

MINUTES OF THE 76TH EXECUTIVE COMMITTEE MEETING

Date: Tuesday, December 10, 2019 (14.00 - 18.00)
 Venue: CSIRO, 10 Murray Dwyer Circuit, Mayfield West NSW 2304, Australia.
 Contacts: Kenneth Karlsson, [keka@etsap.org].

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. Steffen Dockweiler	Yes	Mr. Mikkel B. Simonsen
4	EC	JRC Directorate	Mr. Wouter Nijjs	No	
5	Finland	VTT/Business Finland	Ms. Pia SALOKOSKI	Yes	Ms. Tiina Koljonen
6	France	ADEME/EDMP/DGEMPEDAD	Mr. Emmanuel Combet Ms Nadia Maisi	Yes	
7	Germany	IER	Mr. Markus BLESL, Vice chair	Yes	
8	Greece	CRES	Mr. Philip Siakkis	Yes	Mr. George Giannakidis
9	Italy	ENEA	Ms. Maria Rosa VIRDIS, Vice Chair	Yes	Mr Brian O Gallachoir
10	Ireland	SEAI	Mr. Brian Ó GALLACHÓIR, Chair	Yes	
11	Japan	IEEJ	Mr. Yuhji MATSUO	Yes	
12	Kazakhstan	NURIS		No	
13	Korea	KEA	Ms. HoChul Shin	Yes	Ms. Hyun-Jung Chang
14	Netherlands	TNO	Mr. Bob van der ZWAAN	Yes	Mr. Evangelos Panos
15	Norway	IFE	Ms. Kari Aamodt ESPEGREN	Yes	Ms Pernille Seljom
16	Russia			No	
17	Spain	CIEMAT	Ms. Yolanda Lechon	Yes	Ms. Anna Krook-Riekkola
18	Sweden	STEM	Ms. Josefin THORESSON	Yes	Ms. Anna Krook-Riekkola
19	Switzerland	PSI	Ms. Anne-Kathrin FAUST	Yes	Mr. Evangelos Panos
20	UK	BEIS	Mr. Alec WATERHOUSE	Yes	
21	US	DOE	Mr. David Daniels	Yes	
22	Sponsor	ENEL Foundation	Mr. Carlo PAPA	Yes	Mr. George Giannakidis

OFFICERS

Mr. George Giannakidis	ETSAP Project Head	Mr. Gary Goldstein	ETSAP Liaison Officer
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GUESTS

Ms. Vij Kooyela	EECA, NZ	Mr. Amit Kanudia	KANORS, India
Bakytzhan Suleimenov	PSI, CH		

AGENDA AS OF 9 DECEMBER 2019

No.	ITEM	DOCS
1	<i>Quorum Count</i>	
2	<i>Adoption of the agenda</i>	
3	<i>Minutes of the 75th Executive Committee</i>	L1
3.1	<i>For adoption: Minutes of the 75th Executive Committee</i>	
3.2	<i>Matters arising</i>	
4	<i>IEA-ETSAP Implementing Agreement</i>	
4.1	<i>Communication from the Secretariat</i>	L2
4.2	<i>Strategic Communication submitted to CERT</i>	L3
4.3	<i>ETSAP Participation and Outreach activities</i>	
4.4	<i>Development of ETSAP's tools. Discussion on open source issues.</i>	L4
5	Annex XIV (2017-2019): UNDERSTANDING AND FACILITATING THE ENERGY TRANSITION TO ACHIEVE THE 'WELL BELOW 2°C' GOAL	
5.1	<i>Progress of current projects and ETSAP tools</i>	L5
5.2	<i>Final report of Annex XIV</i>	L6
5.3	<i>Annex XIV Budget report and status from OA.</i>	L7
5.4	<i>Project Selection</i>	L8
6	ANNEX XV (2020-2022): ENERGY SYSTEMS AND SUSTAINABLE DEVELOPMENT GOALS	
6.1	<i>Discussion and adoption of work program. Decision on Operating Agent for the Annex.</i>	L9
6.2	<i>Confirmation of participation fee for 2020</i>	
6.3	<i>Approval of budget for 2020</i>	L10
7	OTHER BUSINESS	
7.1	<i>Next meeting and workshop: Summer 2020, together with IEW in Freiburg, Germany, July 2nd-3rd 2020.</i>	
7.2	<i>Successive meetings: Winter 2020: offer from Norway.</i>	
7.3	<i>Others</i>	
Attachments		
L1	<i>Minutes and Action list from of the 75th ExCo meeting, held in Paris on June 6, 2019.</i>	
L2	<i>Communication from the Secretariat.</i>	
L3	<i>Strategic Communication submitted to CERT.</i>	
L4	<i>Discussion on open source issues and LoA process.</i>	
L5	<i>Progress of projects and tools.</i>	
L6	<i>Proposal for the Final Report of Annex XIV.</i>	
L7	<i>Annex XIV budget.</i>	
L8	<i>Projects for approval.</i>	
L9	<i>Draft work programme of Annex XV.</i>	
L10	<i>Budget proposal for next year</i>	

