



EU-KUWAIT GREEN TRANSITION FORUM ENERGY FOR A SUSTAINABLE FUTURE

EVENT SUMMARY REPORT

Organized by

THE EU-GCC COOPERATION ON
GREEN TRANSITION PROJECT



Funded by
the European Union



بعثة الاتحاد الأوروبي لدى دولة الكويت
European Union Delegation
to the State of Kuwait

In collaboration with



مؤسسة الكويت للتقدم العلمي
Kuwait Foundation for the Advancement of Sciences



مؤسسة البترول الكويتية
Kuwait Petroleum Corporation



وزارة الكهرباء والماء والطاقة المتجددة
Ministry of Electricity & Water & Renewable Energy



مركز الكويت للأبحاث العلمية
KUWAIT INSTITUTE FOR SCIENTIFIC RESEARCH



هيئة مشروعات الشراكة بين القطاعين العام والخاص
Kuwait Authority for Partnership Projects



المؤسسة العامة للرعاية السكنية
Public Authority for Housing Welfare

EU-Kuwait Green Transition Forum: Energy for a Sustainable Future

Sunday | 8 FEBRUARY 2026

AGENDA

09:00 - 09:15

Opening Remarks



H.E. Anne Koistinen
Ambassador
European Union Delegation
to the State of Kuwait



H.E. Dr. Subaih Al-Mukhaizeem
Minister
Ministry of Electricity, Water and
Renewable Energy (MEWRE)



Dr. Faisal Al Humaidan
Director General
Kuwait Institute for Scientific Research
(KISR)

09:15 - 10:00

High-Level Energy Committee Roundtable: EU Dialogue on Kuwait's Energy Transition Priorities

Moderator



Spyros Kouvelis
Team Leader
EU-GCC Cooperation
on Green Transition
Project

Panelists



Dr. Adel Al-Zamel
Undersecretary
Ministry of Electricity,
Water and Renewable
Energy (MEWRE)



Dr. Fotouh Al Ragom
Acting Executive Director
Kuwait Institute for Scientific Research
(KISR)



Eng. Bader Al Attar
Managing Director –
Planning & Finance
Kuwait Petroleum
Corporation (KPC)



Maria Papamichail
Deputy Head
European Union Delegation
to the State of Kuwait

10:00 - 10:45

Panel Session 1 – Sustainability & Power Security (KPC)

Moderator



Dr. Yousef
Al-Abdullah
Research Scientist
Kuwait Institute for
Scientific Research
(KISR)

Panelists



Eng. Sanaa
Al Ghareeb
Director of Engineering
Programming
Ministry of Electricity,
Water and Renewable
Energy (MEWRE)



Eng. Abdullah
Alayyar
Deputy Managing Director
– Sustainability
Kuwait Petroleum
Corporation (KPC)



Eng. Nayef
Al Haddad
Director of Infrastructure
Advisory / PPP Projects
Kuwait Authority for
Partnership Projects (KAPP)



Toufik Khitous
Business Development
Manager
Wärtsilä Energy



Rasa Jautakaite
Regional Adviser –
Sustainable Energy Cooperation
Delegation of the European
Union to the UAE

Thursday | DEC 11

10:45 - 11:00

Networking Coffee Break

Thursday | DEC 11

11:00 - 11:45

Panel Session 2 – Energy Efficiency (KISR)

Moderator



Eng. Dina Alnakib
Senior Director
**Kuwait Foundation for
the Advancement of
Sciences (KFAS)**



Panelists



Dr. Yehya Al-Hadban
Renewable Energy and Energy Efficiency
Program Manager
Acting Operations Director, Energy and
Buildings Research Center
**Kuwait Institute for Scientific Research
(KISR)**



Arch. Nasser Al Khuraibet
Assistant Undersecretary
for Technical Affairs
**Public Authority for
Housing Welfare (PAHW)**



Christianna Toliopoulou
Analytics & Digital
Transformation Professional,
PPC Group
Founder, CTK Data Solutions



António Campos
Chief Executive Officer
Hub2Energy

11:45 - 12:30

Panel Session 3 – Renewable Energy (MEWRE)

Moderator



Maite Elizalde
Country Editor
**The Business Year -
Kuwait**



Panelists



Dr. Ayman Al Qattan
Research Scientist
**Kuwait Institute for Scientific Research
(KISR)**



Eng. Abdulwahab Al Gallaf
Lead Electrical Engineer -
Department of Renewable Energy
**Ministry of Electricity, Water and
Renewable Energy (MEWRE)**



Rui Marques
International Business
Manager
Hub2Energy

12:30 - 12:40

Closing Remarks



Spyros Kouvelis
Team Leader
**EU-GCC Cooperation
on Green Transition Project**

Executive Summary

The EU–Kuwait Green Transition Forum, held on 8 February 2026 in Kuwait City, convened over 136 participants from government entities, policymakers, national research institutions, industry leaders, utilities, financial actors, and international experts to advance dialogue and practical cooperation on Kuwait's energy transition.

