



IDEAS
**International
Decentralized Energy
Access Solutions
Conference**

**Bali, Indonesia,
January 7-9, 2025**

Final Program



Table of Contents

1. Welcome Message from the IDEAS 2025 Chairs.....	4
2. Welcome Message from the Energy Access Team	5
3. List of Conference Committee Members.....	6
4. General Information.....	8
5. Schedule-at-a-Glance.....	9
6. Special Sessions.....	11
7. Technical Program Overview.....	13
8. General Information about Bali, Indonesia.....	15
9. Tourism and Local Attractions.....	16
10. Travel Information for Bali.....	18
11. 2026 IDEAS Information.....	19

IDEAS

2025 IEEE International Decentralized Energy Access Solutions (IDEAS) Conference
Bali, Indonesia, January 7-9, 2025

The IDEAS 2025 Planning Committee would like to express its gratitude for the generous support received from the following SPONSORS:



Welcome Message from the IDEAS 2025 Chairs

It is our great pleasure to welcome you to the IEEE 2025 International Distributed Energy Access Solutions Conference (IDEAS) in Bali, Indonesia, from January 7-9, 2025. As we gather in this exotic city, we look forward to two-and-half days of cutting-edge research, insightful discussions, and valuable networking opportunities in the field of energy access for rural electrification as well as energy transition. This year's conference promises an exceptional program featuring four plenary speeches, a WIE networking event, 30 technical presentations, EBL Team Formation for Global EBL-III Competition and a field trip to a floating solar farm. These sessions will cover a wide range of topics at the forefront of power electronics, delivered by distinguished experts from around the world.

While the conference offers a wealth of knowledge and professional growth opportunities, we encourage all attendees to take some time to explore the beautiful city of Bali and its surroundings. Known for its pleasant climate, stunning natural beauty, and friendly atmosphere, Bali provides an ideal backdrop for both intellectual stimulation and relaxation. We kindly request that all authors and participants not only actively engage in the technical sessions but also enjoy the city during their stay. We look forward to welcoming you to Bali for what promises to be an enriching and memorable conference. Your participation and contributions are vital to the success of IDEAS 2025 and the advancement of power electronics.

Professor Sanjib Kumar Panda
Professor Arwindra Rizqiawan
General Co-Chairs, IEEE IDEAS 2025



Dr. Sanjib. Kumar Panda



Dr. Arwindra Rizqiawan

Welcome Message from the Energy Access Team:

Dear Participants,

Launched initially by Professor Deepak Divan at Georgia Tech in 2019, the IEEE International Decentralized Energy Access Solutions (IDEAS 2025) marks a significant milestone for TC-12 as the main platform to connect global leaders, technologists, and practitioners working toward sustainable energy access solutions.

It is our great honor and privilege to welcome you to the IDEAS 2025 conference, the flagship conference of the IEEE Power Electronics Society's (PELS) Technical Committee on Decentralized Systems for Energy Access (TC-12). This inaugural event will take place from January 7–9, 2025, in Bali, Indonesia—a destination that offers not only natural beauty but also an inspiring environment for innovation and collaboration.

As the Energy Access Committee (EAC), we are focused on addressing the critical challenges of energy access, recognizing that while nearly 750 million people globally lack access to electricity, the underlying technological solutions required for decentralized energy systems are universal. Whether for off-grid communities in sub-Saharan Africa, rural regions in South Asia, remote islands, or underserved communities in developed nations, the EAC focuses on advancing robust, cost-effective, and scalable decentralized energy solutions. It is important to note that TC-12 was launched in 2020 following the successful completion of the first initiative, known as the Empower a Billion Lives (EBL) global competition. At this conference, Dr. Jelena Popovic, Chair of EBL 2025, will conduct a special session dedicated to the EBL 2025 competition, which will set the stage for its global finals, to be held later at ECCE 2025 in South Africa later in the year. Through the EBL initiative, we have catalyzed innovation, bringing together experts, practitioners, and entrepreneurs to address this pressing global challenge, where more than 2.5 billion people suffer from energy poverty. To help bring the global community together, IEEE PELS also established the Energy Access Committee, which will lead a global energy conversation to address the energy access challenge outlined above.

The conference will feature an engaging program, including keynote addresses, technical presentations, tutorials, and special sessions on business models, policy frameworks, and social impact. IDEAS 2025 promises to be an exciting and impactful event, offering a unique opportunity to learn, share, and collaborate on the future of decentralized energy systems. On behalf of TC-12, EBL Organizing committee and EAC, we warmly invite you to join us in Bali for what we are confident will be an inspiring and productive conference.