1. Quorum Count

Quorum is 12. A quorum was present as 19 delegates were present.

2. Adoption of agenda

The ExCo adopted the agenda.

3. Minutes of the 75th Executive Committee (Attachment L1)

3.1 For adoption: Minutes of the 75th Executive Committee

The ExCo adopted the minutes.

Update on Action list from 75th ExCo

Action List from 75 th ExCo Meeting	Update
The Action list should form part of the minutes rather than a separate document.	Done
Add the update on actions from the previous meeting to the discussion point on previous meeting minutes.	Done
Contact World Bank to explore NDC collaboration options.	Gary and VITO contacted WB. WB funds via tenders only. May be interested in joint seminars.
Develop a contact list of TCP's for the ETSAP members, beginning with identified TCPs	To do. George / Kenneth
Explore opportunities for developing joint annexes or tasks (building on Hydrogen TCP Task 41)	Ongoing. George / Kenneth
Engage with Combustion TCP and Wind TCP (Task 25)	Brian engaged with Wind TCP. Forthcoming IEA Inter-TCP/Task workshop on Capturing value of flexibility in integrating variable generation April/May 2020. ETSAP (Kannan Ramachandran from PSI) attended one of Combustion TCP workshops.
ETSAP Members to encourage TCP gatherings at national level	Ongoing. Takes place in Germany, Sweden, and Denmark
Seek to coordinate with IEA on joint training workshops for IEA Association Countries	Ongoing. George / Uwe
Focus in the short term on countries close to Australia and invite participants to the 76th ETSAP Workshop (including also Malaysia and Philippines).	Done.
ETSAP partners should send comments on website to George by e-mail before the 76th ExCo meeting.	Ongoing. ETSAP teams should submit comments before 77 th ExCo meeting.

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TO ACHIEVE THE 'WELL BELOW 2°C' GOAL

Submit journal papers on national models/scenarios for inclusion in the IPCC AR6 report by June 2020	Ongoing. ETSAP teams
New VEDA Front-end prototype will be ready for 76 th meeting	Done. Test driven by Gary and Maurizio. Will be focus of advanced training.
Topics for advanced training will be requested E-mail.	Done.
Topics for the advanced training will be provided via the Forum	Nothing provided.
Advanced training should not overlap with the ETSAP workshop and basic training	Done
Decision required on possible GAMS course at the summer 2020 77 th ETSAP meeting	GAMs reps will attend ETSAP 77 th meeting. Need to co-ordinate meeting.
ExCo suggested that final report of the GTAP-TIMES project should be framed as a "How to" report	Final report submitted.
Provide additional information in financial report detailing a breakdown the spending on workshops and ETSAP tools maintenance	Done
final budget report should be circulated at least two weeks before ExCo meetings	Done.
Annex XIV should be prepared in power point format providing and overview on output, capabilities developed, impacts and outcomes, with web links to papers etc..	Will form part of Annex XIV final report.
The ExCo requested that each country provide slides for final report	Template to be provided. ETSAP teams to submit.
Draft Annex XV work programme to be distributed to Contracting Parties prior to the 76th ExCo for agreement at the meeting	Done
Dates agreed for 76th ETSAP Workshop 9-11 December, 76th ETSAP ExCo Dec 10 (afternoon), Basic training from 9-11 December and advanced training from 12-13 December	Done
Dates agreed for 77th ETSAP meeting (summer 2020) with IEW 2020 June 29 – July 1 in Freiburg, Germany.	Done
The 77th ETSAP meeting will be July 2-3 and 77th ExCo will take place on July 2 in the afternoon	Done
Final decision on 78 th ETSAP meeting will be taken during the 76th ExCo in Australia	ExCo
ETSAP will strive to have all financial decisions for meetings included in the agenda issued at latest one month before each ExCo	Done unless ≤ €10k

