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ASIA

INTRODUCTION

Asia's Regional Commentary builds on insights surfaced through this year's World Energy Issues Monitor dialogues, reflecting what leaders across the region said – not just what the survey shows. The survey and dialogues were conducted prior to the ongoing situation in the Middle East and therefore reflect conditions at that point in time.

Asia's transition is anchored in structural growth, deepening electrification, and a pragmatic delivery mindset, yet increasingly shaped by global uncertainty. Ambition remains high, but recent experience has sharpened the primacy of security, affordability, and resilience. Geopolitical shifts, supply chain fragility, and uneven global trade are amplifying adaptation challenges. Unsurprisingly, coordinated infrastructure planning – especially around power grids, storage, and demand management – sits at the top of regional concern.

Across this landscape, reliability and decarbonisation remain core priorities. EV deployment is accelerating sharply and reframed as both load and flexible storage, while Australia's home battery boom has accelerated demand side flexibility. Nuclear has re-entered the conversation, from Malaysia's future mix considerations to China's planning horizon. Beneath this, shifts on both the supply and demand side are giving rise to new business models, commercial arrangements, and operational practices – from prosumer driven flexibility and aggregation models to new service based approaches to storage, efficiency, and digital infrastructure. Affordability pressures and the need to actively build social licence continue to shape delivery.

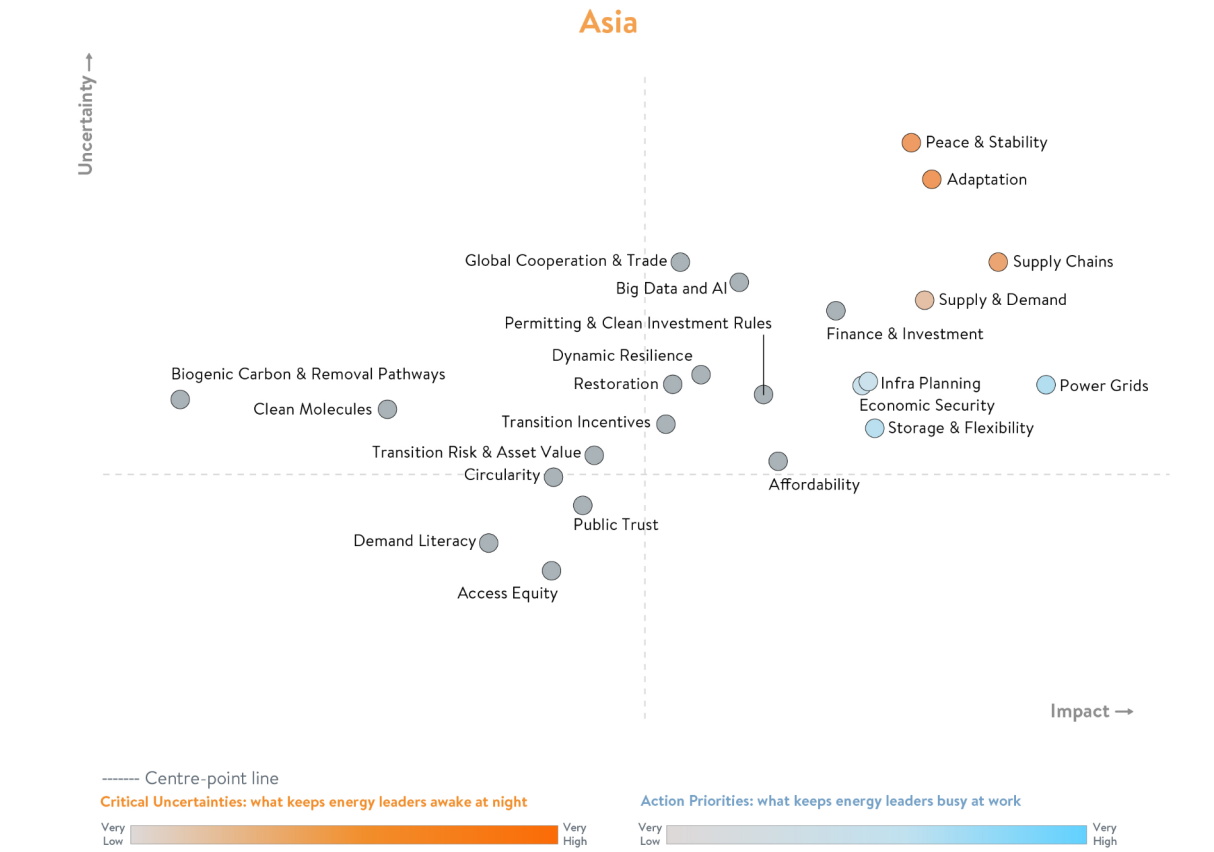
Asia's transition is also becoming more visibly system-bound as systems expand and transform simultaneously. Distribution networks, microgrids, and behind-the-meter assets are moving to the centre of planning; interoperability of distributed energy resources (DERs) is emerging as a constraint as some manufacturers shift toward proprietary systems, requiring government policies to keep pace with the market. High solar markets are experiencing midday negative wholesale prices, pulling storage and flexibility to the forefront and underlining the need for smarter tariffs or balancing storage and generation rollout. Cybersecurity is now a multidimensional risk – operational, financial, and geopolitical – as digitalisation expands. These changes demand greater adaptability from businesses, new technical skills across the workforce, and policy frameworks able to evolve at the pace of market and technological change.

