

# The Gulf Research Center and the Changing Global Energy Landscape



**Gulf Research Center**  
Knowledge for All



Abdulaziz Sager, Chairman, Gulf Research Center and the Honourable Samuel Bodman, US Secretary of Energy, Washington, DC at the book launch of the The International Energy Outlook 2005 (IEO2005) Arabic version.



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The twenty years since the creation of the Gulf Research Center have been an eventful period for the international energy landscape. Considering the centrality of oil and gas production and exports for the Gulf economies it is certainly not surprising that GRC has devoted considerable attention to energy developments, and in particular to regional energy cooperation and the transition towards a cleaner energy future.

It may be worth reminding that oil prices reached a very low point in 1999, the year before GRC was founded. They recovered somewhat the following year but remained rather moderate until the beginning of 2004. In 2003, when the United States and its allies intervened in Iraq to precipitate regime change, the expectation was that prices would remain very weak, because Iraq would rapidly expand production, thanks to regime change, the end of the sanctions, and possibly even exit from OPEC. But when it became clear that such expectations would not be fulfilled, prices started climbing exponentially, and continued to do so until the financial crisis in 2008-9. Then prices sharply decreased again, but recovered relatively quickly and remained very high until the summer of 2014, when growth in shale oil production in the US emerged as a more important factor than continuing geopolitical instability in the region, leading to a reversal of expectations and new decline in prices.

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spell of imminent peak of oil demand in the context of growing availability of oil reserves and production growth, creating conditions of almost uncontrollable excess supply. At the same time, increasingly strong pressure from public opinion, including in the GCC member countries, to contain carbon emissions and avoid climate change focused attention on sources of energy alternative to fossil fuels.

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In its early years the GRC energy program aimed at facilitating access to competent knowledge of international energy affairs in the region, for example through the publication in Arabic of the International Energy Outlook published by the Energy Information Administration of the United States for two successive years, 2005 and 2006. But very soon the research and publishing activity of GRC's energy program came to focus on issues of energy sustainability, which has been the defining feature of the program until today. This has meant predominant attention to renewable energy sources and their uptake in the GCC, but also to nuclear energy and energy consumption and pricing (subsidies).

In this context, the energy landscape has evolved from being underpinned by fear of a seemingly inevitable peak in oil availability, against continuously growing demand; to being under the



## Research and publications of clean energy alternatives

To begin with, in July 2007 the GRC held in Geneva a three-day Executive Learning Program on Nuclear Power Generation for Oil and Gas Producing Countries. The program was offered in cooperation with the Geneva Center for Security Policy, and saw the participation of high-ranking officials from all GCC member countries.

The following year saw the publication of a report by Eckart Woertz entitled Alternative Energy Trends and Implications for GCC Countries. The report dealt with major trends in renewable energies like solar, wind and biofuels, outlined renewable energy initiatives in the Gulf and asked which scenarios could unfold for the GCC countries. Rising domestic energy needs for power generation and desalination, favorable conditions for solar energy production, and interest in acquiring technological know-how were seen to make a perfect argument for renewable energy in the Gulf. Renewable energies can stretch the lifeline of the GCC's oil and gas exports, and have the potential to develop into a major pillar of the economy.

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In the years 2009 to 2013 the GRC was part of an international consortium including: Institute of Communications and Computer Systems of the National Technical University of Athens (ICCS-NTUA), Greece; Deutsches Zentrum für Luft-und Raumfahrt (DLR), Germany; Centro Nacional de Energías Renovables (CENER), Spain; Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME), France; University of Stavanger - Centre for Sustainable Energy Solutions (UiS), Norway; Electricity Supply Board International

(ESBI), Ireland; and Centre for European Policy Studies (CEPS), Belgium. The project received funding from the European Commission to implement the first phase of the EU-GCC Clean Energy Network.

**“ Create a network of GCC and EU entities, including universities, research institutes, corporations, administrations and utilities, to support and work on topics of mutual interest in the area of clean energy ”**

The project consisted of four main components. First, to create a network of GCC and EU entities, including universities, research institutes, corporations, administrations and utilities, to support and work on topics of mutual interest in the area of clean energy. Second, to operate and develop the activities of the network including capacity building events and joint research activities. Third, to disseminate information and advice for an increased knowledge among the GCC states on EU policies in the area of clean energy, and the promotion of joint demonstration projects being mutually implemented in this area. Fourth, to set-up a sustainability strategy for the established network to continue within the framework of a legal and financial structure.