If an issue arises during the ExCo requiring a financial decision that was not in the agenda, the ExCo can allocate up to a maximum of €10k during the meet-ing. If the decision involves a financial allocation of greater than €10k, this will be decided by email voting procedure after the meeting.	Done. Ongoing.
ETSAP management engage with the C3E TCP and explore how to include gender analysis in scenario analysis.	Ongoing. George
ETSAP Chair will send a letter to the Swedish Energy Agency in response to their letter of May 23 2019.	E-mail sent
ETSAP management will look into licensing and consider including in the next work program.	Done.
NDC group should meet and discuss TIMES Starter training	Proposal on this topic developed.

3.2 Matters arising

The ExCo agreed that if there is a delay in the meeting documents, the ExCo will be informed by e-mail (Brian).

4 IEA-ETSAP Implementing Agreement

4.1 Communication from the Secretariat

- Request for Extension (RfE) of ETSAP's 5-year term. The ExCo unanimously **decided to seek an extension to its term for an additional five years**. The ETSAP management will proceed with paper work (End of Term Report, Questionnaire and Request for Extension).
- Energy Technology Perspectives 2020. The theme of the revamped ETP-2020 publication will be on the **role of technology innovation in reaching net zero emissions**. The focus will be on technology needs for hard-to-abate sectors, such as steel, chemicals, cement in industry or aviation, trucking or shipping in transport. In this context, there will also be a chapter dedicated to carbon capture, use and storage (CCUS). As this focus of ETP-2020 aligns very well with some of the modelling and scenario work done with TIMES models, the ExCo agreed that ETSAP partners should point Uwe to relevant scenario analyses they may have done on reaching net zero emissions, ideally on a global level. If there is a sufficient interest from ETSAP partners, ETSAP management can organise with IEA a web conference on this topic.
- The biennial IEA Ministerial Meeting took place in Paris on 5-6 December, with Ministers and top representatives from the IEA's 30 member countries, 8 association and 2 accession countries as well as 30 energy companies. The meeting focussed on various topics, including global energy governance, energy security and energy transitions. It was chaired by Mr Michal Kurtyka, Poland's Minister of Climate and the President of COP24.

4.2 Strategic Communication submitted to CERT (Attachment L3)

- The strategic communication was submitted to CERT on November 15th. The relevant CERT meeting took place on November 19-20. The secretariat placed the communication on the CERT website and included it in the action items.

4.3 ETSAP Participation and Outreach activities

- The Government of Italy sent a letter on the 7th September 2019 to the Executive Director of the IEA, nominating RSE -Ricerca sul Sistema Energetico to be a contracting party to ETSAP together with ENEA - Agenzia Nazionale per le Nuove Tecnologie, l'energia e lo sviluppo

economico sostenibile. The Executive Committee of ETSAP unanimously approved the participation of RSE as the second contracting party from Italy. The ETSAP Management will communicate the decision to RSE.

- The Government of Germany sent a letter on the 15th October 2019 to the Executive Director of the IEA, nominating Forschungszentrum Julich GmdH (FZJ) to be a contracting party to ETSAP together with Institutes für Energiewirtschaft und Rationelle Energieanwendung (IER). The Executive Committee of ETSAP unanimously approved the participation of FZJ as the second contracting party from Germany. The ETSAP Management will communicate the decision to FZJ.
- The ExCo discussed and unanimously approved issuing an invitation to New Zealand to join ETSAP. The ETSAP Management will invite the Government of New Zealand to join ETSAP and to designate a Contracting Party.
- The ExCo discussed and unanimously approved issuing an invitation to Austria to join ETSAP. The ETSAP Management will invite the Government of Austria to join ETSAP and to designate a Contracting Party.

