GUIDE BOOK
DERRICK 2025

DERRICK 2025 Energy Innovation Action

RENEWABLE ENERGY COMPETITION

In Collaboration With:

Organized By:

BACKGROUND

Renewable Energy Competition (RE Comp) is one of the competitions in Derrick 2K25 that focuses on developing innovation in the field of renewable energy to realize Indonesia in the energy transition, where renewable energy is a naturally available energy source, can be used sustainably, and produces less pollution.

This competition is held to involve the younger generation in contributing to the energy transition and helping to overcome climate and environmental problems by reducing dependence on the use of conventional energy or fossil fuels through their ideas or innovations in the form of Scientific Paper Sheets (LKTI). In addition, the increase in population has resulted in an increase in energy needs every day, but the use of energy from non-renewable energy sources causes an energy crisis that will continue if used continuously and is not immediately replaced with renewable energy or alternative energy.

In this competition, participants are grouped into teams consisting of 1-3 participants with 1 person as team leader and plus 1 supervisor. This competition is held online. At the abstract stage, participants submit abstracts according to the provisions given. At the next stage, namely the complete paper submission stage, participants submit complete papers. Then at the final stage, participants make presentations directly in front of the judges. After that, the final participants took part in the exhibition session at the awarding night by displaying the posters they had made at the booth provided.

VENUE, DATE AND STATUS

- Venue : Online via Zoom Cloud Meeting
- Date : 6th December 2025
- Status : Online

GENERAL RULES

- Participants are those who have completed the registration process, which consists of filling out the form and sending an abstract via the link provided.
- Participants are in one team, where each team consists of 1 to 3 participants with one person as team leader and added 1 supervisor.
- Participants can come from diploma or undergraduate students.
- Each team consists of students from the same university.
- Revisions to the names of members and teams and replacement of team members must beconfirmed to the committee no later than before the registration period closes. If no confirmation of replacement is made, the participant concerned will not be recognized.
- Participants are required to fill out a complete paper submission sheet which aims to state the availability of each team to participate in the presentation process.
- Participants who have made payments cannot withdraw payments for any reason.
- The final round will be attended by the 6 best participants from the abstract and complete paper selection
- Participants who are declared to have entered the final round must attend the presentation online. If they are unable to attend, the participant will be disqualified and will be replaced by a participant below them.
- The final participants will be given a briefing during the technical meeting which will beconfirmed by the committee again.

COMPETITION SUBTHEME

- **Waste Management Energy**

This sub-theme aims to explore how the industrial sector can integrate the waste-to-energy concept into its production processes through innovative approaches and sustainable technologies. As one of the world's largest energy consumers, the industrial sector is also a major contributor to wasted energy—either in the form of residual heat, waste raw materials, or unutilized fluid pressure. In the context of the global energy transition and industrial decarbonization efforts, waste energy management is an important strategy to improve the efficiency of industrial processes while supporting the development of resilient and sustainable renewable energy systems. These efforts include the utilization of waste heat into electrical energy, the conversion of organic or chemical waste into bioenergy, and the use of residual pressure or mechanical vibration as additional energy sources.

- **Improvement and Reliability of System Efficiency Renewable Energy**

In the global effort towards clean energy transition, the industrial sector faces major Challenges in adopting renewable energy sources without sacrificing operational efficiency and reliability. This sub-theme invites participants to design ideas, technical studies, or innovations aimed at improving the efficiency of renewable energy systems and ensuring their reliability when applied in large-scale industrial sectors. Renewable energy systems such as solar, wind, biomass, and hydro often face constraints such as supply fluctuations, weather dependence, and integration with high loads in industry. Therefore, technical and systematic solutions are needed to improve energy conversion efficiency, minimize power losses, and ensure the stability and continuity of energy supply for critical industrial processes.

Each team is free to submit a title based on one of the sub-themes above.

COMPETITION FORMAT

Certainty of Paper

1. Works submitted to the Scientific Writing Competition (LKTI) must be original works, have never been published in any media, and are not currently or have ever been submitted to similar competitions.
2. This LKTI competition emphasizes originality of thought, argumentation, analytical sharpness, and writing style.
3. LKTI must be objective, free from SARA (ethnicity, religion, race, and inter-group)elements, and supported by actual facts.
4. The title of the LKTI is freely chosen according to the selected sub-theme and must reflect the contents of the essay, using good and correct English.
5. Submitted works must never have been submitted to other competitions.

TECHNICAL INSTRUCTIONS FORMAT

Abstract

1. The paper must be written in good and correct English.
2. The submitted paper has never been included in other competitions.
3. The abstract must comply with plagiarism and citation standards.
4. Abstract Format:
a) Research background, problem formulation, and research objectives
b) Materials and methods used
c) Discussion
d) Conclusions and suggestions
5. Abstract Specifications:
a) The abstract must be written in English
b) Font: Times New Roman (12), Line Spacing: 1, Margins: 2.5 cm (left, right, top, bottom), Text Aligned Left and Right, Paper Size A4 (Full detailed specification full at the QR code)
c) The abstract must be in PDF format
d). The abstracts collected according to the specified timeline.

Full Paper

1. Papers must be written in good and correct English.
2. Papers must comply with plagiarism and citation standards, with a Turnitin similarity index of no more than 30% (the Turnitin report must be attached in the appendix).
3. Papers must not exceed 10 pages, including bibliography and appendices.

The Full Paper Template is attached below

TECHNICAL INSTRUCTIONS CRITERIA

Abstract

1. Originality of ideas (15%)
2. Clarity of content (10%)
3. Innovation and solutions offered (25%)
4. Ideas can be applied to everyday life (20%)
5. Grammar, citations, and plagiarism (5%)

Full Paper

1. Interest in the proposed abstract (20%)
2. Completeness and clarity of proposal content (35%)
3. Implementation of work (30%)
4. Grammar, citations, and plagiarism (15%)

Presentation

1. Urgency (25%)
2. Relevance (25%)
3. Visibility (20%)
4. Presentation (30%)

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KEY DATES

- Early Bird Registration : October 9th– October 16th, 2025
- Normal Registration : October 17th– October 31th, 2025
- Abstract Submission : November 2th, 2025
- Abstract Announcement : November 4th, 2025
- Full Paper Submission : November 23th, 2025
- Annoucement Finalist : November 29th, 2025
- Presentation Submission : December 2nd, 2025
- Technical Meeting : December 4th, 2025
- Competition Day : December 6th, 2025
- Awarding Night : December 7th, 2025

PRIZES AND AWARDS

The winners of DERRICK 2025 Smart Competition will be awarded money and certificates

Champion	Rp 2.000.000
1st Runner Up	Rp 1.500.000
2nd Runner Up	Rp 1.000.000

CONTACT PERSON

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