These macro observations are reflected in this year's Issues Monitor results: Asia moved storage & flexibility and power grids from "critical uncertainty" to "action priority," while elevating adaptation, supply chain robustness, circularity, and policy clarity as key unknowns. The message is unmistakable: constraints are increasingly systemic – interoperability, grid readiness, workforce capability, supportive regulatory frameworks, investment confidence, cyber preparedness, and social licence – rather than a lack of technology. Under these tighter conditions, the leadership task is **World Energy Trilemma-tested delivery: sustaining climate ambition while holding security and affordability in real time.** The imperative is to protect what works while modernising delivery so the region can scale clean energy with resilience, and equip institutions, policies, and people to respond to a rapidly changing system.

ABOUT THE WORLD ENERGY ISSUES MONITOR

Energy transitions are complex, evolving, and deeply interconnected, shaped by shifting priorities, emerging uncertainties, and regional realities. Since 2009, the World Energy Issues Monitor has offered a unique lens into the dynamic forces driving energy transitions worldwide. This year's survey spans 23 core transition issues across six categories – spotlighting blind spots, new signals, and shifting leadership priorities. Amid growing uncertainty, leaders across the World Energy Council community are asking sharper questions: What's working? What can be adapted across regions? And where are the real opportunities to turn blind spots into bright spots?

WORLD ENERGY ISSUES MONITOR | 2026



CRITICAL UNCERTAINTIES AND ACTION PRIORITIES

TOP CRITICAL UNCERTAINTY: PEACE AND STABILITY

Peace and stability has become Asia's defining operating condition – shaping investment horizons, energy-system planning, and the region's ability to navigate simultaneous transitions in security, climate, and industrial development. The uncertainty is no longer whether geopolitical disruption will occur, but how Asia can adapt under conditions of rising strategic competition, intensifying climate impacts, and increasingly contested global trade rules. Across the region, these pressures are now interacting with one another, exposing delivery systems to volatility in ways that directly influence

cost, pace, and market confidence. In many markets, the speed of digitalisation and electrification is outpacing the ability of policy frameworks, regulatory systems, and workforce capabilities to adjust and respond at the necessary pace.

The 2026 Issues Map reflects this shift: perceived impact rises sharply across Peace & Stability, Global Cooperation & Trade, and Adaptation & Resilience, with more respondents placing these in the High/Very High Impact category. Uncertainty also increases for Peace & Stability and for global climate cooperation, underscoring the sense that Asia's operating environment is being shaped by external pressures it cannot fully control, but must increasingly plan and invest around – including ensuring that skills, business models, policy, and planning frameworks evolve with the pace of system transformation.

