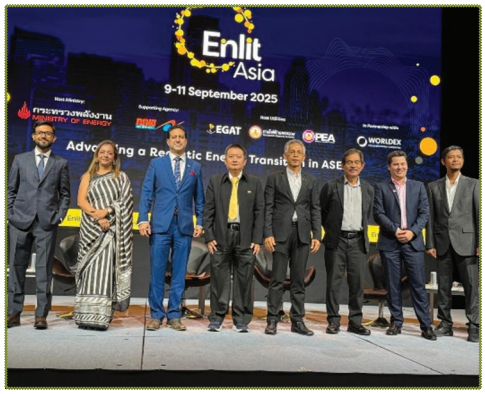
Global Smart Energy Federation

NEWSLETTER

September 2025

INDIA'S STRONG PRESENCE AT ENLIT ASIA 2025 IN SEPTEMBER IN BANGKOK



ISGF AND AIDA SHOWCASE INDIA'S ENERGY TRANSITION LEADERSHIP AT ENLIT ASIA 2025

India Smart Grid Forum (ISGF) and All India DISCOMs Association (AIDA) showcased India's leadership in the global energy transition at Enlit Asia 2025, held at BITEC, Bangkok from 09th -11th September, 2025. The event gathered policymakers, regulators, utilities, and technology innovators from across Asia to discuss the future of power systems.

SESSION ON AI AND DIGITAL MATURITY

Mr. Reji Kumar Pillai, President, India Smart Grid Forum (ISGF), participated as a speaker in a panel discussion on "**AI as a Catalyst for Digital Maturity – From Forecasting to Asset Optimisation**" held on 11 September 2025. The session brought together industry leaders to explore how artificial intelligence is driving efficiency, accuracy, and innovation across the power value chain.

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SESSION ON DECENTRALISED ENERGY AND RESILIENCE

At Enlit Asia 2025, Ms. Reena Suri, Executive Director, ISGF, chaired and moderated a session on "**Decentralised Energy and Resilience: Balancing Grid Stability and Transition Goals.**" The discussion featured experts from Napocor (Philippines), NBPDCL (India), PT PLN (Indonesia), Black & Veatch, EGAT, PEA, and Kraken Technology Group, focusing on regulation, financing, digitalization, and the role of energy users in advancing decentralization. The session emphasized that decentralization is not just a technological shift but a collaborative transformation toward resilient and future-ready energy systems.

ISGF ROUNDTABLE ON GRID MODERNIZATION

A high-level roundtable on "Accelerating Grid Modernization in Asia: Challenges and Opportunities." was hosted by India Smart Grid Forum on 11th September, 2025. Leaders from GE Vernova, Oracle, Trilliant, Smart Energy Water, Kraken Technology Group, and PEA, along with senior executives from major Indian utilities, deliberated on renewable and EV integration, energy storage, digital technologies, and enabling regulatory frameworks.

AIDA'S 2nd INTERNATIONAL STUDY TOUR

All India DISCOMs Association (AIDA) led its 2nd International Study Tour from 9–12 September 2025, with a large delegation of Indian utilities executives. The delegation attended Enlit Asia's sessions on grid resilience, decarbonization, clean mobility, and AI-enabled optimization

TECHNICAL TOUR TO PROVINCIAL ELECTRICITY AUTHORITY (PEA)

With the objective of enriching the learning experience, ISGF and AIDA took the delegation to Provincial Electricity Authority (PEA) for a technical field study on Thailand's Power Distribution Innovations. The visit provided the Indian delegates valuable insights into Thailand's power distribution sector, advanced technologies being adopted, and innovative approaches in customer service and grid modernization.

GLOBAL STORIES ON SMART GRID

PWP signs PPA for Oman's first solar and BESS project

Nama Power and Water Procurement Company (PWP) have signed a power purchase agreement (PPA) with a consortium led by Abu Dhabi Future Energy Company (Masdar) to develop the Ibri III Solar Independent Power Project. The project will involve a 500 MW photovoltaic plant integrated with a 100 MWh battery energy storage system (BESS). The consortium includes Masdar, Al Khadra Partners, Korea Midland Power Company and OQ Alternative Energy. With a total investment of OMR115 million, the project will cover nearly 10 million square metres.