Best regards,

Professor Deepakraj Divan
Founder of IDEAS Conference

Professor Jelena Popovic
EBL 2025 Chair – Technology

Professor Issa Batarseh
Chair, TC-12



Dr. Deepakraj Divan



Dr. Jelena Popovic



Dr. Issa Batarseh

List of Conference Committee Members

1	Sanjib Kumar Panda	National University of Singapore, Singapore	General Co-Chairs
2	Arwindra Rizqiawan	Institut Teknologi Bandung, Indonesia	General Co-Chairs
3	Silard Liptak	AGSOL, Kenya	Technical Program Committee Chair
4	Mahesh Krishnamurthy	Illinois Institute of Technology, USA	Publication Chair
5	Sumana Ghosh	USA	Publication Co-Chair
6	Jurris Arrozy	Technical University Eindhoven, Netherland	Technical Program Committee
7	Chandra A. Wiguna	Nanyang Technological University, Singapore	Technical Program Committee
8	Fathin S. Rahman	Institut Teknologi Bandung, Indonesia	Members
9	Darian V. Retianza	Technical University Eindhoven, Netherland	Members
10	Novalio Daratha	Bengkulu University, Indonesia	Members
11	Tole Sutikno	Ahmad Dahlan University, Indonesia	Members
12	Mohamed Orabi	Africa	Members
13	Haibing Hu	Nanjing University, China	Members
14	Pradita O. Hadi	Institut Teknologi Bandung, Indonesia	Local Arrangement
15	Gede Sukadarmika	Udayana University, Indonesia	Local Arrangement
16	Fransiska A. Martina	PT. Pertamina Hulu Energi, Indonesia	Local Arrangement
17	Adinda I. Putri,	Universitas Prasetiya Mulya, Indonesia	Local Arrangement
18	Ni Made Ary Esta Dewi Wirastuti	Udayana University, Indonesia	Local Arrangement
19	Wayan Gede Ariastina	Udayana University, Indonesia	Local Arrangement
20	Sanjib Kumar Panda	National University of Singapore, Singapore	Special Sessions
21	Jaber Abu Qahouq	The University of Alabama, USA	Special Sessions
22	Jane Celusak	IEEE-PELS Staff	Treasurer

IDEAS

2025 IEEE International Decentralized Energy Access Solutions (IDEAS) Conference Bali, Indonesia, January 7-9, 2025

23	Rejeki Simanjorang	PT. Vela Prima Nusantara, Indonesia	Financing Committee
24	Hasmat Malik	Universiti Teknologi Malaysia, Malaysia	Financing Committee
25	Yazan Abu-Yaghi	PSUT, Jordan	Financing Committee
26	Issa Batarseh	University of Central Florida, USA	Advisory Committee
27	Deepak Divan	(IDEAS Founder), Georgia Tech, USA	Advisory Committee
28	Jelena Popović	University of Twente, Netherlands	Advisory Committee
29	Ali Husain	EUV Tech, San Jose, California, USA	Advisory Committee
30	Wejdan A. Elhajja	Princess Sumaya University for Technology (PSUT), Jordan	Advisory Committee
31	Johan Enslin	Department of Energy (DoE), Washington DC, USA	Advisory Committee
32	Stan Atcitty	Sandia National Labs, USA	Advisory Committee
33	Mohammad Orabi	Aswan University, Egypt	Advisory Committee
34	Philip Krein	University of Illinois, Urbana-Champaign, USA	Advisory Committee
35	Ben Kroposki	National Renewable Energy Lab, USA	Advisory Committee
36	Jelena Popović	University of Twente, Netherlands	EBL2025 Coordinating Committee
37	Deepak Divan	Georgia Tech, USA	EBL2025 Coordinating Committee
38	Ali Husain	EUV Tech, San Jose, CA USA	EBL2025 Coordinating Committee
39	Sanjib Panda	National University of Singapore, Singapore	EBL2025 Coordinating Committee
40	Liuchen Chang	University of New Brunswick, Canada	L2025 Coordinating Committee
41	Majd Batarsehn	(EBL2023 winner), PSUT, Jordan	EBL2025 Coordinating Committee

IDEAS

2025 IEEE International Decentralized Energy Access Solutions (IDEAS) Conference
Bali, Indonesia, January 7-9, 2025

General Information

Dates: January 7-9, 2025

Location: Bali, Indonesia, The Stones Marriott Hotel.

