

# FAQ IFEC 2020

## General Questions

### Format guidelines for the qualification report:

The recommended format for the qualification report is single-column, 1.5 line spacing, and 10 pt in font size with Times New Roman. Make sure that the quality of pictures is high enough to inspect details.

### Who should present the project at APEC 2020?

The team can choose one or more students to present or co-present the project.

### How to reimburse the travel expenses and get the travel grant?

The travel grant is by default. There is no need to apply for it. However, it is based on the submission of a scanned copy of receipts of relevant travel expenses (e.g. flight tickets (remember boarding pass), hotel)

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

Regarding the letter of intent, please refer to page 9 and page 13 of the latest updated "IFEC 2020 RFP" file and the email address to submit it. The letter of intent should be put with an official Department/University letterhead.

### How should the proposal be submitted?

The Attachment II Letter of Support from the RFP documents should be filled out together with the project proposal submitted to [ifec2020@et.aau.dk](mailto:ifec2020@et.aau.dk), with a copy to the IFEC chairs as the information shown on page 12 of the latest updated "IFEC 2020 RFP" file available from the IFEC 2020 website.

### 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.

### Are professionals working in the industry able to serve as advisors for the student team?

Yes, besides graduate students and school faculty, industry professionals can serve as an advisor.

### Do we need proof of financial support from our university?

There is no need for proof of financial support. Nevertheless, the project team is encouraged to seek financial support locally as IFEC 2020 provides a limited amount of travel grants to each selected project team.

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## **Technical Questions**

Should the inputs and outputs be galvanically isolated?

There are no requirements for galvanic isolation in the converter. The selection of this is, therefore, a choice made by the designing team.

In the original RFP, a control button should be included to switch between different operating states. How should this more specifically be done?

Please be noted that the RFP regarding the control functionalities has been significantly revised. Please refer to the newest RFP document for detailed information on the required control functionalities.

Can you provide more details on the operating conditions of the converter?

Please refer to the newest version of the RFP document, which carefully describes the updated converter operation: <http://energychallenge.weebly.com/ifec-2020.html>

How should non-uniform solar irradiance be understood? Does this imply partial shading of the panels due to obstruction by the body of the satellite itself?

Yes, the non-uniformity is due to the shading of the satellite itself. Considering practical nano-satellites, which are cubic objects (e.g., having 6 inputs), in operation, there will be cases where some of the panels are in dark regions or partially shaded. In this competition, only two PV inputs are considered, but non-uniform solar irradiance is performed to emulate the effect of partial shading in operation.

*Do the solar panels have a series diode?*

The panels are regular panels. There is no series diode.

*Should the eclipse effect be considered? Does the satellite have some rotation around its own axis?*

No such space-related effects should be considered for the IFEC2020 proposal.

*Are the solar panels immobile?*

Yes, they are immobile. The solar PV panels are mounted on the surfaces of the satellite – a cubic object.

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