Read More: https://shorturl.at/aDKds

Singapore Secures USD655 Million For Green Infrastructure In South East And South Asia

Singapore has secured USD655 million to fund green and sustainable projects across South East and South Asia. The fund targets renewable energy, energy storage, electric vehicles, transport, water and waste management, particularly projects that struggle to secure traditional financing. The project uses a blended finance approach, combining public, private, and philanthropic capital to de-risk infrastructure investments. Its first funding pillar, the green investments partnership and has attracted contributions from Temasek, HSBC the Australian and European governments, IFC, British International Investment and others.

Read More: https://shorturl.at/QImD7

GLOBAL STORIES ON SMART GRID

World Bank Approves $500 Million for Indonesia Power Grid Upgrade

The World Bank has approved $500 million for the Indonesia Electricity Network Transformation (I-ENET) programme to modernize the electricity distribution system in the Java, Madura, and Bali regions. The initiative is aimed at supporting the integration of renewable energy and accelerating the digital transition of the power grid. The programme will run from 2025 to 2032 under PLN's National Electricity Business Plan (RUPTL).

Read More: https://shorturl.at/3Fjwg

Nuclear Fusion: The Race Among Start-Ups To Harness Limitless, Clean Energy

From Germany to China, the United States to France, more than 50 start-ups are locked in a fierce race to control this long-sought energy source. Nuclear fusion is the opposite of nuclear fission, which splits uranium nuclei in nuclear power plants to release energy and generate electricity. Since humans lack the Sun's immense mass to force atoms to merge and do not want to blow up the planet to power it, physicists and engineers have competed to control this energy for over 70 years. Every decade, they promised that the Holy Grail would be achieved in 10 years.

Read More: https://bit.ly/46wuVMU

Structural Themes In Global Digital Asset Regulation

Jurisdictions with digital asset regulatory regimes include Bermuda (Digital Asset Business Act), Singapore (Payment Services Act), Switzerland (existing legislation and Swiss Financial Market Supervisory Authority guidance), Dubai (Dubai International Financial Centre Digital Assets Law), and the European Union (Markets in Crypto-Assets Regulation).

Read More: https://tinyurl.com/56djs7s9

Advancing Blockchain Scalability: An Introduction to Layer 1 and Layer 2 Solutions

Bitcoin's growing popularity has brought attention to its scalability challenges, particularly the slow transaction speed—each transaction takes around 10 minutes to be confirmed on the blockchain. To address this, developers have introduced two categories of scaling solutions. Layer 1 solutions involve modifying the core protocol itself, such as increasing block size or enhancing consensus mechanisms, to boost throughput. In contrast, Layer 2 solutions operate on top of the existing blockchain and include innovations like payment channels and sidechains, which help reduce congestion on the main chain. While decentralized systems inherently offer lower speed and throughput compared to centralized networks, they compensate with benefits like reduced transaction fees and improved operational efficiency. Understanding the logic and effectiveness of these scaling approaches is essential for improving Bitcoin's performance and broader adoption.

Read More: https://tinyurl.com/52k8xze6

Delhi Targets 8,000 Electric Buses By 2026 For Ev Transition

Expanding its fleet from 3,400 to nearly 8,000, Delhi strengthens its ambition to become the nation's EV capital. Delhi is on course to become India's electric vehicle (EV) capital, with plans to deploy between 7,000 and 8,000 electric buses by February 2026, according to the city's transport ministry. Currently, Delhi operates around 3,400 electric buses, a sharp rise from just 400 when the present transport minister, Pankaj Singh, assumed office. The fleet is projected to expand to 6,000 by the end of 2025, putting the city firmly on track to meet its public transport requirements. The planned additions will also cover last-mile connectivity through the expansion of the city's "Devi" bus service.

Read more- https://tinyurl.com/bdcwvf7h

The World's First Carbon Border Tax Will Soon Go Live — Shaking Up Global Trade

The European Union is poised to fully implement the world's first carbon border tax from Jan. 1. The controversial measure, known as the Carbon Border Adjustment Mechanism, has been criticized by the U.S., China and India, among others. The EU is poised to implement the climate policy as part of an effort to reduce greenhouse gas emissions and promote cleaner production processes outside the bloc.

