

THE EU-GCC COOPERATION ON
GREEN TRANSITION PROJECT



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WEBINAR SERIES 2026 . WEBINAR 1

Energy System Resilience in Times of Volatility

*Resilient Power Systems for the
GCC: Renewables, Flexibility and
Security of Supply*

SUMMARY REPORT

Webinar 1 - 24 June 2026 - Virtual (Webex)



SUMMARY REPORT

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◆ Webinar at a Glance

RESILIENT POWER SYSTEMS FOR THE GCC	
DATE & TIME	24 June 2026 · 12:00–13:30 UAE 10:00–11:30 Brussels
FORMAT	Online webinar (Webex) · EU-funded cooperation programme
MODERATOR	Spyros Kouvelis - Team Leader, EU-GCC Cooperation on Green Transition
ORGANIZER	Rania Nseir - Events & Communications Expert, EU-GCC Cooperation on Green Transition Project
KEYNOTE	Adrian Steiner , International Relations Officer, Directorate-General for Energy (DG ENER), European Commission
PANELLISTS	Dr. Fotouh Al Ragom , Senior Research Scientist, Energy and Building Research Center, Kuwait Institute for Scientific Research (KISR) Patrik Farkas , Director, Strategy & Business Development, Wärtsilä Energy Steve Lemoine , Regional Director, Dalkia Middle East (EDF Group) <i>Dr. Mohammed Al Rashidi, Head of Energy, GCC Secretariat was scheduled to provide opening remarks but was unable to join live due to technical connectivity issues.</i>
NEXT WEBINAR	6 July 2026 — Water Resilience in the GCC

174

REGISTERED participants

76

LIVE ATTENDEES throughout the session

39

SLIDO RESPONSES to the live poll

The audience spanned government ministries, international organisations, research institutions, utilities, technology providers and private investors across Europe, the GCC and beyond.

01 EXECUTIVE SUMMARY

A strategic imperative, not an aspiration

The clean energy transition is no longer solely motivated by climate change. Amid heightened geopolitical uncertainty, supply-chain disruptions and escalating environmental risks, it has become a strategic imperative for economic resilience, energy security and long-term competitiveness.

The inaugural webinar of the EU-GCC Resilient Green Transition Webinar Series 2026, held on 24 June, brought together policymakers, industry leaders and researchers from Europe and the GCC to examine how resilient, flexible and secure power systems can anchor this transition. The discussion demonstrated that resilience is no longer viewed solely through the lens of energy security. Participants consistently highlighted flexible power systems, energy efficiency, digitalisation, regulatory certainty and regional cooperation as the building blocks of future energy systems capable of responding to geopolitical, climatic and technological disruptions.

Both regions face shared challenges while bringing complementary strengths. The EU offers decades of experience in market integration, grid flexibility, regulation and clean-energy policy. The GCC brings ambitious clean-energy scale-up targets, vast renewable potential, significant investment capacity and growing experience in large-scale deployment under demanding climatic conditions.

The discussion also reinforced the strategic regional priorities highlighted in prepared remarks by **Dr. Mohammed Al Rashidi** of the **GCC Secretariat**, who emphasised regional electricity interconnections, renewable energy integration, storage, digitalisation and stronger EU-GCC cooperation as key priorities for strengthening resilience across the GCC.

THE HEADLINE TAKEAWAY

Against the backdrop of recent disruptions in the Strait of Hormuz — which imposed an additional €50 billion on EU fossil-fuel imports within five months — the case for accelerating the shift to clean, homegrown energy has never been clearer.

Resilience now encompasses far more than security of supply: it demands diversification, flexibility, digitalisation, energy efficiency, regulatory certainty and, above all, sustained regional and international cooperation.

02 BACKGROUND & OBJECTIVES

◆ A platform for structured EU–GCC dialogue

The EU-GCC Cooperation on Green Transition Project, funded by the European Union, is the principal platform for structured dialogue on sustainable energy between the two regions. It works to strengthen institutional partnerships, facilitate knowledge exchange and support the alignment of policy and investment frameworks.

