أكاديمية أنور قرقاش الدبلوماسية
ANWAR GARGASH DIPLOMATIC ACADEMY

Centre for Climate Diplomacy

Centennial Alliance: Strategic Synergies in UAE-Korea AI-Energy Nexus

Youngeun (Sam) Shin | Dr Soohyeon Kim

May 2026

About the Author

Youngeun (Sam) Shin
is an independent advisor, adjunct lecturer at the Hult International Business School, Dubai, and a researcher specialising in the intersection of climate finance, industrial decarbonisation and energy policy. Previously, she served as Senior Manager of Strategy and Programmes at Frontier25, where she led policy and research initiatives on industrial decarbonisation, climate finance and carbon markets. She also worked with the Center for Clean Air Policy, a US-based climate think tank, leading projects on climate finance transparency and sustainable finance taxonomies.

Dr Soohyeon Kim
is an energy economist specialising in energy security, energy and resource markets and climate policy. She serves as Independent Director at NEXT Group and as Visiting Associate Professor at Seoul National University, where she teaches energy economics and climate policy and leads industry-academia collaboration programmes. Previously, she was Manager of the New Industry Analysis Team at Doosan Business Research Institute, leading strategic analyses on energy transition, carbon regulation and the hydrogen and fuel cell business. Earlier, as Associate Research Fellow at the Korea Energy Economics Institute, she directed research on the European Green Deal and its implications for Korean industry.

Summary

- The Republic of Korea (hereinafter Korea)'s President Lee Jae-myung's state visit to Abu Dhabi in November 2025 marked a strategic turning point in its relations with the United Arab Emirates (UAE), formally elevating bilateral ties to a "Centennial Alliance."

- Moving beyond their longstanding cooperation in nuclear energy, both nations are now accelerating a multidimensional, artificial intelligence (AI)-driven energy transition. As both governments pursue 2050 net-zero commitments, they are accelerating the large-scale deployment of renewable energy systems, including utility-scale solar PV, offshore wind and green hydrogen.

- Concurrently, AI has evolved from an isolated technological sector into critical infrastructure underpinning modern energy systems. The rapid expansion of energy-intensive AI infrastructure is increasingly linking digital competitiveness with energy security and decarbonisation policy. As a result, national AI strategies and energy transition strategies are becoming structurally interdependent.

- This Insight analyses the regulatory and governance architectures, research and development (R&D) trajectories, and commercialisation ecosystems of the UAE and Korea to identify areas of strategic convergence. The UAE is positioning itself as a global testbed for next-generation energy systems by combining ambitious policy frameworks with large-scale sovereign investment and international partnership platforms. Korea, meanwhile, is integrating AI as a core operational layer of its power system, signalling a transition from infrastructure-centric energy governance toward digitally integrated energy management in which physical assets, data systems and advanced algorithms function as a unified operating framework.

- The analysis finds that the UAE and Korea's approaches are complementary and provide a solid foundation for long-term strategic cooperation. To maximise bilateral synergies in AI-enabled decarbonisation and grid resilience, the Insight recommends structuring future cooperation around three priority pillars:

1. **Advanced Grid Stabilisation:** Integrate the UAE's large-scale AI infrastructure deployment with Korea's advanced manufacturing capabilities and commercially mature grid technologies including High-Voltage Direct Current (HVDC) transmission and battery energy storage systems to ensure reliable, 24/7 power systems compatible with AI-driven demand.
2. **Co-Investment and Commercial Platforms:** Align UAE sovereign capital with Korea's deep-tech manufacturing base to create robust, cross-border investment vehicles that scale commercial deployment across both markets.
3. **Joint Human Capital and R&D Cooperation:** Develop bilateral research frameworks and talent exchange programs to address workforce shortages in AI-energy convergence and jointly advance foundational climate and energy technologies.

- It concludes with the assertion that by transitioning from project-based cooperation to institutionalised, long-term collaboration, the UAE-Korea Centennial Alliance can emerge as a model partnership for integrating digital transformation with energy transition objectives.

The Issue

Historically reliant on fossil fuel-centric growth models, both the UAE and Korea are currently navigating capital-intensive and technologically complex decarbonisation pathways. A foundational convergence between the two nations is their decisive shift toward legally and strategically anchored 2050 Net-Zero targets.