Address: The Stones Hotel - Legian Bali,
Autograph Collection

Jl. Raya Pantai Kuta, Banjar Legian Kelod,
Legian Bali, Indonesia

Tel: +62 361-3005888

- Wi-Fi Access: Complimentary network available throughout the venue.
- The use of cameras and/or recorders is strictly prohibited during oral sessions. Limited use is allowed for exhibitors in their own booth area. Personal photography is allowed at social functions.



IDEAS

2025 IEEE International Decentralized Energy Access Solutions (IDEAS) Conference
Bali, Indonesia, January 7-9, 2025

Schedule-at-a-Glance

Day 1 (Tuesday, Jan 7th): Tutorials and Welcome Reception

Time	Room A	Room B
7:30 am	Registration	
8:30 am	Welcome Remarks	
8:45 am	Introducing TC-12 and IDEAS	
9:15 am	Keynote 1: Mochamad Soleh – PLN R&D Division	
9:45 am	Keynote 2: Andhika Prastawa – Indonesian Renewable Energy Society (METI)	
10:15 am	Coffee Break	
10:30 am	Special Session 1: Ilman Sulaeman: Overcoming Challenges in Decentralized Energy Access: A Transdisciplinary Approach Lessons from Indonesia – Netherlands Collaboration	Technical Session 1: Power Electronics
12:00 pm	Lunch	
1:15 pm	Special Session 2: Valerio De Angelis: Energy Storage and Regional Needs	Technical Session 2: Microgrids
2:45 pm	Special Session 3: Fei Deng: Advancing Energy Access in Microgrids for Enhanced Resilience, Efficiency, and Intelligence	Technical Session 3: Photovoltaics
4:15 pm	Coffee Break	
4:30 pm	Rap Session – Convergence of Energy Transition and Energy Access	
5:30 pm	Free time	

Day 2 (Wednesday, Jan 8th): Keynote Speeches and Oral Sessions

Time	Room A	Room B
7:30 am	IEEE WIE Breakfast	
8:30 am	Keynote 3: Nick Singh - ESKOM	
9:00 am	Keynote 4: Thomas Reindl - Solar Energy Research Institute of Singapore	
9:30 am	Keynote 5: Vivien Barnier - EnAccess Open Source as an Enabler of Energy Access	
10:00 am	Coffee Break	
10:15 am	Special Session 4: Silard Liptak and Jelena Popovic: Productive Uses of Energy	Technical Session 4: Implementation
11:30 am	Special Session 5: Wejdan Abu Elhaja: Energy problems in MENA region	Technical Session 5: Renewables
1:00 pm	Lunch	
2:15 pm	Special Session 6: Haibing Hu: Low-Cost and Portable Power Access Solutions in Remote Areas	Technical Session 6: EV Transportation
3:30 pm	Ashok Das – IEEE Smart Village – Experience Sharing (remote)	
4:45 pm	Coffee Break	
5:00 pm	EBL Team Intros, Matchmaking	
6:30 pm	Reception /Banquet	

IDEAS

2025 IEEE International Decentralized Energy Access Solutions (IDEAS) Conference
Bali, Indonesia, January 7-9, 2025

Day 3 (Thursday, Jan 9th): Special Events and Poster Sessions

Time	Room A
9:00 am	Keynote 6: Fajar Sasrowijoyo – Syntek
9:30 am	EBL Team Coaching
11:00 am	Coffee Break
11:15 am	Wrap-up Session
12:00 pm	Lunch
1:30 pm	Tours and Sightseeing

Special Sessions

Special Session Title	Chair	Panelists
<p>Special Session 1: Overcoming Challenges in Decentralized Energy Access: A Transdisciplinary Approach Lessons from Indonesia – Netherlands Collaboration</p>	<p style="text-align: center;">Ilman Sulaeman University of Twente, Netherlands.</p>	<ul style="list-style-type: none"> - Amalia Suryani, University of Twente, Netherlands. - Eko Agus Prasetyo, Bandung Institute of Technology, Indonesia. - Tri Desmana Rachmilda, Bandung Institute of Technology, Indonesia. - Jelena Popović, University of Twente, Netherlands. - Niek Moonen, University of Twente, Netherlands.
<p>Special Session 2: Energy Storage and Regional Needs</p>	<p style="text-align: center;">Valerio De Angelis Sandia National Labs, USA</p>	<ul style="list-style-type: none"> - Sanjoy Banerjee, City College of New York and Urban Electric Power, USA - Pedro Rodriguez, Luxemburg Institute of Science and Technology, Luxemburg. - Ji Yeon Kim, Korea Electrical Safety Corporation, Korea - Stan Atcitty, Sandia National Labs, USA
<p>Special Session 3: Advancing Energy Access in Microgrids for Enhanced Resilience, Efficiency, and Intelligence</p>	<p style="text-align: center;">Fei Deng Nanyang Technological University, Singapore.</p>	<ul style="list-style-type: none"> - Ziheng Xiao, Nanyang Technological University, Singapore. - Lei Zhang, Nanyang Technological University, Singapore. - Zhigang Yao, Nanyang Technological University, Singapore.