Read More: https://tinyurl.com/yynurm6x

GLOBAL STORIES ON SMART GRID

Energy Vault and PG&E Launch Hybrid Battery-Hydrogen Microgrid

In Calistoga, California, Energy Vault and Pacific Gas & Electric (PG&E) have introduced a first-of-its-kind hybrid microgrid that combines lithium-ion batteries and hydrogen fuel cells. During Public Safety Power Shutoffs, which are frequently required due to the risk of wildfires, the 293MWh system is intended to give the community at least 48 hours of reliable, continuous power.

Read More: https://shorturl.at/lt41u

Dedicated Wildfire Supercomputers To Power AI Forecasting

The largest supercomputer system in the world for modelling wildfires has been launched by Technosylva, a US wildfire science company. It can simulate more than one billion fire scenarios every day. The 11,500-core system provides forecasts in a matter of seconds by identifying communities and electric lines at the highest risk using artificial intelligence applied to decades of fire weather data. This establishes a new standard for operational wildfire preparedness by giving utilities and fire departments the critical lead time they need to make accurate decisions about power shutoff and expedite evacuation alerts.

Read More: https://tinyurl.com/4vpwjwxb

E.ON And BMW Group Release V2G Solution In Germany

The first commercial Vehicle-to-Grid (V2G) solution for private customers in Germany has been introduced by E.ON and the BMW Group. Bidirectional charging allows BMW iX3 owners to feed energy from their vehicle's battery back into the grid. Customers can receive an annual bonus of up to €720 ($845), which could cover the cost of charging for 14,000 km of driving annually while also aiding in energy system stabilisation, thanks to an intelligent energy management platform and a special V2G electricity tariff from E.ON.

Read More: https://tinyurl.com/3c874fb7

ISGF collaborated with Ministry of Energy and Mineral Resources, Indonesia and (MEMR) and Prakarsa Jaringan Cerdas Indonesia and (PJCI) for International Smart Grid Ecosystem Training Program

Jakarta, Indonesia – September 17, 2025

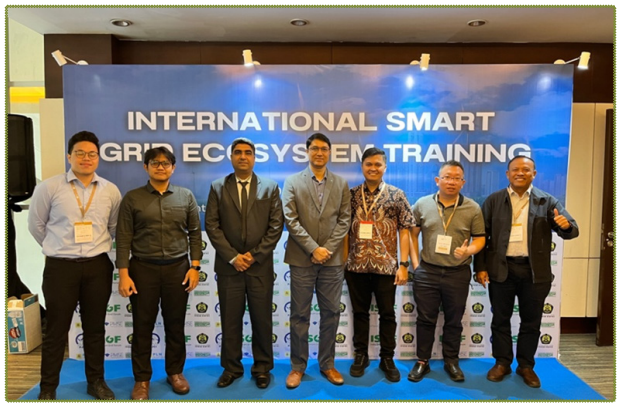
The India Smart Grid Forum (ISGF), in collaboration with the Ministry of Energy and Mineral Resources (MEMR), Indonesia, and the Prakarsa Jaringan Cerdas Indonesia (PJCI), successfully organized the International Smart Grid Ecosystem Training Program in Jakarta. The program aimed to build capacity and share global best practices in smart grid technologies, renewable integration, and digital utility transformation. Representing ISGF, Mr. Anand Kumar Singh, Mr. Gaurav Arora, and Dr. Faruk Kazi participated as lecturers, delivering sessions on topics such as Smart Grid and Cyber Security, AMI Infrastructure, Electric vehicle, Battery technology, Charging station integration with the grid (V2G, V2H), Blockchain. The collaboration marks a significant step toward strengthening Indo-Indonesian cooperation in advancing smart grid and clean energy initiatives across the region.

