

IFEC 2024

2024 International Future Energy Challenge College Student Competition Call for Proposals

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IFEC Introduction

IFEC is an international student competition for innovation, conservation, and effective use of electrical energy, which is open to college and university student teams from recognized undergraduate engineering programs in any location.

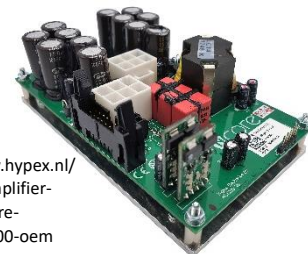
The competition is sponsored by the Institute of Electrical and Electronics Engineers (IEEE) Power Electronics Society (PELS), Power & Energy Society (PES), Industry Application Society (IAS), and Power Sources Manufacturers Association (PSMA).

Topic: Stereo Switch-mode Audio Power Amplifier

Preliminary Specifications:

- Power Input: 48 V from a specified dc supply
- Power output: 135 W per channel, 3 channels
- Audio Input: Balanced analog from WAV files
- Judgment criteria will emphasize audio quality, distortion metrics, and frequency response. Efficiency, weight, and power density will also be scored.

<https://www.hypex.nl/products/amplifier-families/ncore-family/nc1200-oem>



Final Competition Location University of Texas at Austin

Participation

Participation is on a proposal basis. Those schools that are interested must submit a proposal to the topic chair before the proposal deadline. Each Proposal will be judged by a distinguished panel of volunteer experts from the IEEE and from industry. Schools with successful proposals will be notified and qualified for the rest of the competition. Deadline for each period will be posted on the IFEC website. The finalist teams will be invited to a competition event in summer of 2024.

There will be a Grand Prize of \$10,000 and three additional awards granted at \$5,000, \$3,000 and \$1,000 each.

Teaming Guidelines

- ✧ Each university can support only one team.
- ✧ Each team should have at least 4 members with at least 2 undergraduate students.
- ✧ Interdisciplinary teams are encouraged.
- ✧ Teams should be composed of primarily undergraduate students.
- ✧ Graduate students can participate in the team to provide high-level support.

Important Dates

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|------------------------------|-------------------|
| ▪ Workshop at ECCE 2023 | October 30, 2023 |
| ▪ Proposal Deadline | November 10, 2023 |
| ▪ Notification of Acceptance | November 17, 2023 |
| ▪ Workshop at APEC 2024 | March 1, 2024 |
| ▪ Notification of Finalists | March 8, 2024 |
| ▪ Final Competition | July, 2024 |

Please visit <http://www.energychallenge.weebly.com/> for more detailed information.