IDEAS

2025 IEEE International Decentralized Energy Access Solutions (IDEAS) Conference
Bali, Indonesia, January 7-9, 2025

Special Session Title	Chair	Panelists
Special Session 4: Productive Uses of Energy	Silard Liptak AGSOL, Kenya	Jelena Popovic, University of Twente, Netherlands
Special Session 5: Energy problems in MENA region	Wejdan Abu Elhaija Princess Sumaya University for Technology (PSUT), Jordan.	<ul style="list-style-type: none"> - Issa Batarseh, University of Central Florida (UCF), USA. - Francisco Gonzalez-Longatt, Universitetet I Sørøst-Norge/University of South-Eastern Norway. - Ibrahim Abu Shmies, Princess Sumaya University for Technology (PSUT), Jordan. - Omar Mohamed, Libyan International Medical University (LIMU), Libya.
Special Session 6: Low-Cost and Portable Power Access Solutions in Remote Areas	Haibing Hu Nanjing University of Aeronautics and Astronautics, China.	<ul style="list-style-type: none"> - Khalil Saleh, Taibah University, Saudi Arabia - Yan Xing, Nanjing University of Aeronautics and Astronautics, China. - Aljohani, Taibah University, Saudi Arabia.

Technical Program Overview

#	Title	Track name	Session	Session No	Time	Day	date
1571081653	SPICE Simulation Assisted Thermal Management for Surface-Mount GaN HEMTs: Experimental Validation and Performance Insights	Technology Track	PE Technology	1	10:30	Tuesday	7-Jan-25
1571085661	Evaluation of High-Efficiency Two-Stage Inverters with Fixed Modulation Ratio SVPWM Control	Technology Track	PE Technology	1	10:45	Tuesday	7-Jan-25
1571085695	Solar Plug - Universal Off-Grid Microconverter for Low-Cost Tier-1-4 Energy Access	Technology Track	PE Technology	1	11:00	Tuesday	7-Jan-25
1571090434	Enhanced Gain DC-DC Converter for Hybrid Energy Systems with Transformerless High-Efficiency Power Integration	Technology Track	PE Technology	1	11:15	Tuesday	7-Jan-25
1571090572	Evaluation of Virtual Admittance-Based Dual-Loop Voltage-Controlled Grid Forming Inverters	Technology Track	PE Technology	1	11:30	Tuesday	7-Jan-25
1571091060	Design and Implementation of a Novel Isolated DC-DC Converter Topology Utilizing Minimal Components	Technology Track	PE Technology	1	11:45	Tuesday	7-Jan-25
1571080092	Comparative Analysis of Operation and Maintenance Practices in Community-Based Solar Microgrids	Impact Track	Microgrid	2	13:15	Tuesday	7-Jan-25
1571084481	Mitigating the Impact of Rapid Load Changes in Rural Dc Minigrids for Extended Accessibility	Technology Track	Microgrid	2	13:30	Tuesday	7-Jan-25
1571091275	Integrated Transactive and Physical Control of Decentralized Fractal Inverter-Dominated Microgrids	Technology Track	Microgrid	2	13:45	Tuesday	7-Jan-25
1571093165	Viable System Model for off-Grid Solar-Powered Electricity Operation in Indonesian Rural Communities	Impact Track	Microgrid	2	14:00	Tuesday	7-Jan-25
1571093396	Off-Grid Energy Access Solution for Rural and Underserved Regions	Technology Track	Microgrid	2	14:15	Tuesday	7-Jan-25
1571077392	The Feasibility Study of the Rooftop Solar PV Financing Model at Regional Public Hospital in Jakarta	Impact Track	PV Technology	3	14:45	Tuesday	7-Jan-25
1571089869	Artificial Intelligence Models for Short Term PV Forecasting for Direct PV to EV System	Technology Track	PV Technology	3	15:00	Tuesday	7-Jan-25
1571090489	Quality Observations of Solar Home Systems for Rural Electrification	Technology Track	PV Technology	3	15:15	Tuesday	7-Jan-25
1571090986	Arrow Summation Su-Do-Ku Game Inspired Optimization for Photovoltaic Module Placement in Partially Shaded Arrays	Technology Track	PV Technology	3	15:30	Tuesday	7-Jan-25
1571076215	Optimization of HRES Based on Economic, Renewable Fraction and Sensitivity Using HOMER Pro Software	Technology Track	PV Technology	3	15:45	Tuesday	7-Jan-25