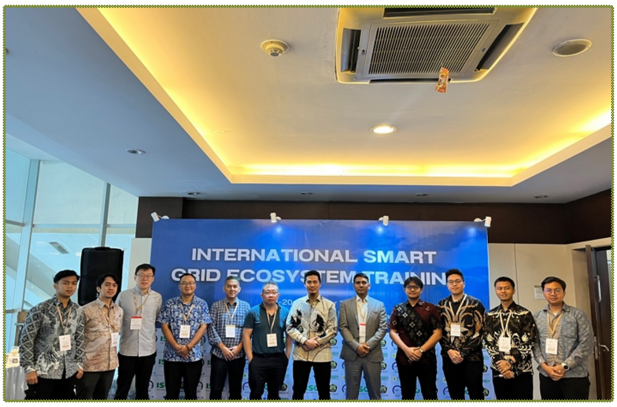
ISGF was also invited to represent India at the high-profile international conference "Indonesia Data Center Landscape 2025: Investment Opportunities", organized by the Perkumpulan Jaringan Cerdas Indonesia (PJCI) and the Indonesia Data Center Provider Organization (IDPRO). The event, held at the JIExpo Convention Center, Jakarta, brought together senior policymakers, investors, and technology leaders to discuss the emerging data center ecosystem in Southeast Asia.

Representing ISGF, Mr. Anand Kumar Singh, General Manager, delivered an address on "Ensuring Reliable and Scalable Power Infrastructure for Data Centers", focusing on India's pioneering efforts in building intelligent grids and sustainable power systems to support mission-critical digital infrastructure. He emphasized the growing relevance of renewable integration, grid reliability, and green energy procurement models in ensuring resilient and low-carbon data center operations.

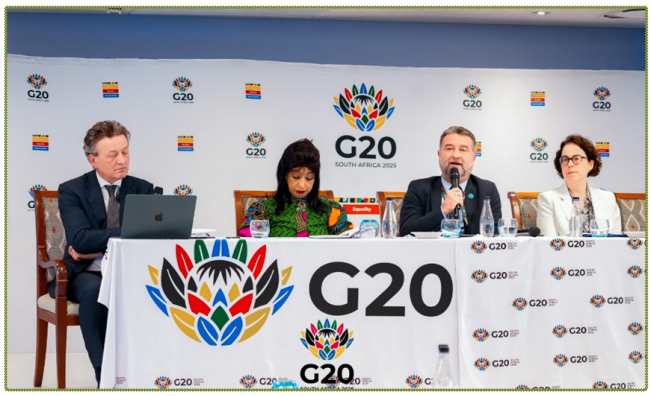
The Awards were evaluated by an international jury of experts chaired by Mr. Reji Kumar Pillai, Chairman, Global Smart Energy Federation (GSEF) and President, India Smart Grid Forum (ISGF).

The discussions revolved around the Asia-Pacific data center investment landscape, regional competitiveness (Singapore, Malaysia, Vietnam, Indonesia), and the need for power reliability, regulatory streamlining, and renewable integration. The session underscored that Indonesia, with its strategic location and growing domestic market, can become a major regional hub for data centers provided it strengthens its energy and digital infrastructure.





UNLOCKING AFRICA'S ENERGY FUTURE: A ROADMAP FOR SUSTAINABLE FINANCING OF DECENTRALIZED ENERGY SYSTEMS



Mr. Nick Singh, GSEF Ambassador - Anglophone Countries in Africa, and head of the Smart Grid Centre of Excellence at Eskom Research Testing and Development, gave a presentation on "Unlocking Africa's Energy Future: A Roadmap for Sustainable Financing of Decentralized Energy Systems" during the G20 Energy Transitions Working Group (ETWG-IV) held in Durban, South Africa. The comprehensive 200-page framework provides a strategic roadmap to accelerate Africa's energy transition through innovation, inclusivity, and sustainable financing.

Mr. Singh emphasized that Decentralized Energy Systems (DES) are pivotal to achieving universal access and resilience in Africa's power sector. The roadmap, aligned with G20 ETWG priorities and Mission 300, is structured around three pillars:

1. Strategic Funding Framework – Introducing blended-finance models that combine public and private capital to de-risk investments.
2. Knowledge Sharing & Capacity Building – Enabling collaboration, data exchange, and skill development.
3. Africa-Specific Implementation Guidelines – Customizing financial and policy tools for local contexts.

The document proposes a phased approach—from feasibility studies to commercial deployment—supported by innovative financial mechanisms such as Pay-As-You-Go, Results-Based Financing, and Public-Private Partnerships (PPPs). It further outlines key recommendations to create blended-finance structures, enhance policy environments, deploy risk-mitigation tools, build developer capacity, and leverage carbon credits.

Highlighting Africa's renewable resource potential and entrepreneurial spirit, Mr. Singh noted that DES can drive industrial growth, local manufacturing, and job creation while ensuring environmental sustainability.