IEA TCP Engagement (Attachment L2a)

- Fusion Power Co-ordinating Committee (FPCC) is organising a meeting on big data in Paris on 12-13 February. In case there is interest from ETSAP to participate, please contact Uwe by the end of December.
- IEA TCP Bioenergy Task 44 on Flexible Bioenergy and System Integration. The meeting informed delegates that there will be a [Workshop](#) in Graz January 22-24 2020
- IEA TCP Hydrogen has initiated Task 41 entitled Data and Modelling that includes ETSAP teams. IFE lead the ETSAP engagement with IEA TCP Hydrogen project.
- IEA TCP Energy Storage Annex 32 collaboration. PSI have engaged with this TCP and prepared a project proposal for consideration.
- The meeting informed delegates that there will be an IEA REWP (Renewable Energy Working Party) meeting place in Paris in the week of 6 April, back to back with RIAB-REWP-TCP workshop, focusing on batteries and storage.
- The meeting informed delegates that the IEA TCP Wind Task 25 has proposed an IEA Inter-TCP/Task workshop on *capturing value of flexibility in integrating variable generation* in Paris on April/May 2020. ETSAP teams who are interested should contact IEA TCP Wind Task 25. The current proposed structure of the workshop is as follows.
 - Session 1 How to model the flexibility needs from wind/PV and contributions of different flexibility options
Wind Task 25/PV Task 14 and ETSAP presentations + discussion
 - Session 2 Generation flexibility in future
Hydro and Bioenergy presentations
 - Session 3 Flexibility options from Storages , transmission (and demand side?)
ISGAN, ECES (and Hydrogen, DSM?).

4.4 Development of ETSAP's tools. Discussion on open source issues (Attachment L4)

KANORS updated the meeting on the ongoing redevelopment of VEDA. VEDA Front-End is complete. It has been tested for a number of models by Gary and Maurizio. It will be further tested by other ETSAP teams during the advanced training on Dec 12-13.

The delegates discussed the timelines for transitioning from old VEDA to new VEDA and agreed that this should happen as soon as possible. The delegates further agreed that subject to positive feedback from the ExCo members testing the new VEDA during the advanced training that

- KanORS-EMR will be paid €150k for the new VEDA Front-End development from the 2019 budget.
- Gary and Maurizio will be paid €5k for testing new VEDA

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- Training materials for new VEDA will be developed in order to begin new VEDA training from summer 2020.
- €10k to be allocated to Gary for revision of Part IV and Part V of the TIMES Documentation, subject to approval during budget discussions
- George will co-ordinate an ETSAP sub-group to work with Amit to determine which elements of the full VEDA development are included in the 2019 €150k payment and which are included in the planned 2020 €150k payment.

Open source issues

The delegates discussed possible changes to the ETSAP TIMES Letter of Agreement and topics related to open source modelling and open data. The ExCo unanimously agreed to replace the TIMES Letter of Agreement with a suitable open source license (e.g. Creative Commons BY4.0 license).

The ExCo also discussed making the source code of TIMES available on GitHub and decided that this needs further discussion with Antti. The ExCo decided to make the TIMES source code available directly from the ETSAP website.

The ExCo decided to update the website in order

1. to make the source code available directly from the website
2. to provide an option for those interested to register for receiving updates from ETSAP
3. to provide an option for those interested in acquiring VEDA and GAMS

The ExCo also discussed making models available on the ETSAP website (e.g. JRC model, national models, such as EPA US Model and ETSAP-TIAM). The delegates also discussed making model descriptions and scenario results available on the ETSAP website. There was a suggestion to possibly make an open user interface and GAMS license for limited size models.