The series is designed not only to exchange knowledge, but also to identify practical pathways for long-term EU-GCC cooperation across energy, water, infrastructure, adaptation and investment.

The 2026 series is a six-part programme spanning energy, water, critical infrastructure, environmental adaptation and green finance. The first webinar focused on energy-system resilience, seeking to:

- Examine the structural drivers of energy volatility and their implications for the GCC;
- Share European lessons in grid modernisation, market design and crisis response;
- Identify practical technology pathways — from flexible generation and storage to demand-side management and digitalisation;
- Explore regulatory and investment frameworks that accelerate deployment and strengthen the EU–GCC stakeholder network.

04 SCENE-SETTING KEYNOTE

Building resilience through diversification

Adrian Steiner · International Relations Officer, DG ENER, European Commission

Adrian Steiner opened the webinar by reflecting on how recent geopolitical developments—particularly the temporary disruption of energy flows through the Strait of Hormuz—have fundamentally reshaped the European Union's understanding of energy resilience. While the crisis created significant price volatility, he noted that its impact on physical energy supply was considerably less severe than during the 2022 Russian invasion of Ukraine, largely because the EU had already diversified its energy imports and strengthened its energy security following that earlier crisis.

PRICE VOLATILITY AS A WAKE-UP CALL

Steiner highlighted two key lessons emerging from the recent crisis. First, global energy markets remain highly interconnected, meaning that disruptions affecting Asian markets rapidly translate into higher prices for European consumers and industry. Second, Europe's continued dependence on imported fossil fuels represents not only an economic burden but also a strategic vulnerability. With the EU spending approximately **€340 billion on fossil fuel**

€340 bn

EU fossil-fuel imports in 2025 — the recurring cost of dependence

€50 bn

Additional cost in the first five months of the Hormuz crisis alone

imports in 2025, followed by an estimated **€50 billion** in additional top up costs during the Strait of Hormuz disruption, he argued that accelerating the transition towards secure, domestically produced clean energy has become both an economic and geopolitical imperative.

For Steiner, the central lesson was clear: fossil fuel dependence has become an unsustainable drag on Europe's competitiveness and long-term resilience. Diversifying supply routes alone is no longer sufficient; instead, Europe must accelerate the transition towards clean, home-grown energy sources capable of delivering affordable, secure and resilient energy.



FIGURE 1. The strategic issue, as presented in the keynote — dependence creates vulnerability, while diversification across sources and routes builds resilience.

◆ The European policy response: “AccelerateEU”

Building on this analysis, **Steiner** presented the European Commission's **AccelerateEU Action Plan**, published in April 2026. He explained that the strategy combines immediate relief for consumers and industry with a long-term vision centred on electrification, renewable energy, nuclear power, stronger grids and increased investment in Europe's clean energy transition.

A rapid electrification plan, with dedicated heating, cooling and geothermal strategies due in summer 2026;

- The **European Grids Package**, including ‘Energy Highways’ to expand cross-border transmission and storage;
- A legislative proposal to ensure, inter alia, that electricity is taxed less heavily than fossil fuels;
- A reform of the Emissions Trading System (ETS), scheduled for summer 2026;
- A Clean Energy Investment Strategy and plans for an Investment Summit still in 2026 to unlock private capital.

Steiner stressed that achieving these ambitions will require unprecedented levels of investment. Public funding alone will not be sufficient to meet the estimated €660 billion needed annually through 2030. He therefore highlighted the Commission's Clean Energy Investment Strategy and the forthcoming Clean Energy Investment Summit as key mechanisms for mobilising private capital alongside public investment.