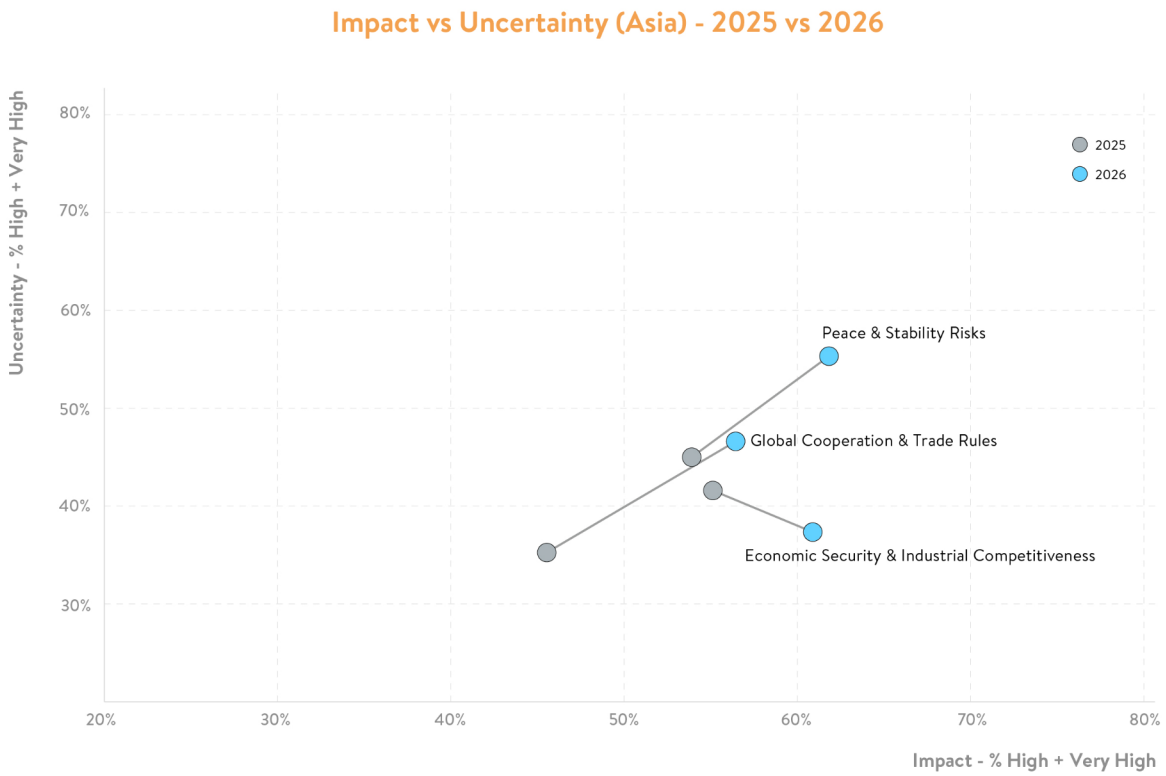


Figure 2: percentage increase in high/very high responses for **Peace & Stability, Global Cooperation & Trade, and Economic Security (big movers)**

- GEOPOLITICAL POLICIES LEAD TO ADAPTATION UNCERTAINTY
  Geopolitical tensions are increasingly shaping how and where Asia adapts to climate risk, and whether sustainability is prioritised. Strategic competition now influences infrastructure siting, resilience requirements, and investment priorities, while climate shocks are treated as security risks that intersect with defence, supply routes, and energy stability. The result is adaptation that is more urgent, costlier, and more exposed to geopolitical conditions – compressing decision time and heightening delivery risk for many Asian markets.

- ASIA'S CLIMATE-LEADERSHIP ROLE IS BECOMING MORE UNCERTAIN
  Even as its importance grows, its large emissions share and vast renewable potential position the region as central to global outcomes yet differing national priorities and uneven transition readiness complicate coordination. Governments must balance domestic development needs

with rising pressure to signal ambition and collaborate regionally creating a persistent uncertainty for markets, investors, and diplomatic processes.

- SUPPLY CHAIN SECURITY AMIDST GLOBAL TRADE CHANGES
  Asia sits at the core of clean-energy supply chains – but also their vulnerabilities. Fragmenting trade, shifting standards, and export controls are reshaping access to critical minerals, components, and manufacturing inputs. These dynamics increasingly require businesses to adopt new commercial models, diversification strategies, and adaptive procurement practices, while governments face the challenge of keeping regulatory and industrial policy aligned with fast-moving market shifts. What was once a cost-competitiveness issue is now about reliability and political risk. Maintaining secure, affordable, and trusted supply chains is becoming harder as trade rules grow more contested and strategic interdependence is rewritten.

