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## **Preliminary Announcement**

### **Call for Papers**

### **24th IERE General Meeting and PLN Indonesia Forum**

### **Distributed Power Generation for Increasing Renewable Energy Penetration**

### **In-Person Event**



Pura Ulun Danu Bratan, Bedugul, Bali

**Bali, Indonesia  
November 19–22, 2024**

**Organized by IERE and PLN**



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## **Distributed Power Generation for Increasing Renewable Energy Penetration**

### **About the Theme**

The theme "Distributed Power Generation for Increasing Renewable Energy Penetration" addresses the strategy and technology used to enhance the global penetration of renewable energy in the energy supply. Distributed power generation is an approach where energy production is decentralized into many small locations, contrasting with the conventional model where energy is generated from large scale centralized and distributed through transmission line.

The background of this theme encompasses the rapid growth in the utilization of renewable energy sources such as solar, wind, and hydro over the past few decades. The penetration of renewable energy offers significant benefits in reducing greenhouse gas emissions and dependence on conventional fossil fuels. However, a key challenge in adopting renewable energy is the variability and unpredictability of renewable energy source and impact the stability of the power grid.

In this context, the concept of distributed power generation becomes crucial. It involves harnessing renewable technologies at a local level, such as rooftop solar panels, small-scale wind turbines, or micro-hydro power plants. This approach not only helps reduce vulnerability to disruptions in energy supply but also enables better integration of renewable energy sources into existing energy grids.

Recent data indicates a significant increase in investment and implementation of distributed power generation technologies worldwide. According to the latest reports from the International Energy Agency (IEA) 2021, the capacity of distributed renewable energy has substantially increased in recent years, with countries like Germany, the United States, and China leading in the adoption of these technologies. Furthermore, advancements in energy storage and smart grid technologies are further enhancing the efficiency and flexibility of distributed energy systems.

### **Who Should Attend?**

The Forum is intended for experts involved in the selected themes, from IERE members and non-members, as well as all those interested in the electrical power industry and the technology development and business development opportunities associated to this evolution. IERE and PLN will invite prominent speakers for keynote speeches.



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## Schedule Outline

Tuesday	November 19, 2024	Registration and Welcome Reception (In the evening)
Wednesday	November 20, 2024	24th IERE GM & PLN Indonesia Forum (Day 1), Official Dinner, Culture Night
Thursday	November 21, 2024	24th IERE GM & PLN Indonesia Forum (Day 2),
Friday	November 22, 2024	Technical Tour (Optional)

## Program and Session Themes

Session structure and speakers may be subject to change according to the submission of contributions.

### November 19, 2024

#### Welcome Reception

### November 20, 2024

#### Opening Session

Opening Address:	IERE Chair
Welcome Speech:	PLN
Keynote Speeches:	Details to be announced

#### Panel Discussion

**Theme: Leveraging Distributed Power Generation to Ensure a Cleaner, Futuristic and Secured Energy Supply**

Details to be announced

#### Technical Session

##### Session 1

**Theme: Distributed Power Generation Technology**

It focuses on the advancements, applications, and implications of technologies enabling decentralized energy production. It explores various distributed power generation technologies, their integration into existing energy systems, and their impact on energy access, sustainability, and resilience.

Potential topics include:

- Renewable Energy Technologies

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- Energy Storage Solutions (e.g., type/technology, design, capacity calculation, etc.)
  - Distributed Generation Control and Optimization
  - Remote Monitoring and Maintenance
  - Emerging Technologies and Future Trends
  - Planning and Forecasting for Renewable Energy Power Generation
  - .....

## **Session 2**

### **Theme: Integrated Micro Smart Grid**

Integrated micro smart grids combine renewable energy sources, energy storage systems, advanced communication and control technologies, and demand-side management to optimize energy generation, distribution, and consumption.

Potential topics include:

- Design and Optimization of Integrated Micro Smart Grids
- Communication and Control Systems
- Cybersecurity Challenges and Solutions
- Energy Management and Optimization
- Grid-Connected and Islanded Operation
- Resilience and Reliability Enhancement
- Advance Meter Infrastructure
- Demand Side Management Using Advance Meter Infrastructure
- Energy Meter Calculation Algorithm with Regard of Power Quality Phenomena (i.e., harmonic, unbalance, etc.)
- AC/DC Microgrid
- Design and Strategy of Protection System Coordination
- .....