AN INVITATION TO PARTNERSHIP

The keynote concluded with a forward-looking invitation for closer EU–GCC cooperation. **Adrian Steiner** encouraged participants to view the Strait of Hormuz disruption not only as a geopolitical challenge to circumvent the bottleneck but also as an opportunity to rethink future energy systems around resilience, diversification and clean technologies. He reaffirmed the European Union's commitment to working with GCC partners on research, innovation, regulatory dialogue, investment and the development of resilient clean-technology supply chains built on reciprocity, shared expertise and long-term strategic partnership.

“If we want our economy to remain competitive and resilient, we will need to phase out fossil fuels from our energy mix even faster.”

Adrian Steiner, European Commission

05 PANEL DISCUSSION HIGHLIGHTS

Perspectives from policy, research, technology and energy services

Moderated by **Spyros Kouvelis**, Team Leader of the EU-GCC Cooperation on Green Transition Project, the panel brought together leading experts representing European policymaking, applied research, technology and energy services. **Adrian Steiner**, International Relations Officer at the European Commission's Directorate-General for Energy (DG ENER), was joined by **Patrik Farkas**, Director of Strategy & Business Development at Wärtsilä Energy, **Steve Lemoine**, Regional Director at Dalkia Middle East (EDF Group), and **Dr. Fotouh Al Ragom**, Senior Research Scientist at the Kuwait Institute for Scientific Research (KISR). Together, the discussion explored how resilient energy systems can be designed, financed and governed across the GCC and Europe.



FIGURE 3. The panel: Adrian Steiner (European Commission), Patrik Farkas (Wärtsilä Energy), Steve Lemoine (Dalkia ME / EDF Group), Dr. Fotouh Al Ragom (KISR) and moderator Spyros Kouvelis.

◆ Defining energy resilience in the GCC context

Inviting the panellists to define what energy resilience means in practice, **Spyros Kouvelis** opened the discussion by asking how the GCC can strengthen its energy systems in an increasingly uncertain geopolitical environment.

Dr. Fotouh Al Ragom described resilience as the ability to anticipate, withstand and recover rapidly from disruptions, whether geopolitical, climatic, technological or cyber-related. Drawing on Kuwait's recent experience, he explained that resilience extends well beyond maintaining electricity supply to ensuring that national energy systems continue to function under changing regional conditions.

From an industry perspective, **Patrik Farkas** argued that resilience should not be viewed as a single technology or infrastructure investment, but as a system-wide capability built on smart intelligence, diversified energy sources, layered protection, geographic flexibility and international cooperation. **Adrian Steiner** complemented this perspective by highlighting the importance of stable regulatory frameworks and deeper regional cooperation in supporting long-term resilience.

◆ From generation to flexibility

Steve Lemoine explained that as renewable energy deployment accelerates across the GCC, balancing electricity supply and demand in real time becomes just as important as expanding generation capacity. Drawing on examples from projects across Saudi Arabia and Qatar—including the Dumat Al Jandal wind farm, the AMAALA solar-plus-storage development and pumped-storage initiatives—he illustrated how flexibility technologies are already strengthening regional energy systems.

Building on this, **Patrik Farkas** highlighted the growing importance of demand-side flexibility. He noted that industrial consumers, commercial facilities and critical infrastructure can provide valuable flexibility services by adjusting electricity consumption during peak demand periods. Such approaches, widely implemented across Europe, could significantly reduce grid stress while improving overall system efficiency.

◆ Energy efficiency: the first fuel

Steve Lemoine described energy efficiency as the fastest and most cost-effective pathway towards greater resilience, emphasising that reducing demand is often more impactful than building additional generation capacity. He illustrated this through a major Saudi university project that achieved approximately **30% energy savings** through comprehensive efficiency measures.

Complementing this perspective, **Dr. Fotouh Al Ragom** highlighted Kuwait's long-standing commitment to energy conservation, pointing to the Energy Conservation Code introduced in 1983, which has contributed to an estimated **8 GW** reduction in cumulative national electricity demand. He argued that efficiency should become the starting point of every energy-transition strategy rather than a secondary consideration.