The Forum was organised on behalf of the European Union Delegation to the State of Kuwait, in cooperation with the EU–GCC Cooperation on Green Transition Project, and under the patronage of H.E. Dr. Subaih Al-Mukhaizeem, Minister of the Ministry of Electricity, Water and Renewable Energy (MEWRE) of the State of Kuwait. The event was delivered in close collaboration with MEWRE, the Kuwait Institute for Scientific Research (KISR), and the Supreme Energy Committee of Kuwait, reflecting a strong whole-of-government and institutional approach to Kuwait's green transition agenda.

Against the backdrop of rising electricity demand, climate commitments, and evolving geopolitical and economic pressures, the Forum provided a timely platform to examine how Kuwait can translate strategic ambition into coordinated, technically sound, and investable action. Discussions underscored the critical importance of aligning energy security, economic diversification, and sustainability objectives under Kuwait Vision 2035 and the leadership of the Supreme Energy Committee.

Across three thematic sessions — Sustainability & Power Security, Energy Efficiency, and Renewable Energy — speakers explored priority challenges and solutions spanning system resilience, demand-side management, efficiency standards, advanced cooling technologies, digitalisation, renewable integration, grid flexibility, energy storage, and hydrogen readiness. EU experience in regulatory design, system planning, and market frameworks was highlighted as a valuable reference for Kuwait's next phase of implementation, while Kuwait's scale, institutional capacity, and regional role were recognised as key strengths.

A strong consensus emerged around energy efficiency as an immediate and cost-effective lever to reduce peak demand and system stress, particularly in buildings, housing developments, and public assets. In parallel, discussions emphasised the need to move beyond pilot projects toward programmatic, large-scale renewable deployment, supported by clear regulatory frameworks, streamlined project delivery processes, robust data and measurement systems, and skilled human capital.

The Forum also highlighted the importance of research-driven policymaking, strengthened EU–Kuwait cooperation on knowledge exchange and skills development, and the role of women and youth in shaping the future energy workforce. Speakers consistently stressed that successful transition will depend not only on technology, but on institutional coordination, behavioural change, and sustained international partnership.

Overall, the EU–Kuwait Green Transition Forum reinforced the shared commitment of Kuwait and the European Union to deepen cooperation on the green transition and provided a clear foundation for moving from dialogue to delivery, ensuring that momentum generated through this high-level exchange is translated into concrete actions and long-term impact.



OPENING REMARKS

H.E. Anne Koistinen

Ambassador, European Union Delegation to the State of Kuwait

In her opening remarks, Ambassador Anne Koistinen marked the 40th anniversary of diplomatic relations between the European Union and the State of Kuwait, highlighting the enduring strength of the bilateral relationship and the shared commitment to cooperation, innovation, and sustainable prosperity. She emphasized that the Forum reflects the EU's and Kuwait's mutual ambition to advance the green transition through partnership, knowledge exchange, and inclusive leadership.

Key messages from her intervention included:

- Recognition of the partnership with H.E. Dr. Subaih Al-Mukhaizeem, Minister of Electricity, Water and Renewable Energy (MEWRE), and appreciation for the collaboration with the Kuwait Institute for Scientific Research (KISR), the Supreme Energy Committee, and the EU–GCC Cooperation on Green Transition Project in convening the Forum.
- Highlighting the European Union's progress under the European Green Deal, including the milestone that in 2025 wind and solar energy generated more electricity than fossil fuels across the EU, demonstrating that ambitious climate action can strengthen economic growth, job creation, and energy security.
- Emphasizing that the green transition cannot succeed in isolation, and that Kuwait—given its solar potential and national ambition to achieve carbon neutrality by 2060—is well positioned to adapt successful European approaches to its national context.
- Identifying key opportunities for cooperation in large-scale solar deployment, energy storage solutions, clean hydrogen development, and research partnerships linking academia, industry, and public institutions.
- Underlining the importance of women's leadership in the green transition, noting the strong representation of women in STEM fields in Kuwait and their central role in shaping innovation, leadership, and decision-making across the energy sector.
- Reaffirming the European Union's commitment to supporting Kuwait through knowledge sharing, technology partnerships, and policy dialogue, including engagement toward a future EU–Kuwait Strategic Partnership Agreement, to unlock the full environmental, economic, and social potential of the green transition.



OPENING REMARKS

H.E. Dr. Subaih Al-Mukhaizeem

Minister of Electricity, Water and Renewable Energy (MEWRE)

In his opening remarks, H.E. Dr. Subaih Al-Mukhaizeem welcomed participants to the EU-Kuwait Green Transition Forum, highlighting the Forum as a timely platform supporting Kuwait's energy transition as a key national priority. He emphasized that energy policy today is intrinsically linked to economic stability, environmental responsibility, and national security, requiring a strategic and well-coordinated approach aligned with Kuwait's long-term national interests.

Key messages from his intervention included:

- Emphasizing that Kuwait's energy transition is an integral pillar of Kuwait Vision 2035, serving as a national roadmap for sustainable development and economic diversification.
- Highlighting the leadership role of the Supreme Energy Committee in advancing a unified framework that aligns energy security, sustainable growth, and international climate commitments across the energy, water, and climate sectors.
- Underscoring Kuwait's commitment to a realistic, gradual, and nationally tailored transition, reflecting its responsibilities as a major energy producer while strengthening system resilience, efficiency, and long-term value for the state and its people.
- Acknowledging the global shift toward cleaner and more efficient energy systems, while reaffirming Kuwait's focus on safeguarding national energy security and economic competitiveness throughout the transition.
- Highlighting the importance of EU-Kuwait cooperation, noting that the European Union's experience in transition planning, regulatory reform, and innovation offers valuable insights to support Kuwait's national agenda, alongside Kuwait's regional expertise and clear sustainability vision.
- Stressing that international cooperation and constructive partnerships are essential to navigating today's complex energy landscape, with opportunities for collaboration across policy, technology, capacity building, and investment.