5. Annex XIV (2017-2019): UNDERSTANDING AND FACILITATING THE ENERGY TRANSITION TO ACHIEVE THE 'WELL BELOW 2°C' GOAL**5.1 Progress of current projects and ETSAP tools (Attachment L5)**

The Operating Agent presented the progress update on the ongoing ETSAP research projects as per attachment L5.

For the *ETSAP-TIAM* project, the ExCo **approved** the extension of the project timeframe to Dec 31 2020 and the proposed change of project co-ordinator from DTU to EdMdp CMA (Sandrine Selosse).

For the *Excel technology database for energy system models integrated with a TIMES SubRES structure* project, the ExCo approved the request to extend the project to the end of March 2020.

5.2 Final report of Annex XIV (Attachment L6)

The ExCo discussed and approved the proposed format and structure of the ETSAP Annex XIV Final Report from Kathleen, and the deliverables associated with the core and extended proposal. To work most effectively, it will require inputs from ETSAP partners and key experts; they will need to provide material and point to relevant information about the content they want to be included in the Final Report.

The Annex XIV Final Report process and deliverables are summarized as follows

- 1) A short but specific list of questions and requests will be circulated to ETSAP partners, experts and users to collect the relevant information;
- 2) The Final Report in Word format to be published online (< 100 pages).
- 3) A summary presentation in Power Point format will also be delivered, summarizing the ETSAP activities, model developments and applications (< 20 slides). This will include key statistics as the number of models, publications, etc.

- 4) An Annex list of references in Word format will be published online including all MARKAL/TIMES applications during the period (peer-reviewed papers, book chapters, masters/thesis, technical reports, etc.) and classified by geographical scale and model as it was traditionally done in most Final Reports for previous Annexes. Presentations at ETSAP workshops are already available on the ETSAP website. The list could include non-English references.
- 5) A compilation of references from current and previous Final Reports, all classified by geographical scale and model. This could replace the "Applications" section of the ETSAP Website
- 6) A compilation list of contacts for each model (corresponding authors, etc.). This could replace the "ETSAP Tool Users" section of the ETSAP Website.

For this and other ETSAP publications, the Swiss Federal Office for Energy requested that a general statement be inserted to indicate that the authors are responsible for the statements and conclusions in the reports and presentation and it is not representing the opinion of the contracting parties. A number of other Contracting Parties also indicated that this was important. The ExCo decided that George will coordinate amongst the relevant ETSAP teams to develop an agreed choice of words for this statement.

5.3 Annex XIV Budget report and status from OA (Attachment L7)

The OA presented the Annex XIV budget. In summary

Balance transferred from 2018	213,770
Fees for 2019 received	300,000
Fees for training received (estimate)	10,000
Total commitments 2019	-239,189
Preliminary 2019 balance available	284,581

As per the ExCo decision under item 4.4, €165k will be transferred for the new VEDA, subject to positive feedback from the ExCo members testing the new VEDA during the advance training to be held on 12,13 December. The ExCo also considered and approved a request to cancel the *Demo Steps Videos project*, as this becomes redundant in the context of new VEDA. This releases €12k in addition to the €20k released due to the cancellation (in the 74th ExCo in Zurich) of *ETechDS Data Normalization and Handling for Modelling Use project*. In addition, it is anticipated that a further €40k may become available from late payment of fees for 2018 and a further €110k from anticipated payment of fees for 2019. This provided a basis for determining the remaining budget as follows

Preliminary 2019 balance available	284,581
Cancellation of research projects	32,000
New VEDA payments	-165,000
2019 balance available	151,581
Anticipated additional 2018 fee income	40,000
Anticipated additional 2019 fee income	110,000
Possible 2019 balance available	301,581

The ExCo discussed the balance available and also the possible balance available (subject to payment of additional outstanding fees) and decided to reserve €100k to provide core funding for ETSAP for 2020. The ExCo further decided to allocate €51 to research projects now and to fund further research projects in ranked order as additional funds are paid.

