	France	ADEME/EDMP/ DGEMPEDAD	Mr. Emmanuel Combet Ms Nadia Maisi	No	
6	Germany	IER	Mr. Markus BLESL, Vice chair	Yes	
7	Greece	CRES	Mr. Philip Siakkis	No	
8	Italy	ENEA	Ms. Maria Gaeta	Yes	
9	Ireland	SEAI	Mr. Brian Ó GALLACHÓIR, Chair	Yes	
10	Japan	IEEJ	Mr. Yuhji MATSUO	No	
11	Kazakhstan	NURIS		No	
12	Korea	KEA	Ms. HoChul Shin	Yes	Hyun-Jung Chang
13	Netherlands	TNO	Mr. Bob van der ZWAAN	Yes	Francisco De la Longe
14	New Zealand	EECA	Mr. Vincent Smart	Yes	
15	Norway	IFE	Ms. Kari Aamodt ESPEGREN	Yes	
16	Russia			No	
17	Spain	CIEMAT	Ms. Yolanda Lechón	Yes	
18	Sweden	STEM	Ms. Josefin THORESSON	Yes	Ms. Anna Krook-Riekkola
19	Switzerland	PSI	Ms. Anne-Kathrin FAUST	Yes	Mr. Tom Kober
20	UK	BEIS	Mr. Alec WATERHOUSE	Yes	
21	US	DOE	Ms Angelina LaRose	No	
22	Sponsor	ENEL Foundation	Mr. Carlo PAPA	Yes	Mr. Claudio Pregagnoli

### OFFICERS AND GUESTS

Uwe Remme	IEA Secretariat	Christoph Jessen	FZU, Germany
George Giannakidis	ETSAP Project Head	Paul Dodds	UCL, UK
Antti Lethila	VTT, Finland	Sandrine Selosse	Mines Paris Tech, France
James Glynn	Univ of Columbia, USA	Kristina Haaskjold	IFE, Norway

## 85<sup>TH</sup> EXECUTIVE COMMITTEE MEETING

### AGENDA

No.	ITEM	DOCS
1	QUORUM COUNT	
2	ADOPTION OF THE AGENDA	
3	MINUTES OF THE 84 <sup>TH</sup> EXECUTIVE COMMITTEE	S1
3.1	<i>Final Minutes of the 84<sup>th</sup> Executive Committee</i>	
3.2	<i>Matters arising</i>	
4	IEA-ETSAP IMPLEMENTING AGREEMENT	
4.1	<i>Communication from the Secretariat</i>	S2
4.2	<i>ETSAP Participation and Outreach activities</i>	
5	ANNEX XV (2020-2022): ENERGY SYSTEMS AND SUSTAINABLE DEVELOPMENT GOALS	
5.1	<i>Status report from Operating Agent</i>	
	S3	
5.2	<i>Economy and budget</i>	S4
5.3	<i>Annual report - Status</i>	S5
5.4	<i>Status and next steps for ETSAP-TIAM</i>	S6
6	ANNEX XVI (2023-2025)	
6.1	<i>Initial discussion of work program and title</i>	S7
7	OTHER BUSINESS	
7.1	<i>Next ExCo meeting (86th): ExCo-meeting and summer workshop: 23-24 May (in Freiburg)</i>	
7.2	<i>Other meetings:</i>	
	<ul style="list-style-type: none"> <li>• 87<sup>th</sup> ExCo meeting (online)</li> <li>• 88<sup>th</sup> ExCo meeting and Winter WS (in-person?)</li> </ul>	

### Attachments

- 
- S1 Minutes and Action list from the 84<sup>th</sup> ExCo meeting, November 29, 2021
  - S2 Communication from IEA Secretariat
  - S3 Status report from Operating Agent
  - S4 Economy and budget
  - S5 Annual report
  - S6 Status and next steps for ETSAP-TIAM
  - S7 ETSAP Strategic work plan (2022-25) and Annex XV work programme (2020-22)

### 1. QUORUM COUNT

Quorum is 12. A quorum was present as 16 delegates were present.

### 2. ADOPTION OF AGENDA

No items were added under 'Other Business.' The ExCo adopted the agenda.

### 3. MINUTES OF THE 85<sup>TH</sup> EXECUTIVE COMMITTEE

#### 3.1 Minutes of the 84<sup>th</sup> Executive Committee - (Attachment S1)

The ExCo adopted the minutes.