Both speakers agreed that improving district cooling efficiency, expanding demand-side management and introducing stronger economic incentives for energy savings represent major opportunities for the GCC.

30%

Savings from a comprehensive programme at a major Saudi university

8 GW

Cumulative power reduction in Kuwait via its Energy Conservation Code since 1983

◆ Technology pathways and innovation

Looking ahead, the panel explored how emerging technologies can strengthen resilience while supporting decarbonisation. **Steve Lemoine** highlighted geothermal energy, seawater cooling and advanced district cooling as practical opportunities particularly suited to Gulf climatic conditions. **Patrik Farkas** emphasised the importance of battery storage, smart grids and digital control systems in enabling electricity systems with much higher shares of renewable energy.

Adrian Steiner linked these technological pathways to wider EU-GCC cooperation, noting that research partnerships, Horizon Europe collaboration and clean-technology supply chains offer significant opportunities for joint innovation and knowledge exchange.

IN THEIR WORDS

The most effective way to motivate energy efficiency is for a consumer "to know exactly where they stand." Accurate data is the foundation of informed action — and the prerequisite for financing.

◆ Data, digitalisation and governance

Turning to implementation, **Dr. Fotouh Al Ragom** explained that the principal barriers to delivering resilient energy systems are increasingly institutional rather than technological. He described Kuwait's efforts to strengthen inter-agency coordination, improve technical data quality through the Kuwait Foundation for the Advancement of Sciences (KFAS), and develop integrated data-sharing platforms to support evidence-based decision-making.

Steve Lemoine reinforced this message from an operational perspective, noting that reliable data is fundamental for identifying efficiency opportunities, verifying performance and securing project financing. **Patrik Farkas** similarly highlighted the growing role of smart meters, IoT technologies and artificial intelligence in enabling predictive system management and greater operational flexibility.

◆ Regulatory frameworks and market design

Adrian Steiner emphasised that stable, transparent regulatory frameworks remain the single most important factor in attracting long-term investment. While financing is generally available for well-structured projects, he explained that investors require predictable market rules, clear revenue streams and robust legal protections before committing capital.

Steve Lemoine added that successful renewable-energy projects combine financing with comprehensive contractual frameworks, including committed offtakers and long-term purchase agreements. **Patrik Farkas** highlighted the evolution of the GCC electricity interconnection from an emergency-support mechanism towards a more integrated regional electricity market, describing this as an important opportunity to strengthen resilience across the region.

◆ EU–GCC cooperation opportunities

Looking beyond individual technologies, the panel agreed that resilience ultimately depends on stronger cooperation between Europe and the GCC. **Adrian Steiner** highlighted opportunities to deepen collaboration on electricity-market design, grid integration, regulatory reform and research partnerships. **Steve Lemoine** pointed to practical cooperation on district cooling, geothermal energy and large-scale efficiency programmes, while **Patrik Farkas** underlined the importance of digitalisation, storage technologies and flexible electricity markets. **Dr. Fotouh Al Ragom** emphasised that research collaboration, knowledge exchange and capacity building will be essential to accelerate implementation across the region.

These themes closely reflected the prepared remarks of **Dr. Mohammed Al Rashidi**, Director of the Energy Department at the GCC General Secretariat, who identified regional interconnection, renewable energy deployment, digitalisation, storage technologies and deeper international cooperation as the key priorities for strengthening GCC energy resilience towards 2030.

Key areas for cooperation include:

- **Grid integration** — dynamic grid management, imbalance settlement, cross-border market design;
- **Heating & cooling** — adapting European strategies to the GCC's dominant cooling demand;
- **Technology transfer** — clean-tech supply chains based on reciprocity, not one-way export;
- **Research** — connecting institutions, including through Horizon Europe;
- **Market access & capacity building** — EU demand anchors for clean molecules; workforce training and skills.