The UAE's commitment to transitioning to a low-carbon economy is guided by its Energy Strategy 2050, which was introduced in 2017 and updated in 2023, as well as Federal Decree-Law No. (11) of 2024 on the Reduction of Climate Change Effects and the UAE Net Zero 2050 Strategic Initiative announced in 2021. The updated strategy sets interim targets for 2030, including increasing clean energy's share of total generation to 32% and committing AED 150-200 billion in energy investment by 2030.[1]

Korea's Framework Act on Carbon Neutrality and Green Growth, enacted in 2021 and in force since 2022, establishes a legally binding framework for achieving 2050 carbon neutrality. Under this framework, Korea set a 2030 Nationally Determined Contribution (NDC) target of a 40% reduction in greenhouse gas (GHG) emissions from 2018 levels and has recently strengthened its ambition through the 2035 NDC, which targets a 53-61% reduction from 2018 levels.[2]

Within both national strategies, AI has evolved from an isolated technological sector into a critical enabler of the energy transition. Because advanced AI infrastructure is inherently energy-intensive, scaling AI capabilities at a sovereign level makes these tech strategies inseparable from national energy strategies. Managing this convergence requires robust technology exchange, co-development and governance harmonisation that the bilateral framework enables. This marks a strategic change in thinking: moving policy focus away from conventional capacity expansion and toward the creation of an integrated ecosystem that unites power grids, industrial hubs and intelligent operating systems.

To systematically examine how the UAE and Korea are operationalising this AI-energy nexus, the following analysis dissects their respective ecosystems across three critical dimensions:

- **Regulatory and governance architectures:** Examining the laws, policies and institutional frameworks.
- **Research & Development (R&D) trends:** Assessing government support for R&D and progress toward localising foundational scientific capabilities.
- **Commercialisation ecosystems:** Analysing enterprise-scale deployment and sovereign investment strategies.

UAE: Infrastructure Scale and Sovereign AI

Regulatory and governance architectures

Korea Trade-Investment Promotion Agency (KOTRA)'s 2025 market analysis characterises the UAE's approach as a self-reinforcing policy model, in which bold capital deployment stimulates widespread adoption, which in turn shapes even more refined institutional frameworks.[3] This sequencing has yielded several global firsts: the world's first AI Ministry in 2017, the world's first national AI strategy in 2017 and the highest AI usage rate among working-age populations of any country by 2025. According to Microsoft's AI Economy Institute, the UAE ranked first globally in generative AI usage, with approximately 64% of its working-age population using AI tools by the end of 2025 – more than double the global average. This trend is led by high public confidence in the technology: the 2025 Edelman Trust Barometer records UAE public trust in AI at around 67%, compared with approximately 32% in the United States.[4]

National and emirate-level AI policies, primarily in Abu Dhabi and Dubai, have been developed. At the federal level, the National Strategy for Artificial Intelligence 2031 designates nine priority sectors for AI deployment, explicitly including renewable energy alongside transport, health, space, water, technology, education, environment, and traffic. The strategy targets AED 335 billion in AI-generated economic value by 2031.[5]

At the emirate level, Abu Dhabi established the Artificial Intelligence and Advanced Technology Council (AIATC) under Abu Dhabi Law No. 3 of 2024. As a regulatory and strategic body, AIATC oversees AI infrastructure policy, R&D and investment initiatives.[6] It also develops the digital infrastructure required for AI adoption across all economic sectors. This mandate implies a profound operational shift for the energy sector, offering the policy and financial support to deploy advanced AI applications (notably in the integration of renewable energy sources), the optimisation of the

power grids and the management of the massive energy demands of AI data centres. In Dubai, the Dubai Universal Blueprint for Artificial Intelligence (DUB.AI), a strategic roadmap for systemic AI integration, was launched in 2024. The first phase of the plan entails five pillars: designating a chief executive officer for AI in each government entity in the emirate, establishing AI and Web3 incubators, implementing AI week in educational institutions, introducing an AI commercial licence in Dubai, and allocating land for data centres.[7] Recent developments include the introduction of the "Dubai AI Seal" to verify trusted AI enterprises and the annual "Dubai AI Week" to fast-track real-world AI deployment.

R&D trends

The UAE's R&D strategy is driven by a structured, centralised governance framework. At the core of this ecosystem is the Advanced Technology Research Council (ATRC), Abu Dhabi's R&D governance body established in 2020, to define national R&D policies and priorities. To ensure a smooth 'lab-to-market' lifecycle, it operates through three entities: the Technology Innovation Institute (TII) (research pillar), ASPIRE (technology programme management arm), and VentureOne (commercialisation engine).[8] Within the nexus of AI, climate action and energy systems, TII employs an interdisciplinary model that bridges theoretical data science with physical sustainable infrastructure. Its Renewable and Sustainable Energy Research Center (RSERC) spearheads the development of physical transition technologies, such as next-generation solar materials and carbon-neutral synthetic fuels, tailored for extreme Gulf climates. In parallel, the AI and Digital Science Research Center (AIDRC) under TII engineers AI-powered digital twins to simulate and optimise the integration of volatile renewable energy into the smart grid prior to physical deployment.