He concluded by expressing his hope that the Forum's discussions would deliver practical, forward-looking outcomes that reinforce Kuwait's strategic direction and contribute to a secure, resilient, and sustainable energy future.



OPENING REMARKS

Dr. Faisal Al Humaidan

Director General, Kuwait Institute for Scientific Research (KISR)

In his opening remarks, Dr. Faisal Al Humaidan welcomed participants to the EU–Kuwait Green Transition Forum, highlighting the importance of grounding Kuwait’s energy transition ambitions in technical credibility, data-driven analysis, and local operational realities. He emphasized that as Kuwait’s energy system becomes more complex—driven by rising electricity demand and long-term transition objectives—policy ambition must be supported by robust scientific and technical foundations to ensure deliverability at scale.

Key messages from his intervention included:

- Emphasizing KISR’s role as Kuwait’s national scientific body, providing independent applied research to support government decision-making, energy policy development, system planning, and implementation across key transition areas.
- Highlighting KISR’s core areas of work, including energy efficiency, renewable energy integration, energy storage, carbon capture, sustainable buildings, and emerging energy technologies, as essential enablers of Kuwait’s transition pathway.
- Underscoring close coordination with the Ministry of Electricity, Water and Renewable Energy (MEWRE) under the umbrella of the Supreme Energy Committee, ensuring that national strategies, regulations, and programmes are supported by sound technical evidence and realistic performance assumptions.
- Noting KISR’s leadership of the Energy Efficiency Technical Team, which brings together key national stakeholders and strengthens the link between scientific research and policy implementation.
- Highlighting the strategic importance of cooperation with the European Union, drawing on the EU’s experience in energy efficiency, grid integration, system reform, and policy development to support Kuwait’s national energy objectives through technical engagement and knowledge exchange.
- Stressing that the Forum provides a valuable platform to bridge research, policy, and implementation, and to identify concrete areas where international cooperation can accelerate progress.

He concluded by reaffirming KISR’s commitment to supporting Kuwait’s energy transition and working closely with national and international partners to translate ambition into technically sound, implementable action, wishing participants a productive and successful Forum.



HIGH-LEVEL ENERGY COMMITTEE ROUNDTABLE – EU DIALOGUE ON KUWAIT'S ENERGY TRANSITION PRIORITIES

This high-level roundtable convened senior representatives from Kuwait's High-Level Energy Committee and key national institutions to examine how governance, strategic coordination, and evidence-based policymaking can support Kuwait's energy transition. Moderated by the EU-GCC Cooperation on Green Transition Project, the discussion focused on aligning national priorities with long-term demand outlooks, economic diversification, and system resilience, while drawing on comparative European experience.

Moderator's Framing

Mr. Spyros Kouvelis

Team Leader, EU-GCC Cooperation on Green Transition Project

Mr. Kouvelis framed the discussion as a strategic-level dialogue, emphasizing that the objective was not to address individual projects, but to explore how Kuwait's energy transition is taking shape at the policy, governance, and institutional levels. He highlighted the significance of the High-Level Energy Committee as a major step toward integrated, whole-of-government energy governance, and noted the growing pressures on Kuwait's energy system, including rising electricity demand, peak load challenges, and the increasing complexity introduced by digitalisation and data centres. He positioned EU-Kuwait dialogue as an opportunity to exchange lessons on sequencing, coordination, and long-term system planning.

Speaker Highlights

Dr. Adel Al-Zamel

Undersecretary, Ministry of Electricity, Water and Renewable Energy (MEWRE)

Dr. Al-Zamel highlighted the High-Level Energy Committee as a central governance mechanism designed to unify national energy policymaking across electricity, water, hydrocarbons, finance, environment, and research institutions. He emphasized that Kuwait's energy transition must be understood as both an energy and economic transformation, with significant implications for national development and long-term fiscal sustainability.

Key points included:

- The importance of integrated demand forecasting and system optimisation across the energy sector.
- Opportunities to better align electricity, water, and hydrocarbons systems, including through cleaner fuels, efficiency improvements, and emerging hydrogen pathways.
- Kuwait's potential to leverage its solar resources and regional connectivity to explore future energy corridors and cross-border cooperation.
- The need for a realistic, phased transition, balancing energy security, affordability, and sustainability.



Ms. Maria Papamichail
Deputy Head of the European Union Delegation to the State of Kuwait

Ms. Papamichail shared lessons from the European Union’s experience in managing complex energy transitions, stressing that success has depended less on specific technologies and more on strong governance frameworks, political ownership, and institutional coherence.

Her intervention highlighted:

- The importance of embedding energy transition objectives into national strategies, supported at the highest political level.
- The value of phased implementation, allowing policies to adapt as technologies, markets, and system pressures evolve.
- The role of formal coordination mechanisms—such as cross-ministerial committees and shared planning frameworks—in aligning fiscal policy, infrastructure investment, research priorities, and industrial strategy.
- The EU’s approach to cooperation with Kuwait as one of partnership and adaptation, offering comparative insights and institutional learning rather than replicating European models.