#### 3.2 Matters arising

Action List from 84 <sup>th</sup> ExCo Meeting	Owner
If there is a delay in the meeting documents, the ExCo will be informed by e-mail.	Brian (ongoing)
Support existing ExCo members, follow up with Israel and reach out to new potential contracting parties to ETSAP - Resend the invitation to Ukraine - Follow up on Kazakhstan.	George/Brian/Kari (ongoing) No update from these three countries. Similar situation as before.
Seek to coordinate with IEA on joint training workshops for IEA Association Countries	George / Uwe (ongoing).
Finalization of the current the ETSAP-TIAM project and the next steps for the model - Submit a document describing clearly the status of the model, what has been updated (Amit/Sandrine) and what are the remaining points to be updated in order to have a fully functional model. - test and review the current status of the model in order to make sure that we have a functional starting point (Markus Blesl + others in ETSAP-team) - discuss next steps for ETSAP TIAM and allocation of €40k at 85 <sup>th</sup> ExCo	George/Amit/Sandrine/Markus + Several comments on model. Covered under agenda item 5.4. Budget of €40k reserved for possible next steps (5.4)
Prepare an updated description for ETSAP in social media	Kate Kolich (NZ) has left EECA. Vincent Smart (new ExCo representative from NZ) will follow it up and see what the status is. Expect to have something for the next meeting
Follow up on invoices for 2021 membership fees. Still 4 members have not paid.	Kari/Linda have followed up The number of ExCo members who have not paid 2021 membership fees has reduced to two.
ETSAP annual report. Develop the template for CPs and officers reporting to the first annual report (2-year report)	Kari/Kathleen Brian/George Will be covered under Agenda item 5.3.
Complete and issue consultancy contracts for 2022	Kari/Linda - done

	Draft contracts were sent to relevant parties
Complete and issue research contracts in line with decisions at the 84 <sup>th</sup> ExCo	Kari/Linda Draft contracts are finalised. Will be issued in early March.
CPs submit (before 85 <sup>th</sup> ExCo) ideas for amendments to process for allocating funds for projects, to be discussed at 86 <sup>th</sup> ExCo meeting	CPs / Kari Discuss process of allocation funds to projects. Not received any ideas. Alec (UK) will write something after the meeting.
Continue with ETSAP webinar series – encourage ExCo members to participate - The next webinar is planned to be in January. - ETSAP partners are encouraged to propose webinar topics to George.	George / Paul (UK) / ETSAP CPs Had 3 webinars on modelling of SDGs. One is planned for 11 <sup>th</sup> of March with focus on <i>Cplex</i> options for running models. CPs requested to submit additional ideas for webinars from April.
Send Doodle for the 85 <sup>th</sup> ExCo meeting	Kari OK.

## 4 IEA-ETSAP IMPLEMENTING AGREEMENT

### 4.1 Communication from the Secretariat (Attachment S2)

Uwe Remme gave a brief overview of reports planned released during the year and ongoing activities at the IEA.

Upcoming meetings:

- CERT meeting February 23-24 Uwe will follow up if any inputs required from ETSAP
- IEA Ministerial Meeting March 23-24 Uwe indicated that open-source data is being discussed. More details will be available after the IEA ministerial meeting. This was welcomed as it would help with TIAM and modelling efforts.

The ExCo also discussed a number of planned IEA reports.

- Uwe mentioned that the ETP (Energy Technology Perspectives 2022) will include supply chains and materials – also looking at potential for alternative material use in the context of construction materials or more materials on the energy side. Will also look into substitutions opportunities in context of material efficiency.
- Uwe also indicated that the intention in the *Reaching Near Zero Emissions in Heavy Industries: a report for the German G7 Presidency (planned for May)* is to provide more details on how to reach net zero for heavy industry – more on the analysis side, but also providing additional discussion on policies.

### 4.2 ETSAP Participation and Outreach activities

Israel is still considering the invitation join ETSAP.

Ukraine: The Ministry of Environment has received the invitation, waiting for cabinet approval.

Kazakhstan: ETSAP efforts to date unsuccessful but will continue trying.