TOP ACTION PRIORITY: THE DELIVERY SPINE – GRIDS + FLEXIBILITY + PLANNING

Asia's transition is now constrained less by technology potential than by delivery throughput – where grids, flexibility, and coordinated planning set the real pace. The region's rising digital loads, rapid electrification, and expanding prosumer base are placing unprecedented pressure on infrastructure readiness, regulatory clarity, investment conditions, and social license. These delivery enablers must now support security, affordability, competitiveness, and decarbonisation at the same time, under far greater scale and speed than previous build-out cycles.

- INTEGRATED GRID AND INFRASTRUCTURE PLANNING IS THE PACING FACTOR
  Asia's ability to scale renewables, electrification, AI-driven demand, and industrial growth depends on integrated transmission and distribution planning that treats DERs and large new loads explicitly. While this is an opportunity for fast actors in the market, policy settings are lagging. Further, data centres, manufacturing hubs, and transport clusters require connection capacity and long-lead-time components that can't be added piecemeal. The real constraint is shifting from what can be built to what can be connected and operated reliably, making coordinated planning essential to prevent congestion, curtailment, and rising system costs.

- DEMAND MANAGEMENT AND FLEXIBILITY MUST BE TREATED AS SYSTEM FUNCTIONS, NOT PILOTS
  Demand management now needs equal footing with supply expansion. Flexibility – home batteries, VPPs, demand response, smart EV charging, V2G – is becoming core system infrastructure as consumers seek greener, time-specific, and cost-efficient energy. Peer to peer trading systems is an emerging market innovation. While, embedding flexibility near load reduces peak stress, volatility, and total system costs. Without it, high-renewables grids risk deeper curtailment, higher balancing costs, and weakened public confidence.

- GRID INFRASTRUCTURE RESILIENCE IS CENTRAL TO DELIVERY CREDIBILITY
  Transmission and distribution resilience – capacity, redundancy, interconnection, protection – is becoming decisive for project timelines and investor confidence. Connection queues, long-lead-time hardware, and uneven regional grid strength limit where clean-energy projects and new industrial loads can go. Strengthening resilience also means integrating DER contributions to system strength and inertia. As climate shocks and digitalisation accelerate, the grid's ability to operate reliably under stress becomes the core test of transition credibility.

AI-DRIVEN DEMAND GROWTH AND SYSTEM-READINESS CONSTRAINTS – ASIA'S DIGITAL-ENERGY CROSSROADS

AI is rapidly becoming a defining force in Asia's energy transition, acting as both an accelerator of system modernisation and a major new source of electricity demand. Across key markets – including India, Malaysia, and Singapore – AI workloads are pushing data centres toward gigawatt-scale clusters, driving unprecedented pressure on supply reliability and reshaping load curves in ways that strain grid resilience. Power availability is increasingly determining where and how fast new capacity can be built, with operators shifting from traditional facility design to onsite generation and advanced electrical architectures.

Yet the region faces a widening clean-energy gap. Analyst projections suggest Asia will account for ~30% of global data-centre capacity by the late 2020s, growing at 20%+ annually, while current renewable-procurement pathways cover only ~32% of projected 2030 demand. Without accelerated grid investment and renewable integration, this demand surge risks deepening coal dependence, particularly in markets like Indonesia and the Philippines where coal remains dominant. Meeting this demand surge will also require policy agility, new business models for digital energy integration, and a workforce equipped with skills spanning grid operations, data analytics, and digital security.

Governments are beginning to respond, but unevenly and behind the market. Singapore has shifted from managed scarcity to a tightly controlled "green growth" model, releasing limited new data-centre capacity only for projects meeting strict efficiency and clean-power criteria. China is relocating compute workloads inland to renewable-advantaged provinces under its East-Data, West-Computing programme, aligning siting with grid capacity and resource availability. India, meanwhile, is scaling from roughly 1GW IT load toward multi-GW clusters this decade, driven by AI adoption, localisation requirements, and 5G expansion – yet while facing persistent grid-connection bottlenecks.