IDEAS

2025 IEEE International Decentralized Energy Access Solutions (IDEAS) Conference Bali, Indonesia, January 7-9, 2025

#	Title	Track name	Session	Session No	Time	Day	date
1571090077	Renewable Energy-Powered Automatic Fish Feeder for Nile Tilapia Farming	Technology Track	Implementation	4	10:15	Wednesday	8-Jan-25
1571090954	Demand Stimulation for Sustainability of Minigrids in Global South- a Case Study from Zambia and India	Impact Track	Implementation	4	10:30	Wednesday	8-Jan-25
1571092849	Whale Optimization Algorithm to Optimal Placement and Size of Single Tuned Filter in PT. Semen Tonasa	Technology Track	Implementation	4	10:45	Wednesday	8-Jan-25
1571093303	Techno-Economic Analysis of Electrolyser Systems for Low-Carbon Energy Solutions: Modelling, Life Cycle Cost Analysis and Graphical User Interface for Sustainable Hydrogen Production	Impact Track	Implementation	4	11:00	Wednesday	8-Jan-25
1571093479	Revolutionising Ice Production for Island Nation: Harnessing Solar Energy with a Variable Speed PV off-Grid Direct-Driven Ice Maker	Technology Track	Implementation	4	11:15	Wednesday	8-Jan-25
1571087481	An Expert-Opinion-Based SWOT of the Current Status of the Energy Transition of the SAR Countries	Impact Track	Renewable Energy	5	11:30	Wednesday	8-Jan-25
1571076224	Evaluating the Impact of Sensitivity Analysis on Hybrid Renewable Energy System	Technology Track	Renewable Energy	5	11:45	Wednesday	8-Jan-25
1571080053	Valorization of a Power Quality Sensor for Decentralized Energy Access	Impact Track	Renewable Energy	5	12:00	Wednesday	8-Jan-25
1571080131	The Measures of Power Quality in Energy Access and Cost-Effective Monitoring Tools as an Enabler	Technology Track	Renewable Energy	5	12:15	Wednesday	8-Jan-25
1571082525	Grid Integration of RE Park with Green Hydrogen Production to Reduce CO2 Emissions	Impact Track	Renewable Energy	5	12:30	Wednesday	8-Jan-25
1571077218	Optimising Grid Support and EV Owner Profit: The Dual Role of Aggregators in V2G Energy Management	Technology Track	EV Transportation	6	14:15	Wednesday	8-Jan-25
1571077231	Optimising Voltage Sag Mitigation Using Electric Vehicles: A Comparative Study of Advanced Algorithms for Reactive Power Injection	Technology Track	EV Transportation	6	14:30	Wednesday	8-Jan-25
1571088878	Optimization of Energy Management and Capacity Sizing for Railway Stations Integrating Renewable Energy Sources and Regenerative Braking Energy	Technology Track	EV Transportation	6	14:45	Wednesday	8-Jan-25
1571089837	Assesment of Various EV Charger Effect to the Harmonics Emission	Technology Track	EV Transportation	6	15:00	Wednesday	8-Jan-25

General Information about Bali, Indonesia

From its ancient Hindu-Javanese temples to Bali's contemporary luxury resorts, from the stone-age way of life in West Papua to the vast city of Jakarta, Indonesia is one of the few countries on earth that spans such a wide range of human civilizations and world history. The almost 283 million people that live there are from 300 different ethnic groups and speak more than 250 different languages. The common element is Bahasa Indonesia, the country's official language.



The Indonesian Archipelago is made up of more than 17,000 islands, including Bali, which is situated between Java and Lombok. Bali is a small island, about 80 km from north to south and 140 km from east to west. A series of volcanic mountains that stretch east to west and slightly off center. Bali, which is located only 8° south of the Equator, has a tropical climate with two distinct seasons—wet and dry—with an average yearly temperature of about 28° C. A variety of crops are grown on this island because of its rich volcanic soil and thriving monsoon season. Bali's famous rice terraces, which are among the most breathtaking in the world, are in the broad, gently sloping southern districts. Coffee, copra, spices, vegetables, cattle, and rice are the primary products in the mountainous, northern coastal areas.

Almost 3 million people live in Bali, which is roughly 5,620 sq km (2,170 sq miles) in size and located nearly in the center of the Indonesian island. The business and urban hub is Bandung, one of the eight regencies. The majority of visitors here spend their vacations playing and partying on the beach, usually in the tourist hotspots of Kuta/Legian, Sanur, or Nusa Dua. However, there are still traditional undercurrents present despite modernization.