## ANNEX XV (2020-2022): ENERGY SYSTEMS AND SUSTAINABLE DEVELOPMENT GOALS



Portugal: ETSAP received an expression an interest in reinforcing their modelling activities. There is a long tradition of modelling with MARKAL and TIMES in Portugal. The Executive Committee unanimously approved to invite Portugal again to join ETSAP. The formal invitation process will be initiated by the Chair.

### 5. ANNEX XV (2020-2022): ENERGY SYSTEMS AND SUSTAINABLE DEVELOPMENT GOALS

#### 5.1 Status report from Operating Agent (Attachment S3)

The consultancy contracts have been issues to ETSAP officers/consultants.

The new draft contracts for research projects have also been completed. ETAP OA will issue these shortly to the 5 approved new research contracts.

The ETSAP OA raised the topic on what to do in cases where research projects are delayed and postponed. Questions arose on whether we need new rules to ensure timely completion of projects and to manage delays. ExCo members raised the following points:

- It is important that the funds that are allocated for research projects are used for this purpose. If not, it should be possible to transfer the funding to other projects that meet the quality thresholds, particularly as there is generally not enough funding for all approved projects.
- Delayed projects: we do not have a clear process on agreeing on how long a project can be delayed or extended. Rules should be defined around what kind of postponements or extensions are possible and they should be included in the process of allocating funds.
- A question was raised regarding other TCPs, namely are there standard protocols practices that we could learn from? On this point, Uwe Remme and Liselott Fredriksson (IEA) agreed to check and inform the ETSAP management team.

The ExCo decided that members should reflect on these issues and send in comments before the next meeting. The goal is to develop rules for delays or extensions and sunset clauses. This can be combined with the discussion point raised in the 84<sup>th</sup> ExCo meeting regarding possible amendments to process for allocating funds for projects, which as previously agreed is to be discussed at 86<sup>th</sup> ExCo meeting

Maryse Labriet contacted the ETSAP Management team to raise the idea of a possible 3rd ETSAP book focusing on the link between energy systems and SDG goals. The ExCo agreed that if teams are interested, they should contact Maryse to develop the discussion further, and write a joint proposal for the Winter ExCo meeting.

The ETSAP OA has collaborated with Kathleen to get inputs to ETSAP Annual report. Not all have provided information yet. This is the first time we will have an ETSAP Annual report (which will however cover 2 years this time). We assume it will be easier when we have more experience with using the templates.

All relevant documents (ExCo-meeting documents, economy overview, presentations, contracts) are uploaded at the ETSAP MS Teams Folder. If any ETSAP member have problem with access, or want to include others from their organisation, please contact the Operating Agent ([kari.espegren@ife.no](mailto:kari.espegren@ife.no) or [linda.oro@ife.no](mailto:linda.oro@ife.no)).

### 5.2 Economy and budget (Attachment S4)

Status of the economy in 2021:

The ETSAP OA informed the meeting that since the 84<sup>th</sup> ExCo two additional parties have paid the 2021 fees and two remaining parties have still not paid their membership fee.

The meeting was reminded of the previous ExCo decision that Contracting parties that have not paid the membership fee cannot receive funding from the ETSAP funded projects.

Invoices for 2022: Linda has contacted all contracting parties to get correct information for the invoices, and has already sent some invoices, remaining will be sent soon.

The ExCo agreed previously to transfer each year €150 k to the following year 's budget to cover core ETSAP activities ensuring the OA can enter into necessary contracts before the membership fees for are paid. The ExCo confirmed this and agreed to transfer €150 000 to 2022.

According to the economic overview (17.02.2022)

Status of economy 2021:

- Due to the additional fees, five projects (i.e. one additional project) with highest score from the voting in the 84<sup>th</sup> ExCo will be offered contracts
- AS per the 84<sup>th</sup> ExCo €40,000 is reserved for ETSAP-TIAM developments subject to a approval of a proposal
- €150,000 was transferred to 2022 to cover core/base activities in 2022
- The remaining amount of €12,899 is also transferred to 2022.