To sustain the whole lifecycle innovation pipeline, the UAE has recognised the imperative of domestic capacity building. This is characterised by the establishment of specialised academic institutions and pragmatic industry partnerships. Initiated in Abu Dhabi in 2019, the Mohamed bin Zayed University of Artificial Intelligence (MBZUAI) serves as the world's first graduate research university dedicated entirely to AI. The aim is to build a critical mass of domain experts. Furthermore, the state's approach to skill development actively integrates academic research with enterprise-scale technological deployment. A notable example is the MBZUAI-IBM AI Centre of Excellence, launched in January 2023. In line with the UAE's Net Zero 2050 strategic initiative and the National Artificial Intelligence Strategy 2031, one of the focus areas of the centre is tackling climate change mitigation developing foundational AI models optimised for clean and renewable energy deployment.[9]

Commercialisation ecosystems

The UAE is rapidly scaling its sovereign AI infrastructure through targeted investments and multilateral alliances. MGX is a technology investment vehicle created by AIATC in 2024, with Mubadala and G42 serving as its founding partners. In September 2024, MGX launched the Global AI Infrastructure Investment Partnership (GAIIP) with BlackRock and Microsoft. Its mandate explicitly covers AI infrastructure including data centres and connectivity.[10] This AI-energy nexus has physically materialised in the Stargate UAE initiative, a 5 GW AI campus in Abu Dhabi developed by G42 in partnership with OpenAI, Oracle, Nvidia, SoftBank, and Cisco Systems.[11] Korea also joined the Stargate UAE project through the November 2025 Strategic AI Cooperation Framework, with a bilateral task force of five working groups established to govern implementation, including working groups overseen by both the Ministry of Science and ICT and the Ministry of Climate, Environment and Energy, confirming that AI cooperation and energy cooperation are structurally linked in the bilateral institutional framework.[12] Beyond infrastructure, the UAE has transitioned AI applications in the energy sector from experimental phases to commercial-scale deployment through sovereign enterprise partnerships:

- **ADNOC and AIQ ("ENERGYai"):** In March 2025, AIQ – a Presight company and joint venture with ADNOC – secured a three-year, USD 340 million contract for the full commercial rollout of ENERGYai across ADNOC's upstream operations.[13] The platform, which AIQ describes as an industry-first at this scale, is built on several decades of ADNOC's proprietary operational data and combines large language model technology with agentic AI. This enables applications ranging from subsurface geological analysis to a real-time monitoring process across more than twenty-eight producing fields. By improving operational efficiency, the platform supports decarbonisation efforts through reducing inefficient flaring, optimising energy consumption across facilities and lowering overall emissions intensity.

- **DEWA's smart grid and solar AI:** Dubai Electricity and Water Authority (DEWA) has established a roadmap to becoming the first AI-native utility globally,[14] embedding AI, IoT and automation across its full operational stack. Central to this transformation is the 3,860 MW Mohammed bin Rashid Al Maktoum Solar Park, where AI drives demand forecasting, supply optimisation, robotic panel cleaning, and energy storage integration.[15] Furthermore, in partnership with Siemens Energy, DEWA launched the world's first AI-powered Plant Intelligent Controller at the Jebel Ali Power and Desalination Complex, enabling autonomous turbine operations through digital twin technology.[16]

- **Masdar City's predictive grid modelling:** Advanced AI models are used throughout Masdar City's wind and solar projects to enhance energy generation forecasts by analysing weather patterns. This capability enables the precise, stable integration of intermittent renewable energy sources into the Abu Dhabi grid.[3]

Korea: Regulatory Maturity and Government Backing for R&D

Regulatory and governance architectures

Under the Lee Jae-myung administration, Korea leverages AI as the primary engine for national economic transformation, anchored by the AI Framework Act (Framework Act on the Development of Artificial Intelligence and the Establishment of a Foundation for Trustworthiness), effective January 2026. The Act brings together a previously dispersed body of AI-related legislation under a single statutory roof, creating what analysts at the Future of Privacy Forum describe as a structural shift from an industry-promotion-first posture towards a combined model that simultaneously drives development and manages risk.[17] In practical terms, this means that AI regulation in Korea operates on two concurrent tracks: light-touch, self-regulatory frameworks for lower-risk applications and mandatory compliance obligation, including transparency, fundamental rights impact assessments and reliable human oversight, for "high-impact AI" deployed in critical, life-sustaining sectors like healthcare, energy and public services.