This roadmap serves as a strategic blueprint for unlocking Africa's clean-energy potential—fostering collaboration among governments, private investors, and international partners to build a just, inclusive, and resilient energy future for the continent.

Article contributed by Mr. Nick Singh GSEF Ambassador - Anglophone Countries in Africa

COP 30: ASPIRATION V/S POLARIZATION

Last year's COP29 in Baku, Azerbaijan confirmed a growing wedge and a struggle for consensus. Dating back to COP26, the financial support mechanisms and increasing transparency have clearly failed. National governments are falling behind their stated targets. Notwithstanding aspirational goals, political polarization is now threatening to break up earlier pathways. This article unpacks the various pieces.

The COP30 meeting agenda slated for November 10-21, 2025, in Belem, Brazil, appears inconsequential to building on COP 29 setback (lack of consensus). It faces new headwinds from recent electoral polarization in key developed countries.

COP30 agenda continues to reaffirm its commitment to implementing the outcomes of the Global Stock-take (GST) of the 2023 Paris Agreement (COP28). The six thrusts being, (1) Transitioning Energy, Industry, and Transport; (2) Stewarding Forests, Oceans, and Biodiversity; (3) Transforming Agriculture and Food Systems; (4) Building Resilience for Cities, Infrastructure, and Water; (5) Fostering Human and Social Development; and (6) Cross-cutting enablers and accelerators.

A January 2025 Study by the Stanford University Doerr School for Sustainability authored by Bromley, Furuta, Garthwaite, Binns, titled, "A global movement opposing climate policies is on the rise", reveals a growing constellation of think tanks, research institutes, trade associations, foundations, and other groups actively working to oppose climate science and related policies. It found that "counter climate change organizations tend to emerge after pro-environmental policies are institutionalized in government".

The above study indicates that more than 60% (of 548 organizations identified in the study) are based in the United States. However, such groups are now present in 51 countries (up from 25 in 1990). The study finds that the counter movement centers around (1) economic interests in energy and agriculture (accounting for 50% global GHG emissions); (2) opposition around cultural identity or threats to a way of life; and (3) such polarization may indeed be strengthening the countermovement's electoral appeal.

The above climate change counter movement is rapidly reversing green energy public policy. Examples include cancellations of wind/solar PV projects, EV incentives and energy conservation, being termed as a rising-cost regulatory burden. These reversals are now taking place in erstwhile pro-green energy countries like Canada, USA, Brazil, and Australia. Temperature guardrails (1.5 deg C rise) as agreed in the 2015 Paris Agreement appear to be losing steam. Global oil and gas production is on the rise.

The dramatic shift in these countries appears from rising energy costs. The green energy replacing fossil energy plants were not like-for-like replacement (poor energy density and intermittency) and required additional infrastructure to make it work. The same is true for e-mobility (charging infrastructure). In other words, the shift to embrace green energy is significant with new added costs, especially when these countries enjoyed a low-cost, resource-rich lifestyle for about hundred years. They even led the industrial revolution. Fatigued with rising energy costs, they now face headwinds in economic growth.

All is not lost if the most climate impacted countries in Asia, LATAM and Africa unite and continue this collective climate change effort with their own co-investments. Today most of the green technology products and systems (wind, solar PV, inverters, batteries, biofuels, EVs) are produced in that region. Further, EPC capabilities in this sector are also in the same regions (design – build – maintain). The only area of setback would be the non-availability of the promised 100b$ annual funds transfer, which has not happened anyway.

In my view COP30 needs to rethink a strong South-South agenda and not attempt to correct COP 29 weaknesses. With USA expected to withdraw support this year the divisions are now clear. Those who are impacted most need to work together. No point crying over yesterday's unkept promises. The way forward will be difficult. Hence, COP30 should pivot along the following lines:

1. Reduce Fossil Fuel Import: Focus on which area yields the best payback (1) renewable energy; (2) conservation; (3) smart grid; (4) e-mobility; and (5) agriculture. For most countries, it would be a combination of the above.
2. Reduce Public Financial Obligations: Reconcile fiscal affordability by (1) repurposing govt. owned stranded fossil assets; (2) improving financial stability of utilities; (3) reskilling; (4) encouraging build-own-operate service models to improve affordability.
3. Leverage Production Clusters: Given most green technology manufacturing is based in Asia and LATAM, promote South-South agreements to (1) rationalize differing standards; (2) improve trade and procurement; (3) encourage consultancy, EPC and R&D co-operation to lower costs.
4. Prioritize Net Zero: Net Zero is not zero carbon fuel. Create choices (avoid, reduce, offset) by (1) source sequestration vs. tail-end sequestration; (2) non-linear removal cost (last 10% more expensive than first 10%); (3) carbon-avoidance offset (growing trees) vs. carbon-removal offset; and (4) tally mechanism (city, state) given unequal clean resources and inability to remove.