06 AUDIENCE ENGAGEMENT

What the audience told us

Participation extended well beyond the live discussion through a Slido word cloud, moderated Q&A and an active Webex chat, demonstrating strong engagement from policymakers, industry representatives, researchers and international experts across Europe, the GCC and beyond.

◆ Slido word cloud · ‘Key ingredients of a resilient GCC energy system?’

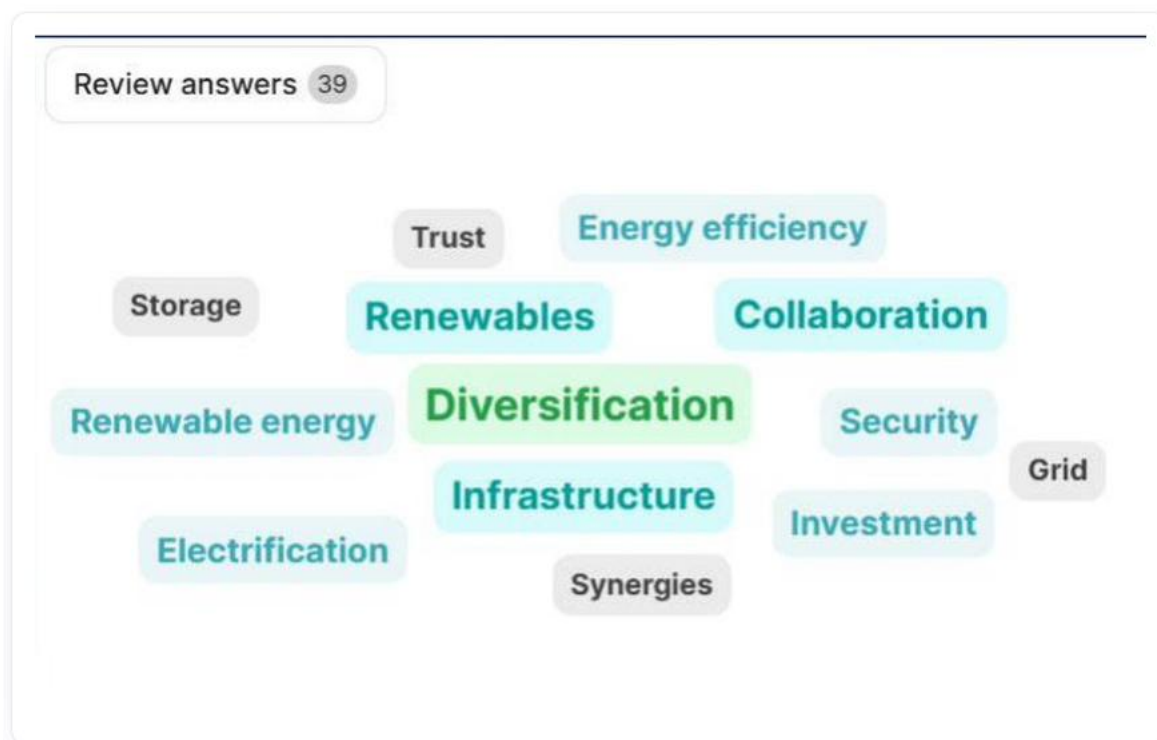


FIGURE 4. The live poll drew **39 RESPONSES**. Diversification was the most prominent term, followed by renewables, collaboration, infrastructure, electrification, investment, energy security, efficiency and storage.

The audience overwhelmingly identified **diversification** as the defining characteristic of energy resilience, followed by **renewables, collaboration, infrastructure, investment, energy efficiency, security, electrification, storage** and **grid integration**.

The responses closely reflected the themes explored throughout the keynote and panel discussion, confirming broad agreement that resilience requires a balanced combination of diversified energy sources, stronger infrastructure, regional cooperation and continued investment in clean technologies.

At the same time, the moderator noted that several issues emphasised by the panellists—including data governance, digitalisation, regulatory reform and market design—were less prominent in the audience responses, highlighting the need for continued dialogue and knowledge exchange.