To execute this vision, the government has established a highly centralised yet specialised governance architecture. The National AI Strategy Committee (formerly the Presidential Committee on AI) serves as the supreme control tower, directly supported by the newly created Office of the Senior Presidential Secretary for AI Future Planning alongside the AI Policy Center and the AI Safety Research Institute. Guided by this broad leadership, specific ministries oversee different aspects of implementation: the Ministry of Science and ICT handles core R&D and ensures legal compliance; the Ministry of Trade, Industry and Energy leads practical AI transformation in the economy; and the Ministry of Climate develops long-term energy AI plans to achieve carbon neutrality. Together, these entities coordinate massive public investments in physical infrastructure, such as the 'AI Highway', tightly integrating national computational resources, open data ecosystems and practical industrial deployment.

R&D trends

Korea's 2026 national research and development budget reflects a strategic convergence of AI and energy transition, expanding total R&D expenditure to 35.5 trillion South Korean won (KRW).[18] Within this framework, under the K-R&D Initiative, the government has allocated 2.7 trillion KRW specifically for renewable energy development, marking a 20 percent year-over-year increase. The cornerstone of this investment is the deployment of an 'intelligent, distributed energy highway'. Rather than treating AI as a supplementary technology, this policy framework positions it as a foundational 'intelligent layer' tasked with optimising supply and demand in real time. By synchronising AI-based energy management systems (EMS), microgrids and energy storage systems (ESS) with advanced generation infrastructure like HVDC transmission, tandem solar cells and ultra-large wind systems, policymakers are formally treating AI and energy R&D as a unified infrastructure investment.

This integrated approach focuses on grid modernisation and industrial commercialisation. Under the February 2026 Next-Generation Distributed Grid Promotion Plan, a 30 billion KRW project is transitioning the physical power grid into a data-driven operating system by developing virtual testbeds, autonomous microgrids and physics-based AI models. Concurrently, the 360 billion KRW "AX Demonstration Valley" initiative bridges R&D and commercialisation by using entire urban areas as real-world testbeds for industrial AI applications, with energy systems including mobility, electricity grids and energy management serving as key application domains.

Beyond grid operations, this unified strategy actively extends to infrastructure safety and future climate technologies. The government is funding AI-driven predictive diagnostics and digital twins to secure high-pressure hydrogen pipelines, alongside forward-looking investments in AI-based climate disaster prediction, carbon-free industrial chemical processes and virtual platforms for nuclear fusion reactors. Continuous policy initiatives are working towards a robust strategic plan to seamlessly integrate AI into Korea's future energy system, ensuring technological advancements remain connected and coordinated.

Commercialisation ecosystems

AI implementation is closely coordinated with major projects such as the 'Energy Highway' and 'RE100 Industrial Parks' to address the growing challenges and unpredictability associated with renewable energy integration. Regional hubs are actively demonstrating this shift. For instance, South Jeolla Province is piloting a next-generation grid that predicts renewable energy generation and automates power flow, while Gwangju is developing an industrial transition strategy combining RE100 infrastructure with AI-driven energy management.

As the central operator, Korea Electric Power Corporation (KEPCO) is repositioning AI as a core layer of power system operation across the entire value chain. This strategic direction has been formalised through its recent 'AI Transformation Roadmap', which frames AI not merely as an efficiency tool but also as a driver of business model transition from a traditional electricity provider to a data-driven energy platform operator by 2030. Central to this approach is the development of an integrated AI architecture that combines advanced applications and underlying infrastructure, including a generative AI-based 'Virtual Grid' for digital-twin simulation and optimisation of grid operations, supported by an 'AI highway', a unified data and computing backbone designed to integrate fragmented grid data and enable real-time, system-wide intelligence.[19] Within this framework, KEPCO has implemented key system-level applications, including the nationwide deployment of the Grid-K ADMS (Advanced Distribution Management System).[20] Their press release states that this system allows for better integration of renewable energy and improved efficiency in grid investment by managing the distribution network with data-driven methods. Furthermore, KEPCO uses comprehensive AI platforms that integrate grid, equipment and customer data to optimise real-time power flow, forecast demand and pre-emptively diagnose anomalies using technologies like the Substation Equipment Diagnostic & Analysis (SEDA) system. This technological advancement also enhances international competitiveness, as evidenced by the 2026 export of KEPCO's Intelligent Digital Power Plant (IDPP) platform to optimise operations at a Vietnamese facility.[21]