The Balinese people have deep spiritual foundations, and their culture has endured despite the significant increase in tourists over the years. Naturally creative, the Balinese have always exploited their talents for religious purposes and most of the stunning art to be seen here, has been inspired by stories from the Ramayana and other Hindu epics. Known as one of Asia's most stunning and varied tourist destinations, Bali welcomes about a million tourists annually from all over the world.

Tourism and Local Attractions

Bali offers a vast array of beautiful natural areas, unique sights, and cultural displays. While you may not be able to see everything, we've listed some of the best options below.



Tours & Activities:

Bali has an amazing collection of tour and activities suitable for everyone's interests. From fast-paced adventures, adrenaline sports, cultural discoveries, sightseeing, educational activities and more.

Balinese Ceremonies:

Bali is the only place in Indonesia with a majority Hindu religion which means you will see the influence of Hinduism throughout Bali and in the daily life of Balinese people.



Balinese Dance, Music, & Theater:

Balinese Hindu culture often uses dance and music to tell stories as well as being used for entertainment purposes. These dances and theatrical performances have been passed down through the generations and are now performed for tourists.

Beaches in Bali:

Bali has some amazing beaches all over the island. From the rugged coastline with beach clubs perched on cliffs, white sand soft powdered beaches, the black sand volcanic coasts and much more in between.



IDEAS

2025 IEEE International Decentralized Energy Access Solutions (IDEAS) Conference
Bali, Indonesia, January 7-9, 2025



Waterfalls in Bali:

The tropical climate of Bali with beautiful forests is matched with the amazing waterfalls throughout the Island. Make sure you understand the differences as some waterfalls are very touristic and others are off the tourist path where you will be able to relax and enjoy the true beauty.

Balinese Temples:

Bali's is the only Island in Indonesia with a majority Hindu religion which makes it a unique place within the world with Balinese Hinduism differing from Indian Hinduism. There are many temples you can visit within Bali showcasing the architecture, culture, and offering cleansing and prayer options.



Museums & Art Galleries in Bali:

Bali has a strong Artisan culture and many of the Balinese are skilled painters, sculptors, and craftsmen and women. Many of these pieces as well as the historical information of Bali which dates back thousands of years can be found in the museums and art galleries over the island.

Travel Information for Bali

VISA:

Indonesia Government had granted visa on arrival favor to 97 countries to be able to purchase the visa on arrival facility upon their arrival in Indonesia's designed "International Gateway" at 15 airports and 21 seaports, Bali's I Gusti Ngurah Rai international airport is one of airports that provides visa on arrival services. The visa provides 30 days duration of stay by fee of 500,000 IDR (~30 USD). It can be extended once for another 30 days. Please visit [Indonesia Visa on Arrival \(VOA\): Eligibility and Requirements - Visa Traveler](#) for further information.

CUSTOM:

Customs allow entry per adult, a maximum of one liter of alcoholic liquor, 200 cigarettes or 50 cigars or 100 grams tobacco and a reasonable amount of perfume adult.

AIRPORT TAX:

An airport departure tax of Rp. 240.000, - is levied by the airport authority for travelers on international flights and Rp. 120.000, - for domestic flights. The tax must be paid in Rupiah.

BUSINESS HOURS:

Government offices open at 8 am every day except Sunday, Monday to Thursday. They are open to around 3 pm. Fridays to 11.30 and Saturday to 2 pm. Shops in Denpasar and other towns close in the afternoon for a siesta (usually 1 pm to 6 pm) and open in the evening until 9 pm.

CLIMATE:

The average temperature in Bali in August is between 28°C - 30°C and the relative humidity is about 88%. There is comparatively little difference between the daytime and nighttime temperatures.

CURRENCY:

Only Rupiah (Indonesian currency) is acceptable at regular stores and restaurants. Certain foreign currencies and major credit cards are accepted by most hotels. Restaurants and souvenirs shops. The exchange rate of 1 US\$ is about Rp. 15.800.

TRAVELERS CHECK AND CREDIT CARDS:

Travelers' checks are accepted by leading banks and hotels in principals' cities. The use of travelers checks in Indonesia is as popular as in any other countries. Dinners Club and American Express, Visa and Master Card are widely accepted at hotel, department stores, shops, restaurants, and night clubs. According to the Indonesian banking regulations, payment of credit card should be charged in local currency.

