EGSTON POWER

UHPS

Test System Collaboration Initiative

A 1. UHPS Test System Collaboration Initiative Call

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I. Introduction

I.1 Purpose

EGSTON Power Electronics is committed to fostering innovation and advancing research in power electronics. As part of this commitment, we are offering technical universities around the world the opportunity to utilize our cutting-edge latest release power amplifier, the UHPS test system.

The UHPS is designed for a variety of applications, including renewable energy, electric vehicle development, and power grid research, however, we welcome proposals from any other fields in which applicants describe use cases.

We invite technical universities and research institutes with a strong interest in power electronics to submit proposals for the use of the UHPS Test System. Awarded institutions will have the opportunity to use the equipment for the requested & supervised amount of time free of charge.

I.2. Objective

The primary objective of this initiative is to enable universities to conduct advanced research using the UHPS test system. By providing access to this state-of-the-art equipment, EGSTON aims to support innovative research projects that can contribute to technological advancements and knowledge sharing in the field of power electronics.

In return for the complimentary use of our UHPS unit, we kindly request that participating institutions produce a white paper or research document detailing their public findings and insights. This publication will contribute to the broader scientific community and highlight the innovative applications of our power amplifier technology. By sharing these results, universities will not only advance their own research efforts but also help foster collaboration and knowledge exchange within the industry.

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II. Eligibility

Any university or research institute with a demonstrated focus on power electronics are eligible and encouraged to apply for the UHPS Test System Collaboration Initiative. Examples of applicable fields include renewable energy systems, electric vehicle development, power grid optimization, advanced simulation technologies and fundamental research, however we welcome any other fields that could use the test system.

II.1. Preconditions

To enable the usage of the unit there are preconditions that we require such as the existence of the interface that enables connection to a Real-Time Simulator (RTS) . The UHPS unit requires a three-phase AC power grid with a voltage ranging from 400 V to 480 V at 50 or 60 Hz, and minimum of 15 kVA. An internal transformer provides galvanic isolation between the Power Amplifier and the input power grid. The system is mobile and equipped with wheels, however it requires location that is accessible to deliver it, and space of 604 mm x826 mm x1085 mm (w,d,h) and weighs about 350 kg.

II.2. Critical conditions

Institutions must already possess a Real-Time Simulator (RTS), such as those from Typhoon HIL, RTDS, dSpace, National Instruments, Speedgoat, or Opal RT, and knowledge to operate it.

II.3. Preferred Conditions

Research projects that focus on cases requiring high dynamics or bandwidth are encouraged, as the UHPS Test System excels in these areas.

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III. Application process

To participate in this collaborative initiative, applicants are required to complete and submit the "B1. Submission Form" document filled out prior to the deadline specified in Section IV. The submission form serves as a crucial component of the application process, enabling applicants to outline their proposed research in detail. In addition to providing basic organizational and contact information, applicants must describe the specifics of their research proposal comprehensively and outline the expected timeline.

The proposal should include a clear explanation of the research objectives, anticipated outcomes and timeline for the project. Applicants are encouraged to highlight how the use of the UHPS test system will facilitate the achievement of these goals and provide innovative insights into the subject area. A well-defined timeline of activities and milestones for the research period is also essential to demonstrate the feasibility and structure of the project.

Furthermore, the submission form offers applicants the opportunity to illustrate the broader significance of their work, emphasizing how their research aligns with the goals of advancing power electronics or other related fields. By providing detailed and thoughtful responses, applicants enhance their chances of being selected for this unique opportunity. Adherence to all requirements and guidelines specified in the B1. Submission Form is mandatory to ensure a fair and transparent evaluation process.

All completed forms must be submitted to the email address info@egstonpower.com before the specified deadline. It is important to ensure that the forms are fully filled out and sent on time, as late submissions may not be considered. Please double-check all required information before sending to avoid any delays or issues in processing.

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IV. Timeline

The application process follows the schedule below to ensure a structured and efficient selection procedure:

- 01.04.2025 - Application process opens
- 12.05.2025 - Deadline for proposal submissions. All completed applications must be submitted by this date to be considered.

The winner will be announced after the evaluation process closed.
Actual dispatch of the UHPS Test Unit will be according to the winner(s)' proposed time schedule.

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V. Questions

Applicants are encouraged to seek clarification or ask questions during the whole application period. While the process is open, inquiries can be submitted via the designated contact email info@egstonpower.com, ensuring all participants have the information needed to complete their proposals accurately and confidently.

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VI. Evaluation

VI.1. Evaluation Criteria

Each application will be carefully evaluated based on a set of detailed criteria designed to ensure the selection of impactful and feasible research proposals. The following aspects will be assessed during the evaluation process:

- Innovation: The degree of originality and creativity demonstrated in the research idea. Proposals that introduce novel concepts or explore uncharted areas in power electronics or related fields will be prioritized.
- Feasibility: The practicality and achievability of the proposed use cases and research timeline. Proposals must demonstrate a clear and structured plan for execution, highlighting how the UHPS test system will be utilized effectively.