In parallel, state-owned power generation subsidiaries are transitioning from experience-based to data-driven operations and maintenance. Korea Midland Power (KOMIPO) has implemented AI-driven fault diagnostics for solar infrastructure using combined meteorological and electrical data, alongside AI-based leak detection systems.[22] Similarly, Korea Western Power (KOWEPO) has been developing a generative AI platform to support equipment operation and administrative workflows,[23] while Korea East-West Power (EWP) operates an AI-based predictive alert system for early anomaly detection.[24] Together, these advancements reflect a comprehensive institutionalisation of AI as a core operational infrastructure within Korea's energy sector.

Conclusion and Recommendations: Synergy Pathways

Synthesising enforceable national policies and the rapid progress of recent bilateral efforts, the following strategic recommendations aim to further promote the use of AI in the energy sector. Because deep-tech development, infrastructure decarbonisation and commercial scaling are highly capital-intensive and require extended time horizons, these engagements should be organised as long-term, high-value partnerships rather than short-term technological exchanges (see Figure 1).

Table 1: National Mandates and Subsequent Bilateral Integration: A Chronological Evolution

Year	Initiative / Policy	Description	Track
2017	UAE National Strategy for AI 2031	• World's first national AI strategy • Nine priority sectors including renewable energy • Targets AED 335 billion in AI-generated economic value by 2031	UAE
	UAE AI Minister appointment	• Omar Sultan Al Olama becomes the Minister of State for Artificial Intelligence, Digital Economy and Remote Work Applications • UAE AI Office issues Ethics Guide (2022) and AI Charter (2024)	UAE
2018	G42 founded	• Abu Dhabi AI holding company backed by Mubadala, Microsoft and Silver Lake • Subsidiaries: Core42, Khazna, AIQ (energy AI), and Presight	UAE
2019	Mohamed bin Zayed University of AI established	• World's first AI-focused graduate university • UNDP AI for Sustainable Development Platform (AI4SDP) founding partner • Establishes with IBM the AI Centre of Excellence on decarbonisation	UAE
2020	ATRC & TII	• Abu Dhabi's R&D governance body • TII includes dedicated Renewable and Sustainable Energy Research Center (RSERC)	UAE
2021	UAE Net Zero 2050 Strategic Initiative	• First Gulf state net zero commitment	UAE
	Framework Act on Carbon Neutrality & Green Growth	• Legally binding 2050 carbon neutrality	Korea
2023	UAE Energy Strategy 2050 (2023 update)	• 32% clean energy by 2030 • AI, IoT and energy storage named as enabling technologies	UAE
	Korea 11th Basic Plan for Electricity Supply & Demand	• 22% renewables by 2030 • Acknowledges AI data centre power demand as key planning variable	Korea
2024	AIATC established	• Chaired by Deputy Ruler Sheikh Tahnoun • Targets world's first fully AI-native government by 2027	UAE
	DUB.AI: Dubai Universal Blueprint for AI	• Develops annual AI roadmap • AED 100 billion economy contribution target • Mandates Chief AI Officer in every Dubai government entity	UAE
	Korea-UAE CEPA signed	• Korea's first FTA with a Middle Eastern country • Economic Cooperation Committee operationalised in November 2025	Bilateral
	MGX + Global AI Infrastructure Investment Partnership (GAIIP)	• MGX, a state-owned investment firm for AI, launched in March • GAIIP announced with BlackRock, GIP and Microsoft in September (NVIDIA, xAI, GE Vernova, and NextEra join in 2025)	UAE

2025	Korea AI Basic Act enacted	• Asia-Pacific's first comprehensive AI law • Energy sector classified as 'high-impact AI' requiring mandatory impact assessments and human oversight	Korea
	ADNOC/AIQ ENERGYai deployment	• World's first large-scale agentic AI platform for energy sector • Covers 28+ ADNOC producing fields	UAE
	Korea AI governance institutions established	• National AI Committee, AI Policy Center and AI Safety Research Institute established under AI Basic Act • Council of Chief AI Officers across all ministries	Korea
	Korea-UAE Strategic AI Cooperation Framework	• Korea joins Stargate UAE • KEPCO-ENEC nuclear AI MOU • Bilateral task force of 5 working groups including Climate & Energy ministries	Bilateral
	Stargate UAE	• 5 GW AI data campus in Abu Dhabi • USD 30 billion initial investment by G42, OpenAI, Oracle, NVIDIA, SoftBank, and Cisco	UAE
2026	Korea AI Basic Act takes effect	• High-impact AI obligations active: transparency, impact assessments, and human oversight required for AI in energy grid and power systems	Korea
	KEPCO 'AI Great Transformation' roadmap	• Declaration of AI vision and roadmap to become a global leader in AI-driven energy platforms	Korea