Regional studies by the Asian Development Bank and National Renewable Energy Laboratory highlight that ASEAN interconnectors could unlock cheaper, cleaner power at scale for emerging AI hubs, but progress remains slow and fragmented. The strategic implication mirrors Europe's challenge: AI is arriving faster than systems can adapt. Asia's binding constraint is no longer digital ambition or renewable potential – it is system readiness: the ability of its grids, planning processes, and clean-power pathways to accommodate AI-driven demand at the speed it is materialising.

BLIND SPOTS AND BRIGHT SPOTS

Asia continues to scale renewables, but the 2026 picture is increasingly shaped by system constraints and legitimacy conditions that often remain secondary until they slow delivery. The Asia Issues Map and regional discussions point to a similar stress point: transitions are moving faster than the foundations can comfortably support.

BLIND SPOTS

- ACCESS EQUITY AS THE HIDDEN DETERMINANT OF CONNECTED PROGRESS
  Despite being one of the most underestimated issues on the map, access equity is deeply intertwined with siting, permitting, and approvals. When early engagement is weak or uneven – especially in rapidly developing or vulnerable communities – legitimacy erodes, slowing project

timelines and elevating local resistance. In a region with fast-moving infrastructure growth, uneven access and participation can quietly become a systemic drag on delivery.

- DEMAND LITERACY: A FOUNDATIONAL, YET MISSING, CAPABILITY
  While demand is rapidly reshaping system dynamics – driven by AI, data centre growth, EVs, and rising electrification – regional literacy about how demand behaves and how it can be shaped is underestimated. Without shared understanding across policymakers, industry, and consumers, demand-side flexibility will remain underutilised, and planning will lag reality. The risk is a persistent mismatch between where demand grows and how systems prepare for it.

- CIRCULARITY AND END-OF-LIFE SYSTEMS REMAIN A BLIND SPOT
  Adaptation to climate shocks is emerging as a visible uncertainty across Asia, yet circularity in clean-energy systems remains largely peripheral in policy and planning. As deployment for solar, batteries, and wind accelerates, end-of-life volumes will scale non-linearly. Without early integration of recycling, recovery, and reuse into energy strategies, the region risks a parallel vulnerability: mounting technology waste and new mineral-supply constraints. The system is preparing for climate impacts while overlooking how insufficient circular infrastructure could itself constrain transitions.

- PUBLIC TRUST: A STRATEGIC ASSET, NOT A STAKEHOLDER EXERCISE
  Public trust remains undervalued, yet it is fundamental to both transition speed and siting legitimacy. Community engagement and energy literacy are not keeping pace with the scale of development, and policy frameworks have not fully adapted to support consent-building. Treating transitions as a common public good – not the remit of a small set of organisations – is essential to sustaining consent under rising cost, land-use, and infrastructure pressures.

BRIGHT SPOTS

- AUSTRALIA: STABILISING HIGH VRE INTO SYSTEM ORCHESTRATION
  South Australia operates with one of the world's highest renewable energy grids while preparing for accelerated load growth and meeting the test of security challenges. Across the National Electricity Market, initiatives to increase both large-scale and home-scale storage including its national home battery rebate scheme. Australia has overtaken the United Kingdom in utility-scale battery capacity, with 37 GWh of projects at or nearing financial close, strengthening flexibility as new loads emerge.

- CHINA: SCALE AS A SECURITY STRATEGY
  In 2025 China added around 430 GW of new wind and solar, marking a 22% year on year increase, and pushing annual renewable capacity to about 4,000 TWh. New type energy storage including approximately 20 million EVs surpassed 100 GW, reinforcing the grid connected by ultrahigh voltage transmission. Smart siting strategies are seeing data centre development following available regional energy supply.

- INDIA: RECORD SOLAR DEPLOYMENT WITH RISING RELIABILITY FOCUS
  India installed roughly 37.9 GW of solar in 2025 – the highest on record – with rooftop additions of about 7.1 GW driven predominantly by households under the PM Surya Ghar scheme. Total renewable additions exceeded 40 GW, contributing to a rare full year decline in coal generation and reinforcing daytime reliability, even as grid and storage needs remain significant across states.