The Network's focus was in particular on the following areas:

- Renewable Energy Sources
- Energy Demand Side Management & Energy Efficiency
- Clean Natural Gas & related Clean Technologies
- Electricity Interconnections & Market Integration
- Carbon Capture & Storage

The Network organized several international conferences and expert meetings, as well as training programs to facilitate the uptake of clean energy solutions. It also generated several publications either as self-standing studies or as reports in connection with international conferences or other gatherings

In this context, 2012 saw the publication of a book on Renewable Energy in the GCC Countries: Resources, Potential, and Prospects edited by Imen Jeridi Bachellerie. The book identified the important role that renewable energy sources can play in the future energy mix of the GCC countries; and looked closely at the major renewable energy initiatives and policies, as well as industrial and research capabilities in the region, with a specific focus on solar and wind energy technologies.

**“ In the context of the EU-GCC Clean Energy Network, in 2013 a paper was published entitled Sustainability and Competitiveness: A Pragmatic Approach to Solar Energy Transition in the GCC Countries ”**

The Gulf Research Meeting of 2012, third in the series, included a workshop entitled Energy Challenges in the Gulf, directed by Naji Abi-Aad and Mostefa Ouki. In it, the discussion set off from the realization that the energy balance of most of the Gulf countries has come under pressure as a result of rapid economic and population growth rates, including large energy-intensive industrialization programs. Several Gulf countries had started importing gas from outside the Gulf region (and continue to do so today). They also increasingly considered alternative sources of energy, including renewables and nuclear. Intra-Gulf energy exchanges through regional or sub-regional energy grids (electricity and gas) were also envisaged, and a GCC power grid already was operational, but overall cooperation was considered insufficient, and remains so to this date. In the context of the EU-GCC Clean Energy Network, in 2013 a paper was published entitled Sustainability and Competitiveness: A Pragmatic Approach to Solar Energy Transition in the GCC Countries. In it author Imen Jeridi Bachellerie argued that for a solar energy transition to be successful, it should be tuned to the local socio-economic priorities of the GCC region – centered on competitiveness and economic diversification. The paper formulated specific

recommendations on how to pave the way for a long-term solar energy transition that enhances both sustainability and competitiveness of the GCC economies.

In the same year a paper by Adel Gastli and Javier San Miguel Armendáriz was published, entitled Challenges Facing Grid Integration of Renewable Energy in the GCC Region. The paper concluded that barriers facing widespread application, as well as integration of renewables into the grid, are mainly related lack of clear policies and regulatory frameworks in most GCC countries. It recommended that the integration of renewables into the GCC grid be accompanied by the conversion of the current conventional grid into a smart grid.

A further paper published at the same time was entitled EU-GCC Renewable Energy Policy Cooperation – Exploring Opportunities. The authors of this paper (Rabia Ferroukhi, Haris Doukas, Stella Androulaki, Emanuela Menichetti, Andrea Masini and Arslan Khalid) pointed to the emergence of important energy challenges with economic and environmental implications. In particular, the region was experiencing astounding growth in domestic demand fueled by rising populations, economic growth, rapid industrialisation and infrastructure development. Rising demand and energy pricing structures prevailing at the time were putting pressures on government budgets. Exclusive reliance on fossil fuels and regional consumption patterns led to some of the highest per capita carbon footprints in the world.

A fourth paper published at the same time was entitled Opportunities for Integrated Energy and Water Management in the GCC. In it authors William N. Lubega, Apoorva Santhosh, Amro M. Farid and Kamal Youcef-Toumi focused on integrated energy and water management and discussed planning opportunities for the energy-water nexus and sustainable development of water and energy resources. The paper concluded with a description of opportunities for EU-GCC collaboration in the integrated energy and water management area.



2014 saw the publication of a book on The Political Economy of Energy Reform: The clean Energy-Fossil Fuel Balance in the Gulf, edited by Giacomo Luciani, Rabia Ferroukhi, and issued from A workshop held at the Gulf Research Meeting in 2012. The book stressed that climate change requires coordinated global responses. All nations, including major Gulf Arab oil producers, should implement policies to contain greenhouse gas (GHG) emissions. Yet all realistic scenarios point to the continuing global need for fossil fuels. The countries of the GCC thus face a dilemma between continuing development and use of their fossil fuel endowments and increasing reliance on low carbon sources, such as nuclear, solar or wind.