1. Integration of advanced grid stabilisation capabilities

The UAE's ambitious digital infrastructure buildout – anchored by the 5 GW Stargate AI campus – requires resilient, 24/7 baseload stability that intermittent solar PV generation cannot independently sustain. Korea possesses a critical comparative advantage in grid digitalisation and stabilisation: KEPCO leads in AI-based grid operations and system integration; LS Electric and Hyosung Heavy Industries provide essential HVDC and ultra-high-voltage infrastructure; and Samsung SDI and LG Energy Solution drive the advanced Battery Energy Storage System (BESS) market. Furthermore, manufacturers like HD Hyundai Electric complement this technical capacity with extensive, proven project experience across the Middle East. To maximise bilateral value, Korean enterprises should move beyond traditional hardware exports by structuring comprehensive, integrated service agreements. By bundling HVDC and BESS infrastructure with proprietary AI-monitoring software, performance-based maintenance contracts and operational capacity building, both nations can establish highly integrated, recurring commercial relationships that directly secure the UAE's grid.

2. Deepened co-investment and commercial frameworks

The UAE-Korea Comprehensive Economic Partnership Agreement (CEPA) provides a robust legal foundation to accelerate targeted capital flows. Importantly, MGX's investment focus on AI infrastructure, semiconductors and AI core technologies directly overlaps with Korea's advanced manufacturing base. To capitalise on this, Korean institutional capital, including the National Pension Service, Korea Investment Corporation and Korea Development Bank, could explore co-investment arrangements with MGX. This architecture would provide UAE sovereign funds with a de-risk option to Korea's deep-tech and clean energy firms, while simultaneously granting Korean enterprises preferential integration into the Stargate UAE ecosystem.

3. Joint human capital and research initiatives

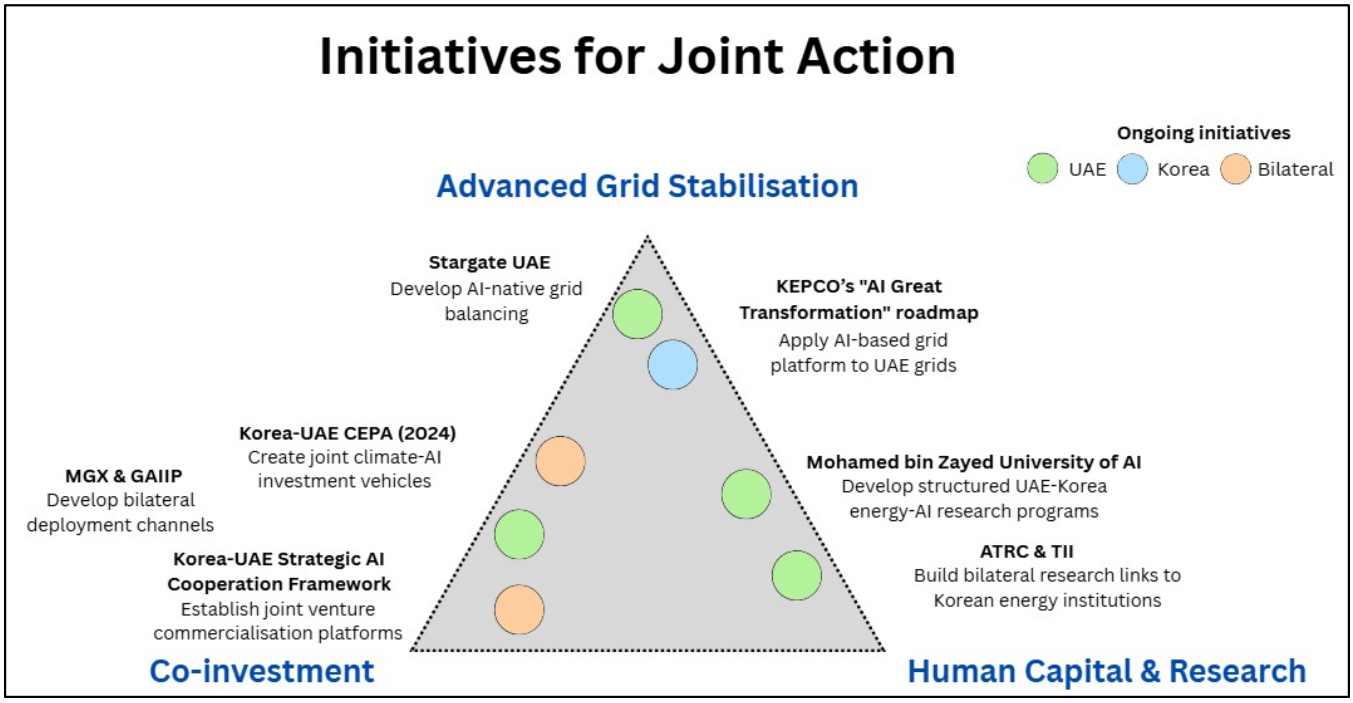
Demand for AI professionals substantially outpaces supply: KOTRA's 2025 analysis projects a specific need for approximately 15,000 additional specialised AI professionals in the UAE by 2030.3