Overview of budget and economy for 2021- 2022:

<b>Balance (Budget)</b>	<b>2021</b>		<b>2022</b>	
Income Membership	Actual	360 000	Initial budget	420 000
Income (training, change OA)	Actual	7 205	Actual	-
Income (transferd)	Actual	817 249	Actual	1 086 431
<b>Total</b>		<b>1 184 454</b>		<b>1 506 431</b>
Base Activities	Actual	98 023	Initial budget	187 700
Base Activities (late actual/commitments)	Late actual	32 677	Late actual	94 700
Coordinated Projects	Approved	129 000	Application	-
Commitments from previous year	Actual	721 855	Actual	883 532
<b>Total</b>		<b>981 555</b>		<b>1 165 932</b>
Transfer of funds for ETSAP-TIAM development	Budget	40 000	Budget	
Transfer Income (Core activities)	Budget	150 000	Budget	
<b>Balance</b>		<b>12 899</b>		<b>340 499</b>
Commitments transferd to next year	Budget	883 532	Budget	978 232
Income actual transferd	Actual	1 086 431	Actual	
<b>New Balance</b>		<b>0</b>		<b>1 318 731</b>

### 5.3 Annual report - Status (Attachment S5)

Most Contracting Parties have contributed to the ETSAP annual report. Kari is following up on this (Australia, Denmark, France, Ireland, US and ENEL (Italy)). Alec proposed to have a cut-off day to avoid delays. All officers have replied.

Comments on template: ExCo members agreed it was a lot of information to provide, but as the same information will be asked for next year, it will be easier.

The ETSAP OA is in contact with Kathleen regarding the date for the draft report and final report. The plan is to have it ready by the end of March. While there may be some slippage this year, this (end of March) will be a firmer deadline for future years.

#### 5.4 Status and next steps for ETSAP-TIAM

S6

##### Status

The ExCo decided in the 84<sup>th</sup> meeting to reserve €40,000 subject to the ExCo approving a proposal to improve the ETSAP-TIAM model. In order to inform this and to complete the ongoing ETSAP-TIAM project, the ExCo had requested feedback from teams using the model to understand what are the strengths and limitations of the updated version, what is the current status and whether it ready to be released to contracting parties. The goal is to ensure we have a TIAM model that is robust and good for purpose to provide for contracting parties.

- George has compiled a report on the status of the model with written contribution from Markus and Antti. The document (S6) will be updated with comments and feedback from Paul and James.
- Markus: The updated version had many improvements compared to the older version. There were some problems with some technologies and running scenarios to achieve the 1.5 degree target. This might be due to the reason that the model does not have appropriate technologies for these scenarios and there can be some possibilities to make the model more technology rich. The most important issue with making the TIAM open source is the documentation.
- James: The new structure and model is considerably improved. Definitely cleaner and easier to use, more stable and more manageable for a new user. Better calibrated in base year. Some calibration issues that need to be completed, some technologies missing. Consequently, some targets cannot be fulfilled for some scenarios. Needs better documentation and additional reviews on technologies.
- Paul: Does not meet all parts of the contract. Regions have not been extended as planned (30 regions planned, currently 16). Size and solution time has doubled – trade off between spatial and temporal resolution in terms of initial contract. Need to consider how to reduce number of constraints etc. to improve modelling time. Needs to consider if there has been sufficient improvement to justify the funding.
- Antti: Looking mainly at the functionality and not how it behaved. Main conclusion: works quite well, with no numerical problems when solving the model. Seeing a few major issues in the model that need to be improved, and a number of small things. Recommend that some additional work is done to improve this.

##### Next steps for ETSAP TIAM

- 1) Regarding the current ETSAP-TIAM research project, the ExCo agree that it is up to the ETSAP Operating Agent, in consultation with the Management team to decide whether contractual obligations have been met
- 2) The ExCo agreed that the existing ETSAP-TIAM model available on web site is no longer fit-for-purpose and should be removed, to be replaced by the improved version when complete.
- 3) Regarding finalising the new version to make it available, the ExCo discussed the usefulness of compiling a list of things to need to be done, ideally by a group of expert users. In addition, the importance of documentation was also highlighted, (acknowledging that there

is no such thing as perfect documentation) and we have some documentation from the old version that can be reused (e.g. [https://www.ucl.ac.uk/drupal/site\\_energy-models/sites/energy-models/files/tiam-ucl-manual.pdf](https://www.ucl.ac.uk/drupal/site_energy-models/sites/energy-models/files/tiam-ucl-manual.pdf)

[https://www.iamcdocumentation.eu/index.php/Model\\_Documentation\\_-\\_TIAM-UCL](https://www.iamcdocumentation.eu/index.php/Model_Documentation_-_TIAM-UCL)).