In the Gulf Yearbook of 2016, Imen Jeridi Bachellerie published an article on Renewable Energy Policies in the GCC: Challenges and Prospects. In it she argued that rapid population growth, increasing urbanization, the vital need for air-conditioning and water desalination, as well as energy-intensive industries are driving the GCC countries to burn growing amounts of their hydrocarbon production, or become importers of natural gas to sustain their fast economic development.

Last but not least, year 2018 saw the publication of the volume Energy Transitions in the Gulf: Key Questions on Nuclear Power, edited by Ali Ahmad. Several countries in the Middle East, including the United Arab Emirates and the Kingdom of Saudi Arabia, are in the process of planning, establishing or expanding their nuclear power programs. The official rationale for investing in nuclear energy differs from one country to another, but broadly speaking, it seems to emerge from the need to improve energy security through reducing the reliance on oil and natural gas to generate electricity and desalinated water. The key focus areas of the volume are the economics of nuclear power; nuclear security and potential for regional cooperation. The book was the product of a workshop held at the 2016 Gulf Research Meeting.

## Regional and International Energy Cooperation

In line with its broader mission of promoting regional and international cooperation, the GRC also devoted specific attention to cooperation in the field of energy, through bilateral or regional meetings and papers.

A first example of this kind was the publication in 2008 of a book on Fostering EU-Italy-GCC Cooperation: The Political, Economic and Energy Dimensions issued from a workshop held in

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cooperation with the Italian Institute of International Affairs in 2006. In the climate of preoccupation for availability of oil supplies and rapidly rising prices, prevailing at the time, the discussion focused on possible initiatives to stabilize prices and contain volatility. Among the proposals that were put forward was that of fostering cooperation in the development of strategic oil stocks.

In May of 2007 the GRC, in cooperation with the Fundación para las Relaciones Internacionales y el Diálogo Exterior (FRIDE) and EGMONT - the Royal Institute for International Relations, organized in Brussels a conference on What Future for the European Union's new Energy Security policy? The Commission's March 2006 Green Paper committed the EU to integrating energy issues more systematically into the Common Foreign and Security Policy (CFSP), and promised that energy security would not compromise the EU's commitment to promoting democracy and human rights. In focusing on the foreign policy dimensions of energy security, the seminar discussed in particular the interplay and potential contradiction between international promotion of democracy and pursuance of energy security.

In November 2007 the GRC organized in Singapore the Middle East & Asia Energy Summit. This event focused on the rapidly growing demand for hydrocarbon imports in Asia, and consequent closer interdependence between Asia and the Middle East. Oil and gas extraction requires sophisticated technological solutions and huge investments, while the increasing cross border transport of energy calls for international cooperation. Geopolitical tensions have to be eased while innovative transport and strategic storage solutions have to be found. Along the same lines, 2009 saw the publication of a report on India, GCC and the Global Energy Regime: Exploring Interdependence and Outlook for Collaboration. In 2014 a paper by Vijo Varkey Theeyattuparampil and Ali Vezvaei was published, entitled Transforming GCC's Oil and Gas Industry in the 21st Century: Opportunities and Challenges. The paper highlighted how the GCC National Oil Companies have invested in infrastructure development for exploration, production, refining, and distribution of crude oil and natural gas. However, some GCC countries have been experiencing severe shortages of conventional natural gas and rely on imports to meet their peak summer demands. The paper presented a SWOT assessment of the GCC's oil and gas industry and outlined key recommendations in the form of opportunities for the oil and gas industry.

Also in the same year a paper by Giacomo Luciani was published on The Potential for Gulf Energy Integration. In it the author argued that while cooperation on energy issues has been rather tardy among the member countries of the GCC, the fact is that such cooperation can potentially be very beneficial. This is true at the global as well as at the regional level. Overall, energy is an area in which cooperation, albeit rewarding, remains very difficult, because low cost and security of supply are viewed as essential components of national development, hence sovereignty.

On the wake of the collapse in oil prices in the latter half of 2014, the following year saw the publication

of a book on The Changing Energy Landscape in the Gulf: Strategic Implications, edited by Gawdat Bahgat. The book argued that extreme fluctuations in oil prices raise important strategic questions for both importers and exporters. In the volume, specialists from the US, the Middle East, Europe and Asia examine the rapidly evolving dynamic in

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**”**

the energy landscape, including renewable and nuclear power, challenges to producers including the shale revolution, and legal issues. The volume was based on a workshop held at the 5th Gulf Research Meeting (2014).