## **Session 3**

### **Theme: Regulating and Financing Distributed Power Generation**

These topics offer insights into the regulatory and financial aspects of distributed power generation, highlighting the need for effective policy frameworks, market mechanisms, and financing instruments to accelerate the transition to a more decentralized and sustainable energy system.

Potential topics include:

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- Policy and Regulatory Frameworks for Distributed Generation
  - Market Structures and Incentive Mechanisms
  - Financing Models and Investment Opportunities
  - Risk Assessment and Mitigation Strategies
  - Community-Based and Cooperative Models
  - Policy Innovation and Best Practices
  - ....

## **Session 4**

### **Theme: Impact of Distributed Power Generation Toward Conventional Energy**

These topics provide a comprehensive overview of the multifaceted impacts of distributed power generation on conventional energy, highlighting both the challenges and opportunities for transitioning to a more sustainable and resilient energy future

Potential topics include:

- Economic Implications and Market Disruption
- Technological Integration Challenges
- Environmental Benefits and Carbon Emissions Reduction
- Social and Equity Considerations
- Transition Strategies and Energy Transition Pathways
- Resilience and Reliability Enhancement
- Best Practices
- ...

## **Poster Session**

Details to be announced

## **Exhibition**

Details to be announced

## **November 21, 2024**

### **IERE General Meeting**

Report on IERE Activities by IERE Chair and IERE Central Office  
Report on IERE R&D Projects

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## Technical Session

### Session 5

#### Theme: Hybrid Distributed Power Generation in Rural Area

It focuses on the implementation of integrated energy solutions combining multiple distributed power generation technologies to meet the energy needs of rural communities. It explores the challenges and opportunities in deploying hybrid systems that leverage various renewable energy sources and energy storage technologies to improve energy access, reliability, and sustainability in rural areas.

Potential topics include:

- Design and Optimization of Hybrid Energy Systems
- Energy Storage Solutions for Rural Applications
- Economic Viability and Financing Models
- Case Studies and Best Practices
- Utilization of Retired Conventional Power Generation
- Virtual Inertia Technology Evaluation of Hybrid Generation....

### Session 6

#### Theme: PLN Innovation

It covers Innovation Technology conducted in PT PLN (Persero)

Potential topics include:

- Distributed Energy Resources
- Green Energy and Power System
- Energy Management Systems, Intelligent Control
- Asset Maintenance Tool
- Operation and Planning of Microgrids (DC, AC, and hybrid)
- Remote Monitoring and Operation
- .....

## Panel Discussion

#### Theme: Smarter, Digitalised and Optimised Distributed Power Generation

Details to be announced



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## **Closing Remarks**

Details to be announced

## **November 22, 2024**

### **Technical Tour (optional)**

Details to be announced

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## Call for Papers

<<Abstract Submission: No later than **September 8, 2024**>>

You are kindly invited to submit abstracts for the Oral Session or Poster Session for the PLN Indonesia Forum by e-mail. In addition, please submit the Speaker's Information.

to: **register (at) iere.jp** [Please substitute “ (at) ” with “@”]

As for the **format of the abstract**, please refer to “Events” page on IERE website.

<https://www.iere.jp/events/forum/2024-indonesia/forspeakers.html>

- The official language of the IERE Forum is English.
- Abstract will be posted the IERE website and open to the public.
- There is a possibility we ask you to change from Oral Session to Poster Session in accordance with the number of submission of abstracts.
- If you need the invitation letter for VISA, please submit “[Invitation Letter for VISA Request Form \(Format 2\)](#)” as well.
- Presentation Slides will be posted the IERE website and open to IERE members and Forum participants.

## Registration

Detailed information on Registration will be announced in the First and Second Announcements, which will be delivered later.

## Registration Fee

The Registration Fee will be informed later. Speakers are also required to pay the Registration Fee. Accommodation and travel costs will be borne by the participants.

Details including cancellation policy will be announced in the First and Second Announcements.