ASIA'S TRILEMMA – KEY IMPLICATIONS FOR SUSTAINABILITY

Despite regional leadership, a new World Bank Group assessment shows that Asia sits on one of the world's largest untapped clean energy opportunities. Across China, Indonesia, Vietnam and the Philippines – countries that together account for nearly 60% of global coal consumption – around 97% of an estimated 65,000 GW of renewable potential remains unused, representing a scale of resource that could secure affordable energy and reinforce long-term industrial competitiveness. Offshore wind alone offers more than 770 GW of potential in Vietnam and the Philippines, positioning both economies for industrial grade clean expansion. Yet without decisive action, regional electricity demand is projected to double within the next three decades, a trajectory incompatible with climate goals and national energy security.

Progress is complicated by persistent coal lock in: coal still dominates power generation in major Southeast Asian economies, with Indonesia and the Philippines among the most coal dependent systems globally. The risks of a slowing transition are evident with countries such as Indonesia, planning to move their capital city due to climate threats. Conversely, Asia holds a vast industrial opportunity in **renewable energy supply chains**: seven key markets could capture over US$1.1 trillion in solar and offshore wind supply chain investments by 2050, with three quarters of the value tied to components, logistics and services rather than panels or turbines themselves. Realising this opportunity will depend on the region's ability to evolve policy frameworks, strengthen human capital capability, and enable new business models that can operate within increasingly dynamic, data rich energy systems.

The region's sustainability challenge lies not in resource scarcity but in **delivery capacity and credibility**. Untapped renewables, surging demand, entrenched coal systems, and uneven policy readiness risk pulling Asia in opposing directions – between affordability pressures, energy security priorities and industrial competitiveness. With emissions from power and industry already accounting for between 75 - 87% of the region's total, the next five years will determine whether Asia accelerates into a scalable clean energy economy or remains constrained by legacy systems.

CONCLUSION

The events and signals emerging throughout 2025 reinforced a clear reality for Asia: transitions are not unfolding as a linear programme, but as system navigation under compounding pressure – where geopolitics shapes adaptation choices, rising demand reshapes system design, and legitimacy conditions shape what can advance at pace. The 2026 Asia Energy Issues Monitor reflects this backdrop: uncertainty is structural, system pressures are higher, and areas of progress and fragility now sit side by side across a rapidly diversifying region.

Four signals stand out:

- **Peace & Stability has hardened into the dominant uncertainty,** shaping investment horizons and system planning as geopolitical tensions, climate impacts, and global trade shifts converge across Asia's operating space.

- **Delivery throughput sets the pace:** integrated grid planning, flexibility, demand side capability, and infrastructure resilience are now the backbone determining how quickly the region can scale renewables, meet new loads, and maintain reliability

- **Access equity and public trust are becoming decisive legitimacy conditions,** influencing siting, approvals, and local participation – quietly determining where projects succeed or stall.

- **Adaptation is treated as a critical uncertainty while circularity remains undervalued,** leaving a growing blind spot as end-of-life systems lag the pace of deployment and risk constraining transition from within.

Across Asia, the challenge is to sequence delivery under constraint – strengthening system readiness while building legitimacy through deliberate engagement, equitable access, and clearer policy pathways. The agenda now is delivery over declarations: integrate planning across transmission, distribution and DERs, scale flexibility as a system function, reinforce resilience, address waste and end-of-life systems early, and invest in trust and community consent as deliberately as in physical infrastructure. This will require businesses across the region to adapt rapidly to new supply and demand side dynamics, evolving commercial models, and more decentralised, data driven- operating environments. The goal is Trilemma-tested progress – keeping security AND affordability AND sustainability advancing together, without allowing any one priority to crowd out the others.

Looking ahead, four questions frame the region's path forward:

- Where is system pressure accumulating – and where is resilience already emerging?

- Which constraints are structural, and which can be eased through better sequencing, coordination, and design?

- How can affordability and equity be protected while mobilising the investment needed for infrastructure, adaptation, and circularity?

- What reforms will strengthen credibility and trust – so intent and delivery remain aligned as systems absorb rising physical and geopolitical stress?

The World Energy Issues Monitor is designed not simply to mirror debate, but to sharpen judgement in a more contested operating environment. It offers a shared basis for comparing perspectives, identifying pressure points, and focusing action where credible delivery can take hold. With 2030 approaching, Asia's transition must ever more be **Trilemma-tested, not only pledge-aligned** – built to absorb pressure and capable of sustaining momentum toward more secure, affordable, and sustainable energy.

ACKNOWLEDGEMENTS

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