◆ Question & Answer session

The Q&A demonstrated that participants were looking beyond technology towards the practical conditions needed to accelerate implementation.

Several questions focused on **data transparency, institutional coordination and governance**, with participants asking whether implementation should wait until better data becomes available or proceed through pilot projects. Panellists agreed that both must advance simultaneously: digitalisation and smart metering are essential but delaying implementation until perfect datasets exist would slow progress unnecessarily.

Other recurring themes included:

- regulatory frameworks needed to attract long-term private investment;
- expanding and operationalising the GCC Interconnection Grid;
- technology transfer, research collaboration and Horizon Europe opportunities;
- financing mechanisms and incentives for energy efficiency and clean technologies;
- strategies to encourage cleantech entrepreneurship and innovation across the GCC.

The breadth and quality of questions demonstrated strong interest in practical EU–GCC cooperation and confirmed the value of continuing this dialogue throughout the webinar series.

◆ Threads from a busy chat

Beyond the formal Q&A, the Webex discussion generated several additional themes that will inform future webinars and project activities.

Key discussion threads included:

- **Innovative recovery alongside resilience** — participants argued that the GCC's comparative advantage lies not only in resilience but also in using technology and innovation to accelerate recovery following disruptions.
- **Data transparency and reference projects** — several participants requested regional case studies demonstrating how improved data sharing has enabled successful implementation and investment.
- **Regional electricity integration** — discussion highlighted the importance of moving the GCC Interconnection Grid beyond emergency support towards greater commercial electricity trading and market integration.
- **Future-proof infrastructure** — participants stressed that long-life energy assets must remain adaptable to changing technologies, climate conditions and demand patterns to avoid creating future dependencies.
- **Learning from international experience** — contributors referenced Ukraine's experience in maintaining energy resilience under prolonged disruption and suggested that both Europe and the GCC can benefit from exchanging operational lessons.
- **Innovation and entrepreneurship** — questions highlighted the importance of creating stronger incentives for cleantech innovation, demonstration projects and commercial deployment across the GCC.

VOICES FROM THE WEBEX CHAT

"The GCC is capable not only of resilience, but of innovative recovery through technology leadership"

"Many of these technologies have lifetimes of 30–80 years. How do we avoid creating tomorrow's dependency while solving today's challenge?"

"Reference projects are essential. Data sharing and proven implementation examples help move innovation into investment."

The breadth of questions - and the number that time did not permit answering - confirmed strong appetite for continued engagement, and several threads will carry directly into upcoming sessions.

07 KEY MESSAGES

Ten strategic takeaways

Distilled from the keynote, panel discussion and audience exchange.

1 Diversification is the cornerstone of resilience.

A balanced energy mix, diversified supply routes and complementary technologies reduce vulnerability to geopolitical and market disruptions.

2 Resilience extends beyond security of supply.

Modern energy resilience means anticipating, withstanding, adapting to and rapidly recovering from disruptions while maintaining reliability, affordability and sustainability.

3 Energy efficiency is the first investment priority.

The fastest and most cost-effective gains come from reducing demand through efficiency before expanding generation capacity.

4 Flexibility is becoming as important as generation.

Storage, demand-side management, smart grids and flexible generation are essential for integrating higher shares of renewable energy.

5 Data and digitalisation enable implementation.

Smart metering, IoT, AI and better data governance provide the visibility needed to optimise systems, improve decision-making and unlock investment.

6 Stable regulatory frameworks unlock investment.

Long-term private capital depends less on financing availability than on predictable market rules, clear governance and investment certainty.

7 Regional integration strengthens collective resilience.

Expanding electricity interconnection, cross-border cooperation and regional market integration can significantly improve efficiency and energy security across the GCC.

8 Innovation and skills will drive the next phase of the transition.

Technology deployment must be accompanied by research collaboration, demonstration projects, workforce development and stronger innovation ecosystems.