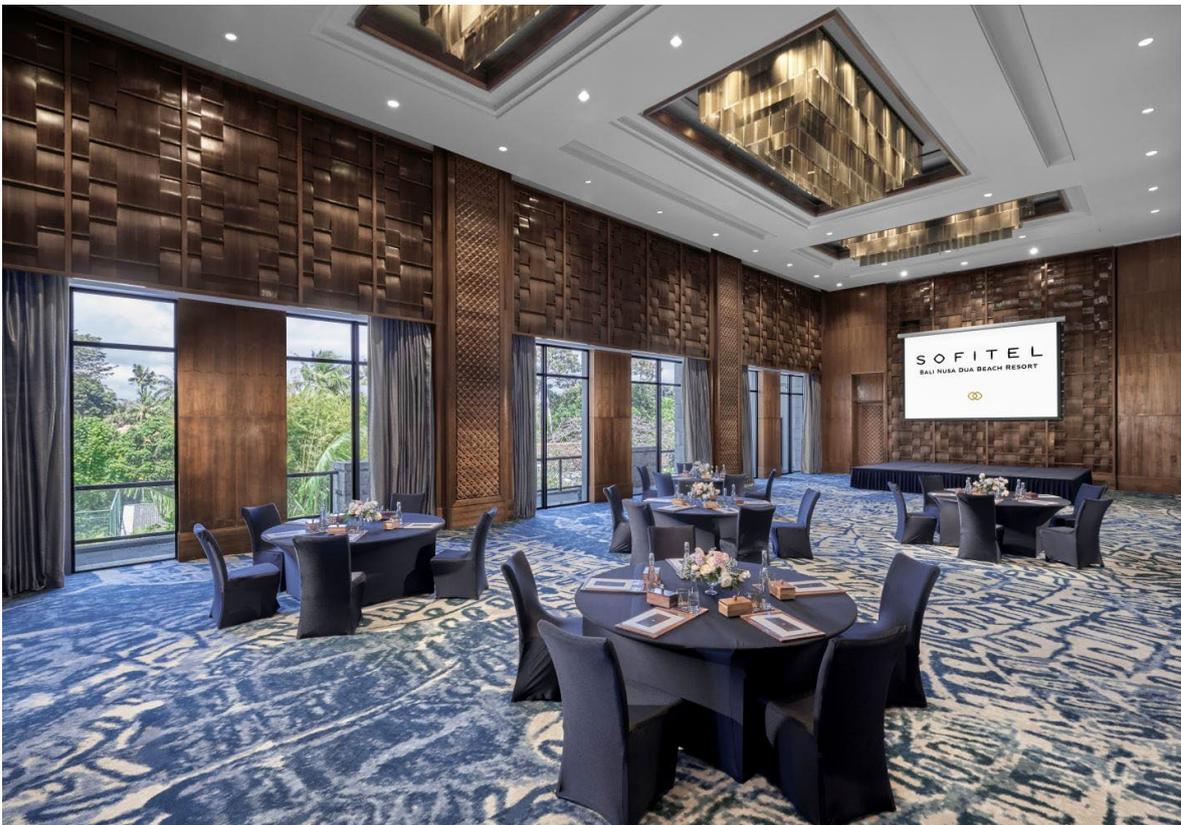
## Conference Venue & Accommodations

### Conference Venue

Sofitel Bali Nusa Dua Beach Resort, Bali, Indonesia

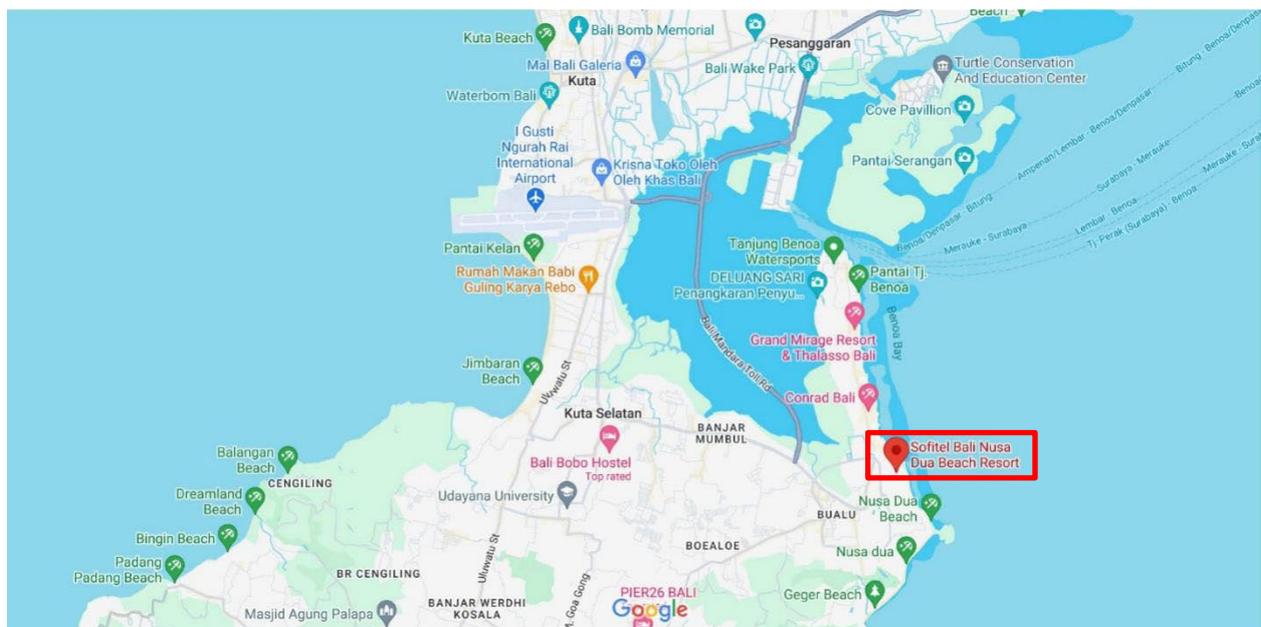
Location: Lot N5, ITDC Tourism Complex, Nusa Dua, Badung, Bali, 80363 NUSA DUA, INDONESIA

Website: <https://sofitelbalinusadua.com>



## Location of the Sofitel Bali Nusa Dua Beach Resort

<https://maps.app.goo.gl/GNEZSu1RjTndAdqu5>



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## Accommodations

Sofitel Bali Nusa Dua Beach Resort, Bali, Indonesia

Location: Lot N5, ITDC Tourism Complex, Nusa Dua, Badung, Bali, 80363 NUSA DUA, INDONESIA

Website: <https://sofitelbalinusadua.com>

Rooms at special rates will be prepared for conference participants by the Hotel. These will be allocated on a first come first served basis. For further information please contact the IERE Central Office.

Details to be announced.





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## About PLN

PT PLN (Persero) is a state owned company (BUMN) in generating, transmitting and distributing electricity in Indonesia. PT PLN (Persero) provides most of the public electricity and electricity infrastructure in Indonesia including power generation, transmission, distribution, construction of power plants and retail sales of electricity.

As a company with a strategic role in the Indonesian electricity industry, PT PLN (Persero) is committed to encouraging the energy transition process towards achieving the net zero emission target in 2060. Along with that, at the end of 2022, PT PLN (Persero) has completed the establishment of Holding and Sub-Holding as a joint effort to optimize all of its potential, by transforming into a lean, agile, and efficient company. PT PLN (Persero) also owns and operates 6,928 electricity generating plant and controls approximately 68,206 kmc of transmission lines which increased by 5.24% from previous year. For distribution lines, PT PLN (Persero) controls approximately 1,033,662 kmc of distribution lines, sale of electricity reach 273.76 TWh and serves approximately 84.8 million customers throughout the archipelago

Please visit : [web.pln.co.id](http://web.pln.co.id)

## About IERE

IERE is an organization for exchanging electricity and energy related cutting-edge technologies and R&D information among its members from the electricity & energy supply industry, equipment provider businesses, academic research, government, etc. This unique platform is of great help for executives, senior managers, engineers, and researchers who are responsible for R&D and solutions. It is a worldwide, non-profit organization, established as “International Electric Research Exchange” in 1968.

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