Dr. Fotouh Al Ragom
Acting Executive Director, Kuwait Institute for Scientific Research (KISR)

Dr. Al Ragom emphasized KISR’s role as the technical backbone of Kuwait’s energy transition, acting as a bridge between research, policy, and implementation. She underlined that credible energy transition pathways must be grounded in local data, tested technologies, and realistic operating assumptions.

Key contributions included:

- The importance of applied research in informing demand forecasting, system resilience, and transition pathways.
- KISR’s long-standing role in developing tools such as energy efficiency codes, pilot renewable projects, and National Energy Outlooks, which support informed decision-making.
- The value of stakeholder engagement and social acceptance in enabling policy implementation.
- The need for a clear national energy transition roadmap with defined targets, timelines, and performance indicators, supported by institutional capacity building.



Eng. Bader Al Attar
Managing Director – Planning & Finance, Kuwait Petroleum Corporation (KPC)

Eng. Al Attar provided the perspective of the Kuwait Petroleum Company, emphasizing that hydrocarbons will remain a core pillar of Kuwait’s energy system, while efficiency, decarbonisation, and cleaner energy solutions play an increasingly important role.

Key points included:

- KPC’s ongoing efforts to improve operational efficiency, reduce flaring, and lower emissions as part of its long-term transition strategy.
- The role of cleaner fuels, energy efficiency, and selective use of renewables in supporting national electricity demand and easing system load.
- The importance of aligning KPC’s transition initiatives with national objectives through active participation in the High-Level Energy Committee.
- Recognition that a balanced coexistence of hydrocarbons and low-carbon pathways is essential to ensure energy security, economic value, and system reliability.

Strategic Outlook and Way Forward

The roundtable reaffirmed that Kuwait’s energy transition is entering a **decisive phase**, where progress will depend less on ambition and more on **effective governance, institutional coordination, and evidence-based execution**. Speakers highlighted the **High-Level Energy Committee** as a central platform to align national priorities, integrate sectoral planning, and guide long-term decision-making across electricity, water, hydrocarbons, finance, and research institutions.

Looking ahead, the discussion underscored the importance of **clear sequencing, shared ownership, and sustained collaboration**—both domestically and with international partners. In this context, **EU-Kuwait cooperation** was positioned as a strategic enabler, supporting **policy dialogue, technical capacity building, and institutional learning**, while remaining firmly aligned with Kuwait’s national context and development objectives.

The session concluded with a shared understanding that the next phase must focus on **translating dialogue into delivery**, including the development of **clear transition pathways**, strengthened **data and analytical frameworks**, and continued engagement across public institutions, industry, and research bodies. By maintaining this coordinated approach, Kuwait is well placed to advance a **resilient, secure, and economically sustainable energy transition** aligned with its long-term national vision.



SESSION 1 – SUSTAINABILITY & POWER SECURITY (KPC)

This session examined Kuwait's long-term power security needs amid rising electricity demand, peak-load pressures, and continued reliance on fossil fuels. The discussion explored system resilience, integrated water–energy planning, supply diversification, grid stability, and practical pathways for EU–Kuwait cooperation to support a more sustainable and secure power system.

Moderator's Framing

Dr. Yousef Al-Abdullah

Research Scientist, Kuwait Institute for Scientific Research (KISR)

Dr. Al-Abdullah framed the discussion around the shift from viewing power security as a question of installed capacity to treating it as a whole-system challenge—requiring integrated planning, resilience under extreme summer peaks, and coordinated action across demand, supply, fuels, and infrastructure. He highlighted that Kuwait's power system pressures must be addressed through a balanced approach that strengthens infrastructure while accelerating efficiency and flexibility measures, supported by partnership and knowledge exchange.

Speaker Highlights

Eng. Sanaa Al Ghareeb

Director of Engineering Programming, Ministry of Electricity, Water and Renewable Energy (MEWRE)

Eng. Al Ghareeb outlined the main stress factors shaping Kuwait's power system outlook and MEWRE's priority responses. She emphasized that vulnerabilities are interlinked and require integrated solutions rather than isolated interventions.

Key contributions included:

- Identifying four primary pressures: rapid summer demand growth, rising water demand driven by desalination, continued fuel dependency, and the ageing of generation and grid infrastructure.
- Highlighting near-term priorities focused on strengthening and modernising infrastructure, maintaining reliability under extreme heat, and advancing demand-side management and energy efficiency.
- Noting that the medium-term direction is to improve the energy mix, including renewables, while addressing grid stability needs through enhanced system flexibility, better cooling solutions, and resilience measures.
- Emphasizing that the objective is to improve grid resilience and system performance, not solely expand capacity.



Eng. Abdullah M. Alayyar
Deputy Managing Director – Sustainability, Kuwait Petroleum Corporation (KPC)

Eng. Alayyar presented KPC’s perspective on sustaining reliable fuel supply for power generation while advancing efficiency and decarbonisation measures. He underscored the importance of practical, economically grounded transition pathways.