5.5 Project Selection (Attachment L8a)

The ExCo discussed the agreed the process for selection of research projects. In the case of Switzerland, the self-evaluation of proposals in which PSI participates is against the requirements of the Swiss Federal Office for Energy (SFOE) for transparency in the evaluation procedure. Thus, PSI indicated that it is forbidden for PSI to evaluate projects that PSI are participating in. Delegates were

asked if other Contracting Parties had similar restrictions but this was not the case. Following this PSI abstained from ranking projects in which they participated. The issue with the self-evaluation of proposals will be discussed in the 77th ExCo meeting in July to explore alternative evaluation procedures if the ExCo decides that this is necessary.

The delegates voted on the research projects proposed and the results are provided in attachment L8a. Based on the €51k allocated, only the top ranked project will be funded immediately and other projects that reached the agreed threshold score of 70 or more will be funded in rank order as additional fee income is received.

ExCo delegates discussed the results of the vote, in particular observing the mainly low results for model tool development projects compared with other types of research projects.

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

6.1 Discussion and adoption of work program. (Attachment L9a)

The draft Annex XV Work Programme was discussed. The ETSAP Management team had previously circulated a draft work programme, sought and received comments and recirculated a revised draft with the meeting agenda. The draft work programme was further discussed during the ETSAP workshop on December 10th and additional comments and suggestions were provided from ExCo members and from other ETSAP tool users.

The ExCo agreed to adopt the Work Programme including suggestions from the workshop discussion that George will incorporate.

Decision on Operating Agent for Annex XV

The process to select a new Operating Agent followed a number of steps, summarised as follows

- 1) The ETSAP Project Management contacted the Contracting Parties individually by phone in early November to inform delegates of the need to select a new OA and to explore interest.
- 2) On November 16th, the ExCo Chair sent an e-mail to delegates seeking nominations.
- 3) On December 3rd, the ExCo Chair distributed to delegates the three OA applications that we received and requested that delegates would "*please review these in advance of the meeting so we can agree on selection of an Operating Agent during the ExCo meeting*".

The Executive Committee voted for the three nominees and the result of the vote was a draw between two of the OA applicants (Kari Espegren [IFE] and Kenneth Karlsson [EML]). The delegates discussed the issue further and decided to appoint Kari Espegren [IFE] as Operating Agent.

6.2 Approval of proposed budget for 2020 (Attachment L10)

PSI indicated that according to the request of the Federal Ministry for Energy an annual financial audit would be desirable. Delegates discussed the decision from the 61st ExCo to replace the standard audit (due to rising audit costs) and to appoint the OA's financial accountants to produce the annual balance sheet of ETSAP as an audit. The ExCo agreed to discuss this during the 77th ExCo meeting and to make a final decision.

The proposed budget for 2020 (attachment L10) was discussed. The ExCo agreed to

- 1) increase the annual training budget for 2020 from €20k to €35k to provide for development of additional training materials in order to develop training sessions for the new VEDA interface.
- 2) increase the OA budget to €25k in line with the budget proposed by the successful OA applicant (IFE).
- 3) allocate €155k for the next phase of VEDA development
- 4) increase the workshop budget to €50k to reflect recent workshop cost increases. The ExCo did agree that the choice of venues for ETSAP workshops should be carefully selected to minimise costs.

- 5) unanimously approve the budget with the elements above included.

Confirmation of fee for 2020

The ExCo discussed and approved the fee for contracting parties to remain at €20k per annum. The ExCo discussed the request from Enel Foundation to consider their fee and agreed that the fee for Enel Foundation will be €20k per annum as per all the other CPs.

7. OTHER BUSINESS

7.1 Next workshop and ExCo meeting: Summer 2020, Freiburg, Germany.

The delegates were reminded of the ExCo decision that the 77th ETSAP meeting (summer 2020) would take place together with IEW 2020 June 29 - July 1 in Freiburg, Germany as follows:-

- Basic training from June 29 - July 1
- 77th ETSAP Workshop from July 2-3
- 77th ETSAP ExCo July 2 (afternoon)

7.2 Successive meetings: Winter 2020: offer from Norway

The ExCo decided that the Winter 2020 78th ETSAP Workshop and ExCo meeting will take place in Norway, in response to the offer from IFE.