To operationalise this, the Korea AI Policy Center mandated by the AI Basic Act should partner with UAE institutions like MBZUAI and ATRC to establish a UAE-Korea AI-energy research initiative. Leveraging existing institutional anchors like ATRC's ASPIRE grand challenges and the Global AI Frontier Lab, this initiative could fund targeted, cross-border

grant competitions focusing on the following:

- Grid resilience: AI models for hybrid renewable grid management and load balancing
- Decarbonisation: AI-enabled carbon capture optimisation to accelerate Net Zero compliance
- Regulatory standards: Harmonised AI governance and safety standards specifically tailored for critical energy infrastructure.

1. Figure 1: Ongoing Initiatives and Potential Collaboration Areas Aligned with the Above Recommendations



Endnotes

1. UAE Government. (2023). UAE Energy Strategy 2050. Retrieved from https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/environment-and-energy/uae-energy-strategy-2050

2. Government of the Republic of Korea. (2025). Submission under the Paris Agreement: The Republic of Korea's 2035 Nationally Determined Contribution (NDC). United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/sites/default/files/2025-12/The%20Republic%20of%20Koreas%202035%20NDC.pdf

3. Korea Trade-Investment Promotion Agency (KOTRA). (2025). UAE AI and energy sector report [PDF]. Retrieved from https://dl.kotra.or.kr/pyxis-api/2/digital-files/151b7313-9b6a-49dc-bd78-423eec99f333

4. Microsoft AI Economy Institute. (2025). Global AI adoption in 2025. Microsoft Corporation. Retrieved from https://www.microsoft.com/en-us/corporate-responsibility/topics/ai-economy-institute/reports/global-ai-adoption-2025/

5. UAE Artificial Intelligence Office. (2021). UAE National Strategy for Artificial Intelligence 2031. Government of the United Arab Emirates. Retrieved from https://ai.gov.ae/wp-content/uploads/2021/07/UAE-National-Strategy-for-Artificial-Intelligence-2031.pdf

6. Abu Dhabi Media Office. (2024). In his capacity as Ruler of Abu Dhabi, UAE President issues law establishing Artificial Intelligence and Advanced Technology Council. Retrieved from https://www.mediaoffice.abudhabi/en/government-affairs/in-his-capacity-as-ruler-of-abu-dhabi-uae-president-issues-law-establishing-artificial-intelligence-and-advanced-technology-council/

7. UAE Government. (2024). Dubai Universal Blueprint for Artificial Intelligence. Retrieved from https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/government-services-and-digital-transformation/dubai-universal-blueprint-for-ai

8. Khaleej Times. (2022). Abu Dhabi: Three new deep-tech research centres launched. Retrieved from https://www.khaleejtimes.com/uae/abu-dhabi-three-new-deep-tech-research-centres-launched

9. IBM Newsroom. (2023, January 18). IBM and MBZUAI advance AI for climate and culture. IBM Corporation. Retrieved from https://newsroom.ibm.com/2023-01-18-IBM-and-MBZUAI-Advance-AI-for-Climate-and-Culture

10. The Wall Street Journal. (2024). BlackRock, Microsoft Partner on Massive New AI Infrastructure Fund. Retrieved from https://www.wsj.com/tech/ai/blackrock-global-infrastructure-partners-microsoft-mgx-launch-ai-partnership-1d00e09f

