

**11th Executive Committee Meeting of the
IEA Technology Collaboration Programmes for
Co-Operation on Tokamak Programmes (TCP-CTP)**

Minutes

Thursday 10th December 2020

(14:45-16:30)

Video Conference

Participants: Luo Delong (CN-Chair), Yalan Zhu (CN), Xu Min (CN), Duarte Borba (EU-Chair), Ambrogio Fasoli (EU), Tony Donn  (EU), Xavier Litaudon (EU), Lars-G ran Erikson (EU), Richard Kamendje (EU), Alberto Loarte (IO), Hajime Urano (JA), Shunsuke Ide (JA), Naoyuki Oyama (JA), Jong-Gu Kwak (KO), Matthew Lanctot (US), Charles Greenfield (US), Diana Louis (IEA),

0. Welcome

Luo Delong (CN-Chair), welcomed the participants to the 11th Executive Committee Meeting of the IEA Technology Collaboration Programmes for Co-Operation on Tokamak Programmes (TCP-CTP Exco). The Chair expressed that he was pleased to take the Chair of this committee, following on Tony Donn  (EU) who was the Chair for the previous years. The Chair thanked Duarte Borba (EU-Secretary) for the help in the preparation of the meeting.

1. Approval of agenda and minutes of the last meeting

The Agenda “Agenda Point 1 - Agenda for the 11th Meeting of the TCP-CTP Exco Thursday 10th December 2020 Version 1” was unanimously approved, together with the approval of the minutes from the previous meeting “Agenda Point 1 - 10th IEA TCP-CTP Meeting Minutes Version 3 19-Oct-2020” including the comments made by Japan, ITER-IO and China.

Decision: The IEA TCP-CTP Executive Committee unanimously approved the Agenda for the 11th Meeting of the TCP-CTP Executive Committee “Agenda Point 1 - Agenda for the 11th Meeting of the TCP-CTP Exco Thursday 10th December 2020 Version 1”

Decision: The IEA TCP-CTP Executive Committee unanimously approved the minutes from the 10th Meeting of the TCP-CTP Executive Committee “Agenda Point 1 - 10th IEA TCP-CTP Meeting Minutes Version 3 19-Oct-2020”

2. Accession of new parties to the CTP-TCP - Approval of the invitation of Thailand to join the TCP-CTP

The Secretary added that there was no participation from Thailand in this meeting. The Secretary confirmed that Thailand showed interest in participating in the TCP-CTP a year ago and in participating in the ITPA-CC and TCP-CTP Exco in 2019 as observers, which was agreed. The representatives from Thailand were informed of the steps required for becoming members of the TCP-CTP. However, in the latest iteration with the representatives from Thailand in August 2020, it was stated that the situation in Thailand has changed and that the process needed to be restarted with the new ministry.

The members of the CTP-TCP Exco unanimously agreed to wait for a clarification from Thailand regarding the request to join the CTP-TCP and not to vote on this issue at this meeting. The Chair added that once the situation is clarified, the CTP-TCP Exco would take a vote on this matter.

Decision: The IEA TCP-CTP Executive Committee unanimously approved to wait for a clarification from Thailand regarding the request to join the IEA CTP-TCP before taking a formal vote on inviting Thailand to join the IEA TCP-CTP. The vote can take place at the next meeting in December 2021.

3. Reports on the completed workshops and personnel assignments for 2020

The Chair introduced the point on the completed workshops and personal assignments by adding that not all parties would give a report since due to the Covid-19 pandemic there were very few assignments completed in 2020.

Duarte Borba (EU) stressed that the Covid-19 pandemic had a large impact on the international missions supported by EUROfusion with almost all assignments cancelled with the exception of a mission to Princeton and participation in ITPA meetings in January and February in 2020 and missions related to the European participation in the JT-60SA commissioning under the broader approach “Agenda Point 3 - Personnel_Exchange_EU2020”.

The Chair (CN) confirmed that the situation is similar for China, with no missions performed due to the impossibility to travel outside China with the earlier start of the pandemic.

The Chair added that SWIP has completed the installation and assembly of the HL-2M Tokamak. The Chair informed that he participated in the TCP Chairs meeting on 8th October 2020 focussing on innovation, with most TCP Chairs participating virtually by Video Conference. At this meeting, Dr Fatih Birol (Executive Director of the International Energy Agency) highlighted the successful re-launch of the special reports on clean energy and innovation. Dr Fatih Birol confirmed also the revision of the IEA procedures for better communication between TCPs and the IEA Secretariat.