8. AGREED ACTIONS

Action List from 76th ExCo Meeting	Owner
If there is a delay in the meeting documents, the ExCo will be informed by e-mail.	Brian
Complete and submit paper work for End of Term Report, Questionnaire and Request for Extension.	George
Regarding ETP 2020, point Uwe to relevant scenario analyses they may have done on reaching net zero emissions, ideally on a global level.	ETSAP teams
Regarding ETP 2020, if there is a sufficient interest from ETSAP partners, ETSAP management can organise with IEA a web conference on this topic.	Uwe
The ETSAP Management will communicate to RSE the ExCo decision to approve RSE as a Contracting Party.	George
The ETSAP Management will communicate to FZJ the ExCo decision to approve FSJ as a Contracting Party.	George
The ETSAP Management will invite the Government of New Zealand to join ETSAP and to designate a Contracting Party.	George
The ETSAP Management will invite the Government of Austria to join ETSAP and to designate a Contracting Party.	George
Contact Uwe by the end of December if you are interested in participating in the meeting on big data in Paris on 12-13 February, organised by the Fusion Power Co-ordinating Committee (FPCC)	ETSAP teams

Develop a contact list of TCP's for the ETSAP members, beginning with identified TCPs	George / OA
Explore opportunities for developing joint annexes or tasks	George / OA
Seek to coordinate with IEA on joint training workshops for IEA Association Countries	George / Uwe
Contact IEA TCP Wind Task 25 if you're interested in attending the proposed IEA Inter-TCP/Task workshop on capturing value of flexibility in integrating variable generation in Paris on April/May 2020	ETSAP teams
<p>Subject to positive feedback from the ExCo members testing the new VEDA during the advanced training</p> <ul style="list-style-type: none"> • KanORS-EMR will be paid €150k for the new VEDA Front-End development • Gary and Maurizio will be paid €5k for testing new VEDA • Training materials for new VEDA will be developed in order to begin new VEDA training from summer 2020 • €10k be allocated to Gary for revision of Part IV and Part V of the TIMES Documentation, subject to approval during budget discussions 	Operating Agent
George will co-ordinate an ETSAP sub-group to work with Amit to determine which elements of the full VEDA development are included in the 2019 €150k payment and which are included in the planned 2020 €150k payment.	George
Replace TIMES LoA with a suitable open source license (e.g. Creative Commons BY4.0 license)	George
<p>Update the website in order</p> <ol style="list-style-type: none"> 1. to make the source code available directly from the website 2. to provide an option for those interested to register for receiving updates from ETSAP 3. to provide an option for those interested in acquiring VEDA and GAMS 	George
Discuss making the TIMES source code available on GitHub	George / Antti
ETSAP-TIAM project, team change project co-ordinator from DTU to EdMdp CMA (Sandrine Selosse)	DTU / CMA
Prepare Annex XIV Final Report as agreed.	Kathleen / ETSAP Teams
Develop and distribute template slide for slide-show version of final report	Kathleen / George
The ExCo requested that each country provide slides for final report	ETSAP teams
Determine form of words to indicate that the authors are responsible for the statements and conclusions in the reports and presentation and it is not representing the opinion of the contracting parties.	George
Allocate funding for top ranked research project, and additional projects by rank order as additional fees are received	Operating Agent
Finalise agreed Annex XV Work Programme as agreed	George

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TO ACHIEVE THE 'WELL BELOW 2°C' GOAL

Transition Operating Agent role from DTU / Kenneth to IFE / Kari	DTU / Kenneth / IFE / Kari
Discuss and decide on auditing of accounts in 77th ExCo	ExCo
ETSAP partners should send comments on website to George by e-mail before the 77th ExCo meeting.	ETSAP teams
Submit journal papers on national models/scenarios for inclusion in the IPCC AR6 report by June 2020	ETSAP teams
ETSAP management engage with the C3E TCP and explore how to include gender analysis in scenario analysis.	George
Discuss and decide on revising the evaluation procedure of proposals to avoid self-evaluation	ExCo