Key contributions included:

- Reiterating KPC’s focus on ensuring a reliable and environmentally improved fuel supply to support national power security.
- Highlighting investment priorities including increased availability of natural gas, cleaner fuels, and continued improvements in operational efficiency.
- Noting KPC’s pursuit of renewables for its own operations, alongside longer-term exploration of hydrogen pathways and carbon capture options where economically viable.
- Highlighting ongoing work to explore fuel flexibility, including potential blending or future fuel options, while maintaining hydrocarbons as a core pillar of system stability in the near to medium term.

Eng. Nayef Al Haddad
Director of Infrastructure Advisory / Public–Private Partnership (PPP) Projects, Kuwait Authority for Partnership Projects (KAPP)

Eng. Al Haddad emphasized that PPPs can accelerate delivery when structured to align national power security objectives with private-sector capabilities, while broadening the transition beyond single-project approaches.

Key contributions included:

- Highlighting continued investor appetite for Kuwait’s PPP framework, including recent progress on major infrastructure projects and competitive interest in renewable tenders.
- Underlining the importance of bankable procurement, market consultation, and risk allocation to reduce delays between tender award and delivery.
- Stressing that enabling power security requires solutions across multiple scales—including small and medium projects, not only large flagship assets.
- Pointing to broader opportunities linked to sustainability outcomes such as job creation, knowledge transfer, and green financing, as well as potential in adjacent sectors including waste-to-energy and water-related infrastructure solutions.



Rasa Jautakaite
Regional Adviser – Sustainable Energy Cooperation, Delegation of the European Union to the UAE

Ms. Jautakaite shared EU experience on strengthening power security through diversification, flexibility, interconnectivity, and energy efficiency, and outlined concrete areas where cooperation can support Kuwait’s priorities.

Key contributions included:

- Highlighting that the EU’s power security approach has shifted toward diversification and flexibility, supported by accelerated grid planning and investment.
- Referencing the EU’s emphasis on grid modernisation, including improved planning, digitalisation, resilience, and new financing mechanisms that support grids, storage, and enabling infrastructure.
- Emphasizing the role of regional interconnectivity and market integration in improving resilience and balancing supply–demand fluctuations.
- Underlining the “triple-win” impact of energy efficiency, noting that sustained efficiency efforts have significantly reduced long-term consumption growth and strengthened competitiveness and security.
- Identifying opportunities for Kuwait to engage in cooperation platforms, including regional regulator and transmission system operator collaboration, as well as emerging EU clean energy investment initiatives.

Toufik Khitous
Business Development Manager, Wärtsilä Energy

Mr. Khitous highlighted the role of technology providers in enabling a “smart mix” of solutions that supports renewable integration while maintaining system stability, emphasizing the need for long-term planning and system optimisation tools.

Key contributions included:

- Stressing that resilience under peak-driven demand requires a smart mix of technologies that improves flexibility and supports higher renewable penetration.
- Highlighting the importance of understanding system needs over a 15–20 year planning horizon, ensuring solutions remain “future-proof” as fuels and technologies evolve.
- Noting that optimisation tools and system-level analytics can help utilities balance cost, emissions, and stability, enabling dispatch decisions that support both economics and grid performance.
- Emphasizing that effective partnerships go beyond equipment supply and require engagement across stakeholders, long-term service models, and capacity building to support sustained system resilience.



SESSION 2 – ENERGY EFFICIENCY (KISR)

Kuwait’s electricity consumption per capita remains among the highest globally, driven largely by cooling demand and subsidised tariffs that shape consumption behaviour. This session explored practical pathways to reduce national energy intensity through stronger efficiency standards, better enforcement, digitalisation and data foundations, advanced cooling solutions, and scalable delivery models. The discussion highlighted that energy efficiency is not only a climate priority, but a power security and fiscal sustainability imperative, and a critical “low-hanging fruit” for near-term impact.

Moderator’s Framing

Eng. Dina Alnakib

Senior Director, Kuwait Foundation for the Advancement of Sciences (KFAS)

Eng. Alnakib opened the session by framing energy efficiency as a national priority, noting Kuwait’s consistently high per-capita electricity consumption and the dominant role of air conditioning in residential demand. She highlighted recent signs of progress through improved public communication and awareness efforts, and positioned the discussion around three interconnected dimensions: technology and standards, consumer behaviour, and digital/data foundations needed to deliver measurable savings at scale.

Speaker Highlights

Dr. Yehya Al-Hadban

Renewable Energy and Energy Efficiency Program Manager; Acting Operations Director, Energy and Buildings Research Center, Kuwait Institute for Scientific Research (KISR)

Dr. Al-Hadban emphasised that energy efficiency in Kuwait must be approached as a whole-system package, tailored to local climatic conditions and operational realities. He underlined that cooling is the single largest driver of electricity demand and therefore the most critical area for measurable impact.

Key contributions included:

- Stressing that no single measure is sufficient—effective efficiency requires a combined set of interventions spanning HVAC performance, building envelope, insulation, lighting, and operational practices.
- Highlighting that air-conditioning performance remains the priority due to Kuwait’s long, extreme summer season and the sensitivity of system efficiency to local high-temperature conditions.
- Underlining the importance of operations and control strategies, noting that even advanced systems can underperform if not operated optimally.
- Emphasising the role of applied research, simulation, and demand-side solutions (including load shifting and thermal storage approaches) to reduce peak demand and avoid unnecessary supply expansion.