Shunsuke Ide (JA) presented the personnel assignments for 2020 “Agenda Point 3 - Personnel_Exchange_JA2020_QST_v2” highlighting that 3 persons were able to complete their missions to participate in JET experiments.

Matthew Lanctot (US) presented the personnel assignments for 2020 “Agenda Point 3 - Personnel_Exchange_US 2020 Exchanges CTP Actual - Dec 9 2020” stressing the support for the activities using remote tools since many trip cancelations interrupted many activities and added that a lot of progress has been made using alternative approaches. Matthew Lanctot (US) emphasised the completion of the activities on the shattered pellet injection.

Jong-Gu Kwak (KO) presented the personnel assignments for 2020 “Agenda Point 3 - Personnel Exchange_KR2020_KR_EU” stressing that most assignments have been cancelled but remote participation in KSTAR (KO) experiments was successful.

Alberto Loarte (IO) presented the personnel assignments for 2020 “Agenda Point 3 - Personnel_Exchange_J2020-2021 Assignments_ITER-IO” pointing out that due the covid-19 Pandemic in person participation was only possible for experiments in KSTAR (KO) and JET (EU). Remote participation was possible for DIII-D (US), EAST (CN) and KSTAR (KO), emphasising the shattered pellet injection and resonant magnetic perturbation experiments in KSTAR (KO) and DIII-D (US) ECCD breakdown optimisation experiments.

The Chair stated that there was no participation in the meeting from India due to the covid-19 pandemic curfew in India and the Secretary added that Australia was not able to participate in the meeting due to the time difference and sent a summary slide on their activities for information “Agenda Point 3 - IFRC_Australia_Oct_2020_Initiatives”.

Decision: The IEA TCP-CTP Executive Committee adopted the Personnel Assignment reports for Jan. 2020 – Dec. 2020.

4. Proposals for workshop, personnel assignments, and remote participation 2021

Regarding the personnel assignments, and remote participation 2021, Duarte Borba (EU) added that the EU is still developing the participation for next year and that there are still uncertainties related to travel restrictions due to the covid-19 pandemic. However, a strong effort is directed to the participation in the commissioning of JT-60SA under the Broader Approach.

Yalan Zhu (CN) added that China is experiencing travel restrictions and uncertainties for 2021 and once the covid-19 pandemic stabilises there will be an update on the plans for 2021.

Shunsuke Ide (JA) overviewed the plans for Japan for 2021 “Agenda Point 3 - Personnel_Exchange_JA2021_v1” highlighting the planned missions to JET (UK), Germany and US.

Matthew Lanctot (US) stressed that the planned missions for 2021 are tentative due to current travel restrictions, however, Matthew Lanctot (US) adding that the plan is to continue to support the on-going activities with emphasis on the European Tokamaks, KSTAR (KO) and EAST (CN).

Jong-Gu Kwak (KO) stated that due to the travel uncertainties due to the covid-19 pandemic the assignment plans have not been yet finalised.

Alberto Loarte (IO) added that the ITER-IO priority would be on assignments related to Shattered Pellet Injection experiments on DIII-D (US), KSTAR (KO) and ASDEX-U (EU), participation on the JET Neon seeding experiments. Alberto Loarte (IO) stressed the collaboration related to the participation on the JT-60SA integrated commissioning activities under the IO/F4E/QST agreement, but that this will depend on the lifting of the travel restrictions.

Regarding Workshops, Alberto Loarte (IO) clarified that in 2020 the annual Disruptions workshop usually organised at Princeton was held via video conference, in July 2020, under the IAEA. This workshop focussed on Disruption mitigation. Alberto Loarte (IO) added that the agreement is to continue to organise this meeting every year, alternating between the IAEA Disruptions Workshop and the Princeton Theory Workshop.

Jong-Gu Kwak (KO) added that the date for the next KSTAR conference, that usually takes place in January or February has not been agreed yet, but it may take place in November or December 2021.

Decision: The IEA TCP-CTP Executive Committee endorsed the proposals for personnel assignments, and remote participation in 2021.

