

**13<sup>th</sup> Executive Committee Meeting of the  
IEA Technology Collaboration Programmes for  
Co-Operation on Tokamak Programmes (TCP-CTP)**

**Minutes**

**Thursday 8<sup>th</sup> December 2022**

**(15:50-17:50 CET)**

**ITER Organisation Headquarters, St. Paul-lez-Durance, France**

**Video Conference**

On-site Participants: Charles Greenfield (US), Rajesh Maingi (US), Tony Donne (EU), Duarte Borba (EU), Shunsuke Ide (JP), Jong-Gu Kwak (KO), Alberto Loarte (IO), Indranil Bandyopadhyay (IN), Joydeep Ghosh (IN).

Remote Participants: Ge Zhuang (CN), Gong Yi (CN), Min Xu (CN), Matt Lancot (US), Ambrogio Fasoli (EU), Richard Kamendje (EU), K.C. Michaels (IEA) Partial.

**0. Welcome**

Luo Delong, chair of the Executive Committee of the IEA Technology Collaboration Programmes for Co-Operation on Tokamak Programmes (TCP-CTP), welcomed the participants to the meeting.

**1. Approval of agenda and minutes of the last meeting**

The Agenda “Agenda Point 1 - Agenda for the 13th Meeting of the TCP-CTP Exco Thursday 8<sup>th</sup> December 2022 Version 2” was unanimously approved, together with the approval of the minutes from the previous meeting “Agenda Point 1 - 12th IEA TCP-CTP Meeting Minutes Version 5 27-Jan-2022”.

*Decision: The IEA TCP-CTP Executive Committee unanimously approved the Agenda for the 13<sup>th</sup> Meeting of the TCP-CTP Executive Committee "Agenda Point 1 - Agenda for the 13<sup>th</sup> Meeting of the TCP-CTP Exco Thursday 8<sup>th</sup> December 2022 Version 2"*

*Decision: The IEA TCP-CTP Executive Committee unanimously approved the Minutes of the 12<sup>th</sup> Meeting of the TCP-CTP Executive Committee "Agenda Point 1 - 12<sup>th</sup> IEA TCP-CTP Meeting Minutes Version 5 27-Jan-2022".*

## **2. Report from the CTP TCP Chair**

Luo Delong (Chair) gave a brief report on the CTP TCP activities in 2022. Luo Delong (Chair) stressed that the CERT approved the extension of the Implementing Agreement from 1 July 2022 to 30 June 2023 and approved an automatic extension to 30 June 2027, effective upon certification by the IEA Secretariat that the Executive Committee has amended the Implementing Agreement to incorporate the Framework for the Technology Collaboration Programme “Agenda Point 2 - Letter of notification of CERT approval 2022” and the Request for Extension Working Party Feedback was provided “Agenda Point 2 - CTP TCP Feedback Form final summary 2022”.

## **3. Accession of new parties to the CTP TCP**

The Chair confirmed that the Executive Committee of the CTP TCP unanimously resolved through a written procedure in a decision ending on 31<sup>st</sup> August 2022 to invite the Government of Switzerland and United Kingdom to join the CTP TCP as a Contracting Party. Respective invitations were sent on 30 September 2022 “Agenda Point 3 - LetterofInvitation2021CTP\_SWISS”, ”Agenda Point 3 - LetterofInvitation2021CTP\_UK”. The Government of Switzerland has accepted the invitation “Agenda Point 3 - 1221010 TCP SERI StS Hirayama Letter of acceptance and designation of EPFL TCP CTP”.

Ambrogio Fasoli thanked on behalf of Swiss fusion community, the members of the Executive Committee for inviting Switzerland to become a member of the CTP TCP.

*Decision: The IEA TCP CTP Executive Committee took note of the written procedure decision ending on 31st August 2022 to invite the Government of Switzerland and United Kingdom to join the CTP TCP as a Contracting Party.*

## **4. Reports on the completed workshops and personnel assignments for 2022**

### *Report on EU outgoing assignments*

The EU report was presented by Richard Kamendje (EU) "Agenda Point 4&5 - EU-Assignments-2022-2023\_IEA\_TCP-CTP".

*Report on China outgoing assignments*

The CN report was presented by Ge Zhuang (CN) “Agenda Point 4&5 - Summarisation of plasma research collaboration for 2022&2023 -CN”

*Report on Japan outgoing assignments*

The JP report was presented by Ide Shunsuke (JP) "Agenda Point 4 - Personnel\_Exchange\_JA2022\_v3".

*Report on US outgoing assignments*

The US report was presented by Matthew Lanctot (US) " Agenda Point 4 - Personnel Exchange 2022 - US". The Chair acknowledged the successful fusion summit organised at the White House and appreciated the proposals for further collaborations with the US.

*Report on Korea outgoing assignments*

The KO report was presented by J. G. Kwak (KO) “Agenda Point 4 - Personnel Exchange\_KR2022\_KR\_EU”. J. G. Kwak (KO) added the depending on the progress and schedule of the Shattered Pellet Activities on KSTAR additional assignments could be envisaged.

*Report on ITER outgoing assignments*

The IO report was presented by Alberto Loarte (IO) “Agenda Point 4 - 2022 Assignments\_IEA (IO)”. Ide Shunsuke (JP) remarked that the visits of ITER staff to Naka, Japan were organised under the tri-lateral agreement between ITER, QST and F4E.

*Report on IN outgoing assignments*

There was no presentation from India at this meeting.

*Report on AU outgoing assignments*

There was no presentation from Australia at this meeting.