Arch. Nasser Al Khuraibet

Assistant Undersecretary for Technical Affairs, Public Authority for Housing Welfare (PAHW)

Arch. Al Khuraibet highlighted the scale of Kuwait’s housing pipeline and its direct impact on future electricity demand, stressing that efficiency and sustainability are now economic necessities rather than optional enhancements.

Key contributions included:

- Explaining that PAHW delivers full city-scale communities, and that the pipeline of new developments represents a significant future demand burden—making demand reduction essential for long-term system viability.
- Emphasising that energy efficiency is a national economic issue, noting that unmanaged growth would place major strain on generation requirements and fuel consumption.
- Highlighting ongoing efforts to strengthen codes, specifications, and sustainability requirements, including the integration of renewable solutions across PAHW projects and the push to embed efficiency measures more systematically.
- Underscoring that incremental savings (even 2–3% per initiative) are meaningful at city scale, reducing both capex needs and long-term operating costs.

Christianna Toliopoulou

Analytics & Digital Transformation Professional, PPC Group; Founder, CTK Data Solutions

Ms. Toliopoulou emphasised that digitalisation and AI-enabled efficiency programmes depend first on people, governance, and data readiness, not on dashboards alone. She highlighted that utilities must build the minimum data foundations to enable effective demand-side management at scale.

Key contributions included:

- Stressing the need to evolve the operating model and mindset, including training and capacity building so organisations can act on data-driven insights.
- Highlighting the importance of high-quality smart meter data, near-real-time visibility, and asset telemetry to enable meaningful efficiency strategies.
- Emphasising customer segmentation as a prerequisite for effective programmes, noting that targeted approaches outperform “one-size-fits-all” interventions.
- Identifying early high-impact use cases such as peak shaving for large consumers and public assets, forecasting models, and structured demand response—supported by clear governance so insights translate into operational decisions.



**Mr. António Campos
Chief Executive Officer, Hub2Energy**

Mr. Campos framed energy efficiency as a power security and budget stability issue, arguing that the main obstacle is not identifying opportunities but designing delivery models that align incentives, financing, and accountability. He stressed that efficiency must move from one-off projects to scalable programmes..

Key contributions included:

- Highlighting the structural challenge that efficiency costs are often upfront while benefits are distributed—raising the central question: “Who pays, and who benefits?”
- Emphasising that the fastest scalable gains are often found in large cooling loads and public assets (campuses, hospitals, large complexes), where impact is measurable and governance is clearer.
- Noting that ESCOs, utilities, and standards each matter—but none succeeds alone; effective delivery requires an integrated programme approach with clear ownership, measurement, and secured payment structures.
- Stressing that efficiency becomes investable when savings are measured and verified, bundled through programmes, and linked to climate finance and structured implementation pathways—turning “good ideas” into scalable solutions.
- Underscoring that pilots must be designed with a clear path to scale, accelerated timelines, and defined ownership—otherwise they risk remaining demonstrations rather than programmes.





SESSION 3 – RENEWABLE ENERGY (MEWRE)

This closing session highlighted Kuwait’s renewable energy ambitions and pathways to achieving the 30% renewable electricity target by 2030. The discussion focused on moving beyond pilot initiatives toward large-scale deployment, with attention to solar and wind performance under Kuwait’s climate conditions, grid integration and flexibility needs, energy storage, enabling frameworks for project delivery, and opportunities for EU–Kuwait cooperation on technology transfer, investment, and skills development—particularly linked to Shagaya and upcoming capacity expansions.

Moderator’s Framing

Ms. Maite Elizalde

Country Editor, The Business Year – Kuwait

Ms. Elizalde framed Kuwait’s 2030 renewables target as a strategic shift requiring a transition from ambition to execution and delivery at scale. She emphasised that achieving the target will depend on building a credible project pipeline in the next two to three years, while strengthening the ecosystem required for implementation—spanning technical readiness, regulatory clarity, investor confidence, and reliable grid integration.

Speaker Highlights

Dr. Ayman Al Qattan

Research Scientist, Kuwait Institute for Scientific Research (KISR)

Dr. Al Qattan drew on practical lessons from Shagaya Phase 1, highlighting specific technology performance challenges and system-level readiness gaps that must be addressed to scale renewables reliably in Kuwait’s harsh climate.

Key contributions included:

- Highlighting the importance of temperature-resilient inverters as a critical risk area for large-scale PV performance, noting that inverter resilience directly affects project lifespan, reliability, and investment protection.
- Pointing to wind technology as a promising resource for Kuwait, while stressing that turbine performance can degrade under high temperatures; he noted that technology adaptation for extreme heat conditions remains essential.
- Citing Shagaya wind performance as a strong signal for future scale-up, reporting an encouraging capacity factor (43%), strengthening the case for wind as part of Kuwait’s renewables mix.
- Emphasising that grid geography matters—given coastal baseload generation and inland renewables sites, large-scale integration will require flexibility solutions, including battery storage and regional grid coordination.



Eng. Abdulwahab Al Gallaf
Lead Electrical Engineer – Department of Renewable Energy, Ministry of Electricity, Water and Renewable Energy (MEWRE)

Eng. Al Gallaf focused on delivery bottlenecks and enablers, emphasising that scaling renewables requires clearer, faster, and more coordinated processes—particularly to meet international investor expectations.