5. Report from the IEA Secretariat (All)

The report from the IEA Secretariat was presented by Diana Louis (IEA) “Agenda Point 5 - Q4 2020 - Desk Officer Updates 10 Dec 2020 CTP TCP” covering the preparation for the next Fusion Power Coordinating Committee (FPCC) on 21-22 February 2021, CTP TCP Request for Extension (RfE) timeline, new framework for the Technology Collaboration Programme, updated guidance and other informal improvements and an update on the Today in the Lab – Tomorrow in Energy? initiative.

In the discussion, Diana Louis (IEA) added that IEA recognised that the criteria for proposals related to the “Today in the Lab – Tomorrow in Energy?” initiative was narrow, in particular, for TCPs with activities not directly related to Technology and added that half of the TCPs submitted proposals to a total of 53. Diana Louis (IEA) added that the criteria would be revised to encourage all TCPs to make proposals.

The IEA TCP-CTP Executive Committee took note of the IEA Secretariat Report “Agenda Point 5 - Q4 2020 - Desk Officer Updates 10 Dec 2020 CTP TCP”

6. Discussion of annual report (TBD, All)

Duarte Borba (Secretary) described the process for drafting the Annual Report, which usually includes collecting all the input provided by the parties and submitting a Draft report to IEA in early January in time for the FPCC meeting in February 2021.

7. Initiative Today in the Lab – Tomorrow in Energy?

This point was discussed under point 5.

8. Request for Extension of the CTP-TCP

Duarte Borba (Secretary) proposed that the documentation required for the Request for Extension, which includes the Period Report, Work Plan for next 5 years and questionnaire, is prepared in Spring 2021 for discussion with IEA in the Autumn 2021. Diana Louis (IEA) added that the Executive Committee needs to formally approve the request for extension, which can be done via written procedure using e-mail. Diana Louis (IEA) agreed to provide a standard e-mail that can be used for the approval of the Request for Extension by written procedure.

The Chair asked Diana Louis (IEA) about the engagement tools and how these can be incorporated. Diana Louis (IEA) suggested the CTP-TCP to contact K.C. Michaels at the IEA legal office in order to take the required steps to amend the framework. Diana Louis (IEA) stressed that these are not structural changes to the framework, but the Governing Board has asked that the additional tools be adopted in the new TCP frameworks.

The IEA TCP-CTP Executive Committee took note of the steps required and the timescale for the Request for Extension of the CTP-TCP; and agreed to request the approval of the request of extension by written procedure in early 2021.

Action on the Secretary to contact the IEA legal office in order to take the required steps to amend the TCP-CTP framework in order to include the engagement tools.

9. Further discussions on any outstanding issues (All)

Date of the next meeting

The next meeting will take place on 9th December 2021 just after the ITPA-CC. If the ITPA-CC meeting is held face to face, covid-19 travel restrictions permitting, the members of the CTP-TCP that attend the ITPA-CC will join from the ITER site in Cadarache. However, video conference will be available for those that do not participate in the ITPA-CC.

Participation of Russia in the CTP-TCP

Regarding the invitation for Russia to participate in the CTP-TCP, Duarte Borba (Secretary) confirmed that Russia has been invited to the CTP-TCP some years ago and that efforts have been made to facilitate Russia joining the CTP-TCP, including sending letters written by the CTP-TCP Chair to the Russian contacts in at least 2 occasions. There have been iterations with contacts in the Russian Ministries, but these efforts did not lead to a positive outcome. Duarte Borba (Secretary) stressed that Russia is still welcome to join if the opportunity arises, but added that there is no point in pursuing these efforts unless there is some explicit request or interest from Russia. Tony Donn  (EU) confirmed that this was pursued in the last 3 years via sending letters to

the contacts in Russia and Tony Donn  (EU) discussed this issue with Anatoly Krasilnikov (RU). Tony Donn  (EU) added that the fusion work is done under Rosatom while the connections to the IEA are via Minatom; with the two related ministries leading to communication difficulties. Shunsuke Ide (JA) stressed that not having Russia involved in the TCP-CTP is inconvenient, since the CTP-TCP forms the legal framework for the exchange of data and personnel related to ITPA. Alberto Loarte (IO) agreed that it would be much better to have all ITPA related exchanges under the same agreement, but emphasised that there are other frameworks between Russian and the ITPA members such as the bilateral agreement between EU and Rosatom.