COP30 promises to be a sharp hairpin bend in the climate change dialog, widening the North-South divide. The aspirant South could see a jerky stop as they contend with new counter moves of the North. The promise of the 100b$ annual funding transfer will likely disappear altogether from discussions. The good news is that 80% of green technology production (PV, Wind, inverters, ESS, EVs), EPC capabilities as well as future markets are in the global South. This combination must be leveraged.

The collective shift of the South towards self-sufficiency in climate change progress will be neither easy nor without pain, but it must be done with resolve. Waiting for handouts from the North, may indeed be a long wait. COP30 must focus on this and not the past.

Article contributed by Ravi Seethapathy, GSEF Ambassador for Americas

Smart Grid Events

International Events

9th - 11th September, 2025

Enlit ASIA, Bangkok, Thailand
https://www.enlit-asia.com/

17th – 18th September 2025

Data Center Asia, Jakarta International Expo Convention, Jakarta 2025
https://www.datacenter-asia.com/jakarta/

18th – 20th September 2025

INTERNATIONAL SMART GRID ECOSYSTEM TRAINING ORGANIZED BY PJCI IN COLLABORATION WITH ISGF
https://pjci.or.id/index.php/produk/international-smartgrid-ecosystem-training/

30th Sept -02nd October, 2025

APUA Annual Event New Cairo, Egypt
www.congresasea.com

07th – 08th October, 2025

Innovation for Cool Earth Forum, Tokyo
https://www.icef.go.jp/

27th - 31st October 2025

Singapore International Energy Week, Marina Bay Sands
https://www.siew.gov.sg/

3rd - 6th November, 2025

ADIPEC 2025
ADNEC, Abu Dhabi, United Arab Emirates
www.adipec.com

18th - 20th November, 2025

Enlit Europe, Bilbao, Spain
https://www.enlit-europe.com/

13th–15th January 2026

World Future Energy Summit (WFES)
https://www.worldfutureenergysummit.com/#

02nd – 05th February 2026

DistribuTech International,
San Diego, CA, USA
https://www.distributech.com/

10th - 14th March 2026

12th India Smart Utility Week (ISUW 2026), New Delhi
http://www.isuw.in/

17th - 19th March 2026

EN26 Conference & Exhibition, Adelaide Convention Centre, South Australia
https://www.energynetworks.com.au/events/en26- conference-exhibition/

25th – 27th March 2026

ASEAN (Bangkok) Smart Energy & Energy Storage Expo 2026, Bangkok, Thailand
https://www.aseancleanenergyexpo.com/

30th March -1st April 2026

Egypt Energy Show – Egypes, Cairo, Egypt
https://shorturl.at/tahpe

7th – 9th April 2026

Middle East Energy
https://www.middleeast-energy.com/en/home.html

26th – 30th April 2026

25th WPC Energy Congress, Riyadh, Saudi Arabia
https://wpcenergy.org/

19th – 21st May 2026

World Utilities Congress, Abu Dhabi
https://www.worldutilitiescongress.com/

Members

Think Smart Grids

India Smart Grid Forum

Korea Smart Grid Association (KSGA)

Prakarsa Jaringan Cerdas Indonesia (PJCI)

Smart Grid Ireland

Electricity Generating Authority of Thailand (EGAT)

Electricity Supply Commission of South Africa (ESKOM)

Tenaga Nasional Berhad (TNB)Malaysia

European Distribution System Operators (E.DSO)

Botswana Power Corporation

Green Business Certification Inc.

Florence School of Regulation (FSR)

Electric Power Research Institute

Texas State University

Arab Renewable Energy Commission

Association of Power Utilities of Africa

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