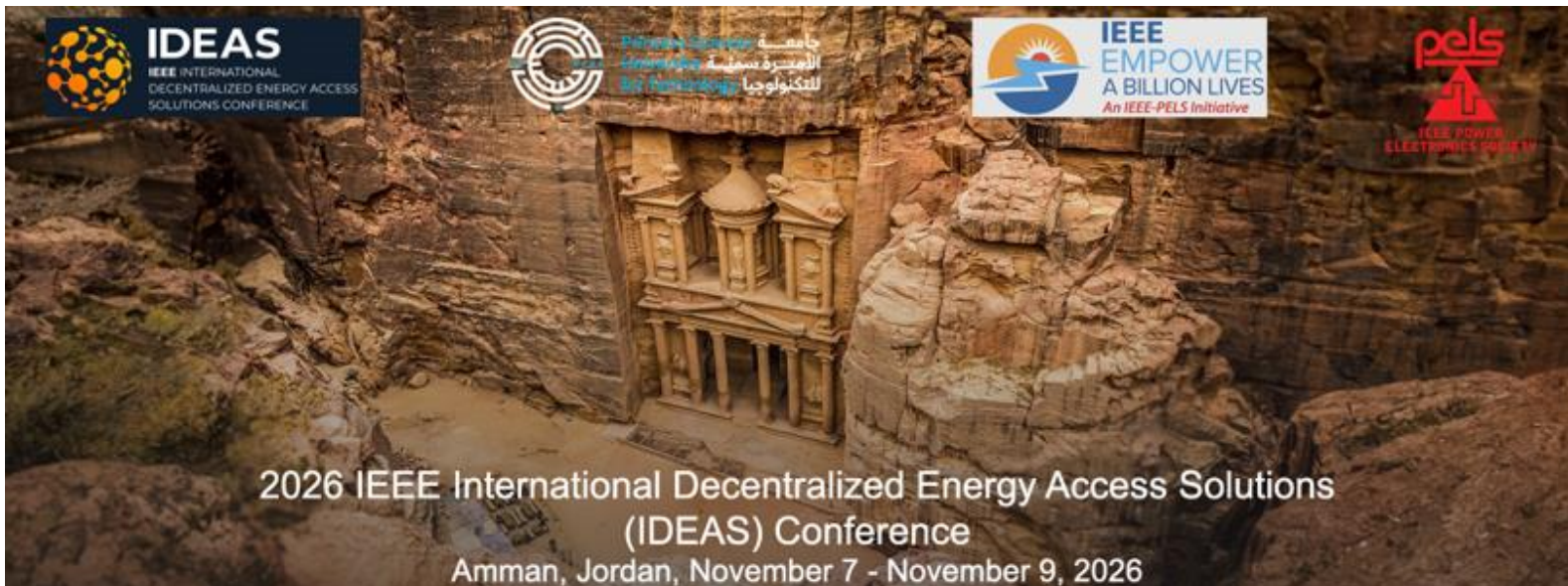
ELECTRICITY:

The electricity used in Indonesia is 220 volts at 50 Hz using type C plug, see [Plug & socket types](#).