- Impact: The potential benefits and contributions of the research outcomes to the broader field of study. Proposals should outline how the research could address current challenges, provide valuable insights, or pave the way for further advancements in the industry.

- Team Competence: The expertise, qualifications, and experience of the research team will play a critical role in the evaluation. Proposals should include detailed profiles of team members, showcasing their ability to execute the proposed research successfully.

- Performance and Use Cases: Proposals with a diverse and comprehensive range of use cases for the UHPS system will be given higher consideration. The more use cases submitted, the greater the likelihood of being awarded, as this demonstrates the project's versatility, scope, and potential to maximize the system's capabilities. Additionally, the quality and depth of the whitepaper or documented research outputs will be key factors in the evaluation.

These comprehensive criteria aim to ensure an equitable selection process, identifying proposals with the highest potential for innovation, practical application, and meaningful contributions to the field of power electronics and beyond.

VI.2. Decision-Making Process

EGSTON Power Electronics is a private company, and the selection of the winner for this award is solely at the discretion of EGSTON. The decision-making process is based on the company's subjective evaluation of the submitted proposals, ensuring alignment with EGSTON's objectives and values. To maintain fairness and thoroughness, a dedicated internal committee will review and assess all applications. This committee, composed of experienced professionals from

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relevant departments, will evaluate proposals based on the established criteria and determine the most suitable candidate for the award. The committee's decision will be final and not subject to appeal.

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VII. Terms and Conditions

VII.1. Rental Fee

No rental fee will be charged to the Renter during the duration of the rental period.

VII.2. Ownership and Monitoring:

EGSTON retains full ownership of the UHPS system throughout the loan period.
EGSTON reserves the right to monitor the use of the equipment to ensure it is being utilized solely for the agreed-upon research purposes.

VII.3. Transportation:

EGSTON is responsible for the transport of the device to the Renter´s loading dock.
Upon arrival at the delivery location, the Renter is required to immediately check that the device has arrived undamaged. Any damages must be reported to the Lender immediately after delivery.
The applicant is responsible for bringing the equipment inside the facility, as well as preparing it for pick-up in the original packaging.
The applicant must ensure secure storage and proper handling of the system to prevent damage during the loan period.

VII.4. Renters Responsibility:

- The Renter agrees to handle the device carefully and return it in good condition.
- The Renter must regularly check the device's functionality and report any defects immediately to the Lender.
- The Renter is not allowed to lend or sell the device to third parties.
- The Renter agrees to return the device to the Lender by the end of the rental period.
- The Renter will unpack the device at the delivery location independently and ensure it is properly prepared for testing.
- The Renter is responsible for ensuring the device is properly and safely connected to the electrical grid at the testing location. The Renter guarantees that all electrical installations at the delivery location comply with applicable safety standards.

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- The Renter is responsible for packing the device securely for return and ensuring that it is returned in undamaged condition.

VII.5. Liability and Insurance

The Renter is liable for any damage to the device caused by improper handling, loss, or theft.

The Renter is required to insure the device during the rental period or ensure that the device is covered by an existing insurance policy.

Liability for Consequential Damages: The Lender is not liable for any consequential damage that may arise to the Renter's test object caused by the rental device. The Renter assumes full responsibility for the effects of the device's use on the test object.

VII.6. Confidentiality and Data Protection:

The applicant must agree to protect EGSTON's proprietary technology and intellectual property.

No data or information about the UHPS system may be disclosed to third parties without EGSTON's prior written consent.

VII.7. Final Report Submission:

At the conclusion of the loan period, the applicant is required to submit a comprehensive final report detailing the research activities, findings, outcomes, and any challenges encountered.

The Lender is entitled to mention the Renter as a reference, particularly in promotional materials, on the website, or in other marketing materials, unless the Renter explicitly objects. If the Renter does not wish to be mentioned as a reference, they must notify the Lender in writing.

VII.8. Academic Integrity:

The applicant must credit EGSTON Power Electronics in all publications or presentations arising from the use of the UHPS system.

VII.9. Termination of Agreement:

EGSTON reserves the right to terminate the loan agreement at any point if the terms and conditions are violated or if the equipment is misused. Effective immediately the Renter is

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required to package the equipment in its original packaging, and position in a freely accessible location for EGSTON Power Electronics at the time of pick-up.

VII.8. Return of Equipment:

The applicant is responsible for ensuring the safe return of the UHPS system at the end of the loan period. EGSTON will coordinate and cover the costs of return transportation. The pickup location will be the same as the shipping location and curbside. The applicant is responsible for packaging the UHPS system in the original shipping crate in the original manner - quality.