Key contributions included:

- Highlighted delivery delays caused by fragmented responsibilities, underscoring the need for a clear, centralised framework with defined timelines to accelerate project execution.
- Emphasised the importance of transparent, internationally aligned requirements to reduce bidder uncertainty and provide a streamlined, “one-stop” process for developers.
- Pointed to key enablers for large-scale integration, including advanced energy management systems and enhanced weather and forecasting infrastructure to support planning and dispatch.
- Stressed the need to modernise grid operating philosophy, moving toward a data-driven, flexible approach that integrates renewables reliably alongside existing power purchase commitments.
- Noted that predictable legislation and market rules will be a critical signal to investors and a key driver of momentum over the next 2–3 years.

Rui Marques
International Business Manager, HUB2ENERGY – Representative in the GCC for InnoEnergy Masters+ and the InnoEnergy Skills Institute

Mr. Marques highlighted that renewable scale-up is often constrained not by technology or capital, but by the absence of an effective delivery ecosystem. He drew on EU lessons and explained how structured platforms can reduce bottlenecks and build local capacity.

Key contributions included:

- Highlighted that the main constraint to renewable scale-up is often ecosystem readiness, including system integration, delivery capacity, and stakeholder coordination.
- Noted that clear frameworks and predictable project structures, as demonstrated in the EU, are essential to build private sector confidence and accelerate deployment.
- Explained how InnoEnergy links industry, investors, academia, and training to reduce delivery risks and move projects efficiently from concept to implementation.
- Emphasised workforce readiness through two key tracks: Skills Institute programmes for technicians and operators, and Masters+ programmes to develop future energy leaders.
- Pointed to growing collaboration with local institutions to support skills development and research exchange ahead of multi-gigawatt renewable deployment.

Closing Remarks



Spyros Kouvelis
Team Leader
EU-GCC Cooperation on
Green Transition Project



CONCLUDING REMARKS

Spyros Kouvelis

Team Leader, EU-GCC Cooperation on Green Transition Project

In his closing remarks, Mr. Kouvelis emphasised the timeliness and strategic importance of the Forum, noting that Kuwait's energy transition is unfolding at a moment of growing pressure—from rising energy demand and geopolitical uncertainty to the global shift toward more sustainable economic models. He highlighted the establishment of the High-Level Energy Committee as a critical milestone, reflecting strong national coordination, political will, and a shared vision for delivery.

Mr. Kouvelis underscored that the green transition is inseparable from Kuwait's broader economic transformation, with long-term implications for the country's development over the coming decades. Discussions throughout the day reinforced this message, particularly on energy efficiency, grid resilience and interconnection, electrification, renewable energy integration, and investment frameworks. He pointed to the scale of Kuwait's housing development plans as both a major challenge and a significant opportunity for efficiency gains, calling it an area where EU-Kuwait cooperation could be further strengthened.

He also highlighted the importance of systems integration, clear regulation, data and research, stakeholder engagement, and green skills development, noting the value of closer collaboration between European and Kuwaiti universities, research institutions, and training programmes, including through Erasmus and Horizon initiatives.

In closing, Mr. Kouvelis reaffirmed the European Union's commitment to remaining a reliable and long-term partner to Kuwait, supporting the transition through dialogue, technical cooperation, and capacity building. He expressed confidence that, building on the strong momentum and national appetite demonstrated, continued EU-Kuwait collaboration can translate today's discussions into concrete, coordinated action.

FROM DIALOGUE TO DELIVERY: ACTION POINTS & WAY FORWARD

Building on the Forum's discussions, the following priority actions are proposed to maintain momentum and support implementation:

1. Strengthen Delivery Frameworks

- Establish clear, time-bound project approval and delivery processes for renewable and efficiency projects.
- Move toward centralised coordination with defined roles, while maintaining flexibility for project-specific execution.
- Provide greater regulatory clarity for IPPs, PPPs, and private-sector participation to enhance investor confidence.

2. Accelerate Energy Efficiency at Scale

- Prioritise large public assets and high-load consumers (housing cities, hospitals, campuses) as near-term impact areas.
- Treat energy efficiency as avoided capacity and power security, not solely as a climate measure.
- Scale proven approaches through programme-based models rather than standalone pilots.

3. Enable System Readiness for Renewables

- Advance grid modernisation, including energy management systems, forecasting tools, and operational flexibility.
- Deploy battery energy storage systems strategically to manage intermittency and seasonal load variations.
- Strengthen regional interconnection, including GCC grid integration, to reduce curtailment risks.

4. Invest in Data, Digitalisation, and Monitoring

- Improve data availability and quality, including metering, asset telemetry, and customer segmentation.
- Use digital tools and AI to support peak management, demand-side response, and operational decision-making.
- Standardise measurement, verification, and performance KPIs to support scale-up and financing.

5. Build Skills and Institutional Capacity

- Expand technical training and certification programmes for operators, engineers, and planners.
- Deepen cooperation between Kuwaiti and European universities and research institutions, including through Erasmus and Horizon-linked initiatives.
- Align skills development with long-term project pipelines to ensure workforce readiness over the coming decades.