9 EU–GCC cooperation is evolving into a strategic partnership.

Both regions bring complementary strengths - from European regulatory and market experience to GCC deployment capacity and investment scale - creating opportunities for reciprocal cooperation in technology, research, investment and clean energy value chains.

10 The transition must be future proof.

Energy systems should be designed to remain adaptable to changing technologies, climate conditions and evolving demand, ensuring today's solutions do not become tomorrow's constraints.

08 CONCLUSIONS

Better positioned than ever to act together

The first webinar confirmed that energy-system resilience has become a shared strategic priority for both Europe and the GCC. Rather than focusing solely on energy security, the discussion demonstrated that resilience encompasses diversified energy systems, flexible infrastructure, digital technologies, efficient markets and strong regional cooperation.

Across the keynote, panel discussion and audience exchange, a consistent message emerged: the technologies needed to accelerate the transition already exist. The greater challenge lies in creating the regulatory certainty, institutional coordination, digital capabilities and investment frameworks that enable deployment at scale.

The webinar also highlighted that resilience should be viewed not only as the ability to withstand disruption, but as an opportunity to accelerate innovation, strengthen competitiveness and build future-ready energy systems. Europe contributes extensive experience in market integration, regulation and system planning, while the GCC offers rapid deployment capability, ambitious investment programmes and experience operating in some of the world's most demanding climatic conditions.

The prepared remarks of Dr. Mohammed Al Rashidi further underlined the importance of strengthening regional electricity interconnection, accelerating renewable energy deployment supported by storage, advancing digitalisation and cybersecurity, and deepening international cooperation with partners such as the European Union.

The discussion reinforced that EU–GCC cooperation is evolving into a genuine partnership built on reciprocity, knowledge exchange and joint innovation. By combining complementary strengths, both regions are well positioned to accelerate the transition towards secure, affordable, sustainable and resilient energy systems.

As the first event in the Resilient Green Transition Webinar Series 2026, the webinar established a strong foundation for continued dialogue. The following sessions will progressively expand the discussion from resilient energy systems to water security, critical infrastructure, environmental resilience and sustainable investment, supporting practical cooperation and long-term EU-GCC partnerships for the green transition.



FIGURE 5. The way forward — secure, affordable, sustainable, connected and inclusive energy systems, built together and looking ahead to 2030.

09 LOOKING AHEAD

Sustaining the momentum

This summary report, the recording and the slides will be circulated to all registered participants, partner institutions and stakeholder networks, and published through the project's channels to extend the discussion further.

WEBINAR 2 · Monday, 6 July 2026

Water Resilience in the GCC

Resilient Supply, Sustainable Desalination, Smart Distribution, Water Ecosystems and the Water-Energy Nexus

Building on the discussions from Webinar 1, the next session will extend the concept of resilience beyond electricity systems to examine how integrated water management, sustainable desalination and the water - energy nexus can strengthen long-term resource security across the GCC. Together, the webinars will progressively develop a comprehensive resilience agenda covering energy, water, infrastructure, environmental systems and investment.

Registration for Webinar 2 is now open. Click [here](#) to learn more and register.



Beyond the series, the project is advancing a regional activity to connect European and GCC research institutions and universities for collaborative technology development — including through Horizon Europe — supporting the emergence of clean-tech entrepreneurship across the region.

Sep 2026	Critical Infrastructure — resilience, cyber risk, continuity & emergency preparedness
Sep / Oct	Environmental Resilience — air quality, climate adaptation & urban resilience
Oct / Nov	Green Infrastructure Investment — frameworks, PPPs, de-risking & the GCC/MENA pipeline
Dec 2026	Conclusions & Roadmap — recommendations and the way forward for EU–GCC green transition

EU–GCC Cooperation on Green Transition

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This publication was prepared by the EU-GCC Cooperation on Green Transition Project to support knowledge exchange and continued EU-GCC dialogue on the green transition.