*Decision: The IEA TCP CTP Executive Committee adopted the Personnel Assignment reports for Jan. 2022 – Dec. 2023.*

**5. Proposals for workshop, personnel assignments, and remote participation 2022**

*EU proposals*

The EU proposals were presented by Richard Kamendje (EU) “Agenda Point 4&5 - EU-Assignments-2022-2023\_IEA\_TCP-CTP”.

*CN proposals*

The CN proposals were presented by Prof. Zhuang (CN) “Agenda Point 4&5 - Summarisation of plasma research collaboration for 2022&2023 -CN” stressing that both HL-2A and HL-2M will be operational in 2023 and further collaborations and external participation in the respective campaigns are highly welcome.

*JP proposals*

The CN proposals were presented by Ide Shunsuke (JP) "Agenda Point 5 - Personnel\_Exchange\_JA2023\_v2r". It was clarified that the EU participation in the JT60-SA experiments is covered by the Broader Approach agreement, which also includes the exploitation of the IFMIF EVEDA facility (IFMIF prototype) and the organisation of an international school. DONES, a scale down version of IFMIF is under consideration in the EU with the construction decision to be made in 2023.

*US proposals*

The US proposals were presented by Matthew Lanctot (US) " Agenda Point 5 - Personnel Exchange 2023 - US". It was stressed that experiments with negative triangularity plasmas in DIII-D, foreseen in 2023, are open to further collaborations, making use of the increase in the Electron Cyclotron Resonant Heating power.

*KO proposals*

The KO proposals were presented by J. G. Kwak (KO) “Agenda Point 5 - Personnel Exchange\_KR2023\_KR\_EU”.

*ITER-IO proposals*

The IO proposals were presented by Alberto Loarte (IO) “Agenda Point 5 - 2023 Assignments\_IEA (IO)”.

*IN proposals*

There was no presentation from India at this meeting.

*AU proposals*

There was no presentation from Australia at this meeting.

*Decision: The IEA TCP-CTP Executive Committee endorsed the proposals for personnel assignments, and remote participation in 2023.*

## **6. Report from the IEA Secretariat**

The contact in the IEA Secretariat Liselott Fredriksson was invited to the meeting, but unfortunately, Liselott Fredriksson was not able to join the meeting. Nevertheless, Liselott Fredriksson submitted a set of slides as a written report “Agenda Point 6 - IEA Secretariat update - CTP TCP 8 Dec 2022” covering the Revised TCP action plan, the IEA Ministerial meeting on 23-24 March 2022, the TCP Handbooks, the new guidance for TCPs on developing collaborative projects, the TCP Forum and upcoming meetings. The Executive Committee members were invited to ask questions on the slides distributed or any other related matters.

## **7. Discussion of annual report (All)**

It was agreed that the Secretary would prepare the CTP TCP annual report based on the input provided by the parties. The report will be submitted to IEA and presented at the FPCC meeting, that takes place on 15-16 February 2023, by the current Chair.

## **8. CTP TCP Implementing Agreement Modernisation (Chair)**

A new version of the CTP TCP Implementing Agreement Modernisation has been prepared by IEA and distributed and discussed by the parties “Agenda Point 8 - CTP IA Modernisation - Mark-up Version 3 - August 2022 (clean)\_revEuratom” and put for final approval by the parties at the meeting. A representative from the IEA legal department, K.C. Michaels, joined the meeting and provided any further clarifications regarding the CTP TCP Implementing Agreement Modernisation.

*Decision: The IEA TCP-CTP Executive Committee unanimously approved the revised CTP TCP Implementing Agreement “Agenda Point 8 - CTP IA Modernisation - Mark-up Version 3 - August 2022 (clean)\_revEuratom”.*

## **9. Election of the New Chair of the TCP-CTP (Chair)**

A proposal for discussion was made by the Chair based on the historical rotation of the IEA TCP CTP Executive Committee Chair “Agenda Point 9 - Past Chairs of the TCP-CTP Exco”. The Chair

proposed that Japan would take the Chair for the next 3 years. Shunsuke Ide (JP) accepted to take the Chair and thanked Luo Delong for chairing the committee for the last 3 years.

*Decision: The IEA TCP CTP Executive Committee unanimously approved the nomination of Shunsuke Ide (JP) as Chair of the IEA TCP CTP Executive Committee for the period from 1<sup>st</sup> March 2023 to 28<sup>th</sup> February 2026.*

## **10. Further discussions on any outstanding issues (All)**

### *Covid-19 related travel restrictions to China*

Luo Delong (CN) confirmed that China is relaxing the Covid-19 related controls within China but added that there is no information yet on changing the restrictions regarding foreign travel.

### *Prospective new members for the CTP TCP*

It was confirmed that the interest of Thailand to join the CTP TCP expressed a few years back have not been pursued recently by our colleagues in Thailand and that no contacts have taken place in the last year. As it was agreed last year, unless these contacts are renewed no actions are to be taken.

It was added that Russia was formally invited to join the CTP TCP in two occasions, but no positive reply has been received, despite of several formal and informal contacts made by the Chairs at the time, namely Richard Pitts and Tony Donné, and no additional actions were taken in the last few years. The Executive Committee expressed once more that Russia would be welcomed as a member to the CTP TCP but added that given the present political situation it is very unlikely that any developments would take place in the near future and agreed no immediate actions on this matter.

## **11. Close of the meeting**

Luo Delong (Chair) closed the meeting by adding that it has been a difficult couple of years due to the Covid-19 pandemic, but many activities were conducted successfully and thanked all for the support given during his time as Chair.