While Markus had prepared a proposal to finalise ETSAP-TIAM, the ExCo agreed to consider and decide (via written procedure) on revised version of this proposal (amended based on the discussion points raised). Markus agreed to submit a revised proposal acknowledging the €40,000 funding reserved for this purpose.

- 4) The ExCo also discussed the future of ETSAP-TIAM, and whether a new process would be useful for updating and improving the model moving forward. The ExCo agreed to establish a workshop of ETSAP-TIAM users to consider how the model improvements can be administered, to define a strategy for TIAM, and a process for funding it.
- 5) The question of making the ETSAP-TIAM model open source was also touched on. But the ExCo agreed this was premature at this point and subject to IEA Energy Balance licensing constraints.

## 6 ANNEX XVI (2023-2025)

S7

The ExCo briefly discussed the development of the new Work Programme (Annex XVI – 2023-2025). The ExCo agreed to include it as an agenda item for the 86<sup>th</sup> ExCo meeting, bearing in mind the ETSAP Strategic Work Plan 2020-2025 (S7a) and the level of success in meeting the ambitions of the Annex XV Work Programme (S7b). ExCo members are invited to send comments and proposals for the new Annex can be to the ETSAP Programme Head (George) to be discussed in the 86<sup>th</sup> ExCo meeting.

## 7. OTHER BUSINESS

### 7.1 Next ExCo meeting

The *Next ExCo meeting* (86<sup>th</sup>) will be arranged on the 23rd of May 2022 (14:00 - 17:00CET). The meeting will be in-person, but online participation will be possible. The ETSAP summer workshop, will be arranged on the 23rd and 24th of May 2022, i.e. alongside IEW in Freiburg (25-27 May).

### 7.2 Successive meeting

The ExCo agreed the 87<sup>th</sup> ExCo will be arranged as a virtual meeting to take place in beginning of September 2022.

The ExCo agreed the 88<sup>th</sup> ExCo and the ETSAP winter workshop will be arranged in the end of November or beginning of December 2022. Offers for hosting the meeting can be send to Kari or George. Kari will send a Doodle for both meetings.



## 8. AGREED ACTIONS

Action List from 85 <sup>th</sup> ExCo Meeting	Owner
If there is a delay in the meeting documents, the ExCo will be informed by e-mail.	Brian (ongoing)
Support existing ExCo members, send an invitation to Portugal	George/Brian/Kari (ongoing)
Seek to coordinate with IEA on joint training workshops for IEA Association Countries	George / Uwe (ongoing).
ETSAP-TIAM to be removed from ETSAP website	George
Organise a workshop with TIAM users to discuss the next steps and the creation of a users' group.	George
Submit an updated proposal for the ETSAP-TIAM (budget reserved up to €40k)	Markus
ExCo to use written procedure to decide on ETSAP-TIAM Proposal	ExCo Chair and CPs
Note on proposed process for future support improvements and updates of ETSAP-TIAM to be considered at 86 <sup>th</sup> ExCo meeting	TIAM-Users group / George
Prepare an updated description for ETSAP in social media	Vincent Smart (new ExCo representative from NZ) will follow it up and see what the status is.
Follow up on invoices for 2021 membership fees. Still 2 members have not paid.	Kari/Linda.
Follow up on the invoices for the 2022 fees.	Kari/Linda.
ETSAP annual report published	Kari/Kathleen Brian/George
ETSAP Book to be considered	Interested CPs to contact Maryse
CPs to submit ideas before the 86 <sup>th</sup> ExCo on <ul style="list-style-type: none"> <li>a) Process for funding projects</li> <li>b) Process for extending delayed ETSAP funded projects including sunset clauses in the contracts</li> </ul>	CPs / George / Kari
CPs to submit ideas before 86 <sup>th</sup> ExCo meeting on the content of Work Programme of Annex XVI 2023-2025 to be discussed in the 86 <sup>th</sup> ExCo meeting	CPs / George / Kari
Continue with ETSAP webinar series – encourage ExCo members to participate - ETSAP partners are encouraged to propose webinar topics to George.	George/Paul/ ETSAP CP
Send Doodle for the 87 <sup>th</sup> and 88 <sup>th</sup> ExCo meetings	Kari