IDEAS

2025 IEEE International Decentralized Energy Access Solutions (IDEAS) Conference
Bali, Indonesia, January 7-9, 2025

2026 IDEAS Information



Call for Papers

Organized by TC-12 of the IEEE Power Electronics Society

<p>Committees: General Chairs: Issa Batarseh, University of Central Florida, USA Wejdan Abu Elhaija, Princess Sumaya University for Technology (PSUT), Jordan Technical Program Committee: Osama Abu Sharkh, Chair, PSUT Szilard Liptak, Co-Chair, Africa, USA IDEAS Advisory Committee: Deepak Divan (IDEAS Founder), Georgia Tech, USA Jelena Popović (EBL Chair), University of Twente, The Netherlands Ali Husain, Electronics Society, Fremont, California, USA Sanjib Panda, National University of Singapore, Singapore</p>	<p>The IEEE IDEAS Conference is organized by the Technical Committee on Energy Access (TC-12) of the IEEE Power Electronics Society and will be held in Amman, Jordan, on Nov. 7 – Nov. 9, 2026. IDEAS provides a forum for bringing together technologists and practitioners in the broad area of energy access. Rapidly moving technologies with steep and sustained price declines, such as PV solar, battery storage, digital controls, power semiconductors, cloud computing, sensors, electrified transportation, microgrids, energy hubs, etc. are rapidly driving a global energy transition. These same technologies provide a unique opportunity to transform energy access, allowing the Global South to leapfrog the Global North.</p> <p>IDEAS will include keynote addresses, technical paper and poster presentations, tutorials, special sessions, as well as sessions on other key factors such as business models, funding, policies and regulations, social impact, adoption drivers, etc. IDEAS will also host a special session of the PELS Energy Access Committee that brings together energy access practitioners from around the world for crosscutting discussions on energy access challenges and opportunities.</p> <p>Finally, as the originating TC for the IEEE Empower a Billion Lives global competition, IDEAS will be a venue for the EBL-2027.</p>
<p>EBL2025 Coordinating Committee: Jelena Popović (Chair), University of Twente, Netherlands Deepak Divan, Georgia Tech, USA Sanjib Kumar Panda, National University of Singapore, Singapore Ali Husain, Electronics Society, Fremont, California, USA Liuchen Chang, University of New Brunswick, Canada Majd Batarseh (EBL2023 winner), PSUT, Jordan Fadi Shahroury, (EBL2023 winner), PSUT, Jordan</p>	<p>Members: Ayman Fazza, PSUT, Jordan Omar Mohmed, PSUT, Jordan Majd Batarseh, PSUT, Jordan Rafat Jarrah, PSUT, Jordan Qusai Salem, PSUT, Jordan Ibrahim Abuishmais, PSUT, Jordan Haibing Hu, Nanjing University, China Jose Quadrado, Instituto Politécnico de Lisboa, Portugal Hussein Majali, Mutah, Jordan Zakaria Dallalah, GJU, Jordan Mohammad Haj Ahmad, GJU, Jordan Ahmad Harb, GJU, Jordan Eyad Abu Filat, GJU, Jordan Sahar Butran, JUST, Jordan Vladimir Terzija, Newcastle University, UK Mazaher Karimi, University of Vaasa, Finland Ala A. Hussein, Prince Mohammad Bin Fahd University, KSA</p> <p>Ehab Shoubaki, University of North Carolina at Charlotte, USA Amin Hajizadeh, Aalborg University, Denmark Khalid Alzareer, HTU, Jordan Jaber Abu Qahouq, The University of Alabama, USA</p> <p>Local Committee: Osama Abu-Sharkh, Chair, PSUT, Jordan Amjed Almousa, PSUT, Jordan Fadi Shahroury, PSUT, Jordan Abdulghafoor Ahmad, PSUT, Jordan Omar Bani Ahmad, PSUT, Jordan Mousa Akhras, IEEE Jordan Section Adiy Tweissi, PSUT, Jordan Ammar Odeh, PSUT, Jordan Abdulla Qusef, PSUT, Jordan Mohammad Amoura, PSUT, Jordan Tala Almasri, PSUT, Jordan Hala Al Saket, PSUT, Jordan</p>



IDEAS

2025 IEEE International Decentralized Energy Access Solutions (IDEAS) Conference
Bali, Indonesia, January 7-9, 2025

Papers are invited for the following and other related topics:

Technology Track- Topics

- | | |
|--|--|
| <ul style="list-style-type: none">• DC nano- and micro-grids• Battery energy storage systems• Grid forming solutions for multi-inverter grids• Scalable grid using plug-n-play DER resources• Stability of decentralized microgrids under unbalance, harmonic and fault conditions• Bottom-up grid w/o comms or central control• Collaborative control of autonomous multi-vendor grid-connected inverters• Infinitely scalable IBR rich grids• Autonomous adhoc fractal microgrids that operate with generation surplus or shortage | <ul style="list-style-type: none">• Direct PV solar to appliances• Multi-value appliances with integrated PV• Integrating PV solar, thermal and storage• Black start and switching of IBR rich grids, including grid-transformer transients• Clean cooking, cooling, transportation and other high-power solutions for energy access• Pumping, graining, milling and other productive use solutions• Energy access solutions for high-latitude communities <p>Communications, sensing, IoT and other enabling technologies for energy access</p> |
|--|--|

Impact Track- Topics

- | | |
|--|--|
| <ul style="list-style-type: none">• Policies for accelerating deployment of new energy access solutions• Scalable business models for last-mile• Viable business cases for productive energy use• Energy justice and Leave No One Behind solutions• Gender and energy nexus• Energy resilience solutions <p>Solutions enabling consumer financing and affordability</p> | <ul style="list-style-type: none">• Technology adoption and co-creation challenges in energy access• Centralized vs decentralized energy systems• Ensuring interoperability across vendors and fast-moving technology generations• Operation and maintenance of energy access solutions• Integrated pay-go and commerce platforms for secure scalable energy systems |
|--|--|

Organized by TC-12 of the IEEE Power Electronics Society
Digests submission will start on July 1st, 2026.

Final details will be released soon. Please contact issa.batarseh@ucf.edu for additional information.