11. CNBC. (2025, May 22). Stargate UAE: OpenAI, NVIDIA, Oracle announce $30 billion AI data centre. Retrieved from https://www.cnbc.com/amp/2025/05/22/stargate-uae-openai-nvidia-oracle.html

12. Korea Times. (2025, November 24). Korea to form task force for AI cooperation with UAE. Retrieved from https://www.koreatimes.co.kr/foreignaffairs/20251124/korea-to-form-task-force-for-ai-cooperation-with-uae

13. AIQ Intelligence. (2025). AIQ announces $340 million contract for large-scale deployment of agentic AI across ADNOC operations. Retrieved from https://aiqintelligence.ai/newsroom/news-and-press-releases/AIQ-announces-340-million-contract-for-large-scale-deployment-of-agentic-AI-across-ADNOC-operations

14. Dubai Electricity and Water Authority (DEWA). (2025, March 25). DEWA announces roadmap to becoming world's first AI-native utility [Press release]. Dubai Media Office. Retrieved from https://mediaoffice.ae/en/news/2025/march/25-03/dewa-announces-roadmap

15. Dubai Electricity and Water Authority (DEWA). (2025, November 14). DEWA charts path to clean energy with AI-driven innovation and solar expansion [Interview]. Economy Middle East. Retrieved from https://economymiddleeast.com/news/dewa-charts-path-to-clean-energy-with-ai-driven-innovation-and-solar-expansion/

16. Dubai Electricity and Water Authority (DEWA) & Siemens Energy. (2025, October 1). DEWA and Siemens Energy launch phase two of AI plant intelligent controller [Press release]. Dubai Media Office. Retrieved from https://mediaoffice.ae/en/news/2025/october/01-10/dewa-and-siemens-energy-launch-phase-two-of-ai-plant-intelligent-controller

17. Future of Privacy Forum. (2025). South Korea's new AI Framework Act: A balancing act between innovation and regulation. Retrieved from https://fpf.org/blog/south-koreas-new-ai-framework-act-a-balancing-act-between-innovation-and-regulation/

18. Ministry of Science and ICT, Republic of Korea. (2026). 2026 Science and Technology Information and Communications R&D Budget [2026년도 과학기술정보통신부 과학기술 연구개발사업]. Government of the Republic of Korea.

19. 한국전력공사 [Korea Electric Power Corporation]. (2026, April). AI로 다시 쓰는 에너지 산업의 미래 [Rewriting the future of the energy industry with AI]. KEPCO Web Magazine.

20. 전기신문 [Electimes]. (2025, March 6). Grid-K ADMS 전국망 시대 개막…글로벌 시장 ‹정조준› [Grid-K ADMS nationwide network era opens… targeting the global market]. Electimes. Retrieved from https://www.electimes.com/news/articleView.html?idxno=351435

21. BusinessKorea. (2026). KEPCO exports AI power plant platform to Vietnam. Retrieved from https://www.businesskorea.co.kr/news/articleView.html?idxno=264700

22. 한국중부발전 [Korea Midland Power Co.]. (2025, September 23). 발전공기업 최초 AI 기반 태양광 고장진단 시스템 도입 [Korea Midland Power introduces AI-based fault diagnosis system for photovoltaic power plants as the first among Korean power generation public corporations]. Korea Midland Power Co. Retrieved from https://www.komipo.co.kr/kor/board/BRD_000021/boardView.do?mnCd=FN120101&boardSeq=20913&pageIndex=1

23. 매일경제 [Maeil Business Newspaper]. (2025, March 18). 한국서부발전, 디지털트윈·AI 활용해 효율성·안전성 ‹쑥›… 발전소 운영 혁신 [Korea Western Power enhances efficiency and safety through digital twins and AI, achieving innovation in power plant operations]. Maeil Business Newspaper. Retrieved from https://www.mk.co.kr/news/special-edition/11266931

24. 매일경제 [Maeil Business Newspaper]. (2026, March 6). Korea East-West Power Company transfers AI predictive warning system technology. Maeil Business Newspaper. Retrieved from https://www.mk.co.kr/en/business/11980563

أكاديمية أنور قرقاش الدبلوماسية
ANWAR GARGASH DIPLOMATIC ACADEMY

مركز الدبلوماسية المناخية
Centre for Climate Diplomacy

In Collaboration with

MUBADALA

أدنوك ADNOC

Email: CCD@agda.ac.ae

www.agda.ac.ae
@agdauae
Anwar Gargash Diplomatic Academy