



IEEE IFEC'18

2018 International Future Energy Challenge
College Student Competition <http://www.energychallenge.org/>

CALL FOR PROPOSALS

Steering Committee Chair

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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 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

High Efficiency and High Power Density Isolated Bidirectional Dc-dc Converter for Residential Energy Storage Systems

Key Specifications:

Low voltage side: $V_{low}(dc)$: 35~50V; Current ripple <3% @100%load (charging);

High voltage side: $V_{high}(dc)$: 400V; Voltage ripple <2% @100% load (discharging);

Output power: P_{out} : 1kW; **Power density:** >1.5 W/cm³

Efficiency: (both charging and discharging modes)

>96% @100% load; >94% @50% load; >92% @25% load;

■ Final Competition Location

Tsinghua University, Beijing, China



■ Participation

Participation is on a proposal basis. Those colleges 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 academics and industry. Colleges 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 outstanding teams will be invited to a competition event in the summer of 2018.

There will be a Grand Prize of \$10,000 and three additional awards granted at \$5,000, \$3000 and \$1,000 each.

Important Notice:

- ◇ Each university can support only one team.
- ◇ Each team should have at least 3 undergraduate student members. Up to two graduate students could participate in each team as graduate advisors.

■ Deadlines and Proposal Submission Email Address

Proposal Deadline	Nov. 15, 2017
Please email the proposal to	IFEC2018@tsinghua.edu.cn
Notification of Acceptance	Dec. 15, 2017
Workshop at APEC'2018	Mar. 4, 2018
Notification of Finalist	Apr. 15, 2018
Final Competition	July, 2018

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