In 2015 the Gulf Research Meeting featured a workshop on Iran-GCC Energy Cooperation convened by Sara Vakshouri and Gawdat Bahgat. The workshop highlighted how Iran and the GCC shared energy interests that are particularly important given the sharp drop in oil prices since the mid-2014. Cooperation between Iran and Arab oil producers (and other producers such as Russia, Norway, Venezuela, and Mexico among others) was envisaged to accelerate oil prices recovery.

The critical oil price conditions in 2014 and 15 were also the focus of the article on Oil in the GCC Countries by Giacomo Luciani published in the Gulf Yearbook of 2016. The article analyzed how the price war that may be dated to OPEC's conference on November 27, 2014 continued in 2015 and showed no sign of soon leading to a new equilibrium. Crude oil production continued to exceed global demand; stocks were increasing, and, at the time of writing, prices remained on a downward slope.

In 2014 and 2016 the GRC also published two Energy Sector Reports for the Kingdom of Saudi Arabia, documenting the pivotal role of the country in the international energy landscape and the rapid evolution of its domestic energy structures.

**“ Early years of the Gulf Research Center also saw significant research achievements in the area of regional security ”**

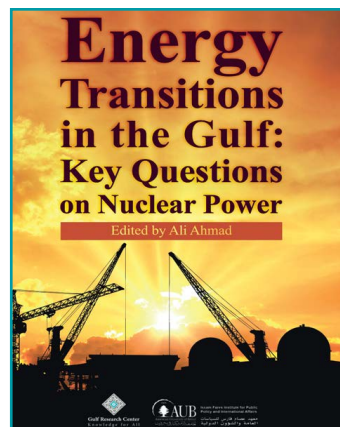
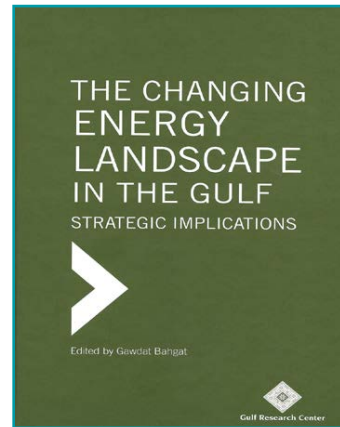
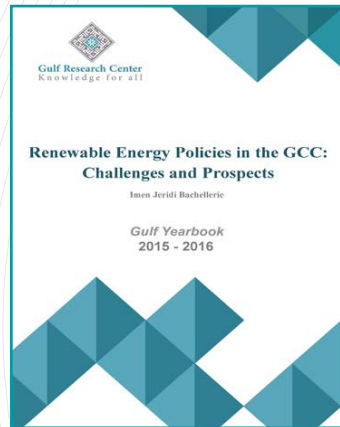
### Recent developments

Issues of economic and energy sustainability remain of great relevance for the GCC countries in the context of the intensified drive towards decarbonization and containment of global warming. Year 2020 witnesses the publication of a volume entitled *When can Oil Economies be Deemed Sustainable?* edited by Giacomo Luciani and Tom Moerenhout, issued from a workshop held at the Gulf Research Meeting of 2018. In it several contributors discuss about the future of oil and gas demand and potential strategies for hydrocarbon

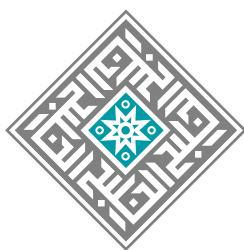
exporters to mitigate or even eliminate emissions connected to the production and use of hydrocarbons, through a combination of greater reliance on renewables, carbon capture and sequestration, and shifting to the production and exports of hydrogen rather than hydrocarbons.

The COVID-19 crisis has precipitated a collapse in global demand for oil and gas, which has been viewed as an anticipation of the inevitable peak and decline in demand. The implications of the crisis were discussed in a virtual conference on Gulf Energy Post-COVID-19, held in April 2020. The conference saw the participation of some of the most prominent international energy experts, and the debate, held under Chatham House rules, was summarized in a report published soon thereafter. While the world will recover from this latest crisis, it is clear that the latter will leave some profound consequences on international trade in general, and trade in energy products in particular. It will be recalled as a watershed in history, and a time when bold ideas, such as those put forward over the years by GRC's energy program, will need to be implemented much more forcefully.









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