6. Sustain EU-Kuwait Cooperation

- Use the Forum as a platform for continued technical dialogue, targeted workshops, and thematic follow-up events (e.g. energy efficiency, renewables integration).
- Translate discussions into joint pilot programmes with clear scale-up pathways.
- Maintain close coordination with national institutions to ensure alignment with Kuwait's evolving policy and planning priorities.

HIGHLIGHTS



MEDIA COVERAGE

The EU–Kuwait Green Transition Forum received wide coverage across leading Kuwaiti media outlets, highlighting national priorities around energy transition, sustainability, and EU–Kuwait cooperation.

- **Al-Rai**
 - Covered the Forum with a focus on ministerial remarks by H.E. Dr. Subaih Abdulaziz Abdul Mohsen Al-Mukhaizeem, emphasising that energy transition is a national priority and underlining the importance of international cooperation, particularly with the European Union.
 - <https://www.alraimedia.com/article/1756045/>
- **Al-Jarida**
 - Reported on discussions linking energy transition with economic stability and long-term development, highlighting institutional coordination and strategic planning as key enablers.
 - <https://www.aljarida.com/article/122734>
- **Kuwait Times**
 - Published an English-language article highlighting Kuwait's efforts to align energy policies with economic resilience, environmental responsibility, and national security, with reference to EU best practices.
 - <https://kuwaittimes.com/article/39567/>
- **Al-Qabas**
 - Highlighted statements affirming that the transition to renewable energy represents a core national priority, stressing the role of regulation, investment, and international partnerships.
 - <https://alqabas.com/article/5959640/>
- **Al-Seyassah**
 - Covered the Forum within the context of Kuwait Vision 2035, focusing on sustainability, energy efficiency, and the strategic transformation of the energy sector.
 - <https://alseyassah.com/article/458405/>
- **Al-Nahar**
 - Reported on the Forum as a platform for dialogue on clean energy, energy security, and regional and international cooperation, noting broad participation from public and private stakeholders.
 - <https://www.annaharkw.com/Article.aspx?id=1038990>
- **Al-Anba**
 - Highlighted the Forum's role in strengthening EU–Kuwait cooperation on green transition, with emphasis on renewable energy targets, energy efficiency, and innovation-driven solutions.
 - <https://www.alanba.com.kw/1344931>

The breadth of media coverage reflects the Forum's relevance as a national platform for dialogue on Kuwait's energy transition and its growing cooperation with the European Union.

ABOUT THE PROJECT

THE EU-GCC COOPERATION ON GREEN TRANSITION PROJECT



Launched in August 2023, this project funded by the European Union marks a significant milestone in the long partnership between the European Union (EU) and the Gulf Cooperation Council (GCC). By addressing critical global challenges such as climate change and sustainable development, the project builds upon the EU-GCC Cooperation Agreement Document signed in 1989. The Joint Action Programme for 2022-2027 endorsed in February 2022 outlines the strategic framework for cooperation, emphasizing the need to join forces in addressing climate change and make progress on green transition. This project reflects the shared commitment to leveraging EU expertise to deepen cooperation and engagement, promote green policies and technologies, and create a conducive business environment for collaboration among energy-related and green tech companies in the Gulf.

KEY OBJECTIVES

The project aims to strengthen political and technical relationships at regional and bilateral levels by:

- Deepening engagement towards green transition and climate change mitigation and adaptation.
- Promoting the uptake of green transition policies and technologies by the GCC countries.
- Facilitating a conducive business environment between EU and GCC green tech companies in the Gulf region.

IMPACT

- Enhanced knowledge exchange on climate action and green transition.
- Raised awareness on climate change, sustainable practices and circular economy.
- Strengthened network for collaboration in green solutions and energy transition.
- Proactive EU Climate Diplomacy in the region.

STAKEHOLDERS

- State and non-state institutions, business community, & environmental NGOs.
- Researchers, academia, youth groups, & media outlets.
- EU and GCC businesses, particularly SMEs.
- EU Member States present in the GCC.

FOCUS AREAS



GREEN TRANSITION

Promote transformative change for green transition policies & practices within the GCC.



NET ZERO CARBON

Implement solutions for reducing carbon emissions in industrial & public sectors.



HYDROGEN MARKET

Support the development of a renewable hydrogen market in the Gulf region.



CLEAN-TECH SOLUTIONS

Foster innovations in renewable energy technologies & clean-tech industries.



CLIMATE CHANGE ADAPTATION

Strengthen resilience & adaptive capacities to climate-related hazards.



ENVIRONMENTAL PROTECTION

Launch initiatives to preserve biodiversity & natural habitats, including marine protection.



CIRCULAR ECONOMY

Encourage the adoption of sustainable waste management & resource efficiency.



SUSTAINABLE FINANCE

Engage financial institutions in channelling investment & finance in support of green transition.



Funded by
the European Union

FPI Programme Manager - Alessandra.tomirotti@eeas.europa.eu
DG CLIMA - CLIMA-D02-ARES@ec.europa.eu
DG ENER - ENER-TF3-SECRETARIAT@ec.europa.eu

SPYROS KOUVELIS

Team Leader
spyros.kouvelis@eugcc.eu

RANIA NSEIR

Events & Comms Expert
rnseir@eugcc.eu

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