FAQs IFEC 2023
(Last updated: 19.10.2023)

General Questions:

Q. Letter of Intent: What to include? Is a template available? To whom should it be sent?

Regarding the letter of intent, please refer to the latest updated RFP_IFEC_2023 file for the template. The Letter of Intent mainly consists of the information of the participating University(s), faculty members and the team members. The letter of intent should be put with an official Department/University letterhead. Please send the letter of intent to IFEC2023@ial.uni-hannover.de.

Q. What is the maximum number of students who can participate as a team?

There is no maximum number. The qualified team should, however, have at least three undergraduates.

Q. Do we need proof of financial support from our university?

There is no need for proof of financial support. Nevertheless, the participating team is encouraged to seek financial support locally as IFEC 2023 provides a limited amount of travel grants to each selected project team.

Q. Will there be any travel subsidies for overseas groups should they reach the final competition?

Yes, IFEC provides travel support, which is either 1000$ (below 5000km) or 2000$ (above) for each team that attends the semi-final or final competition in-person. The semi-finals are currently being planned to be in a hybrid format at APEC 2023. We will update about that soon on our page. The finals, on the other hand, must be in-person in Hannover as they involve hardware tests.

Q. Are inter-university teams allowed? Our IEEE chapter has many students from two close universities. Can they form a single team?

Yes, two universities can support the same team. But please just be aware, that each university can only support one team. So, the university would not be able to have a second team.

Technical Questions:

Q. Are there any requirements regarding active and reactive power control?

It is not a must have, but it could be an added advantage in case of tie-breaks. In the finals, the SSTs would be tested with both resistive as well as a combination of RL loads.

Q. Are there any requirements for bidirectional power transfer?

As mentioned in the RFP, bidirectional power transfer capability is an advanced capability of the SST. There is no specific rating for reverse power. The reverse power test will NOT take place in the final. However, the design in the proposals is expected to at least on a design level support bidirectional power transfer capability.

Q. At what input and output voltages will bidirectional power transfer capability be tested?

Bidirectional power will NOT be tested in the finals.

Q. Can you please provide us with more specifications about high pot?

The high pot test will be made by short-circuiting the input terminals and short-circuiting the output terminals. The prototypes should be able to withstand 3 kV for 1 minute across the input and output terminals.

Q. Will the load impedance be set so that 600 W of power is achieved at the output, or does the device need to control output power?

A resistive load corresponding to 600 W at 230 V output voltage will be used. Voltage control of the SST is enough to provide required power.

Q. Is the device going to be tested with R and RL loads at the output only, or is it going to be connected to the grid at the output?

As mentioned in the previous questions, the load tests will only be performed for output side using R and RL loads.

Q. Does the voltage waveform on the DC output have to be constant?

The DC voltage depends on the ability of the SST to provide DC loads. It is up to the teams to decide if they want their design to be capable of providing DC loads (which is an advanced capability).

Q. What does it mean "plug and play"?

It means the ability of the SST to have autonomous control without any external communication.

Q. Can you please give us more specifications about input disturbances?

As mentioned in the RFP, the output voltage regulation will be tested for input voltage change of +-30 V using an auto transformer.

Q. What is the maximum tolerance for the output voltage?

The output voltage should be -10% / +6% RMS voltage of 230 V with <5% THD.