

From Climate Antagonists to Low-Carbon Protagonists?

The Changing Role of the Gulf OPEC States in the UNFCCC

Axel Michaelowa and Mari Luomi



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- Surging domestic energy consumption in the Gulf region is increasingly threatening oil and gas export revenues. The United Arab Emirates, Qatar and Saudi Arabia are initiating multiple experiments to improve energy efficiency and introduce renewable energy, prompting the emergence of new domestic actors. Still, the legacy of *rentierism* hinders many of these efforts.
- The former antagonistic stance of the Gulf Cooperation Council (GCC) states in the international climate regime is being replaced by cautious signals of a more constructive engagement, such as in the willingness of Qatar to host COP 18.
- The resulting opportunities for constructive and innovative dialogues should not be wasted, and premature statements from Northern governments predicting a failure for COP 18 might be counterproductive. Climate diplomacy should instead try to strengthen the position of those groups in favour of new domestic energy policies.
- Technical support for Nationally Appropriate Mitigation Action (NAMA) pilot projects in the GCC by the EU and other progressive countries in the climate regime could serve as a catalyst for creating sustained synergies between new energy and climate policies in the region.

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1. Introduction

Revolutionary changes are taking place on the domestic energy agendas of Gulf OPEC monarchies, which are also active participants in the international climate negotiations. The fast-paced growth of the past decade and the states' multifaceted dependence on fossil fuels have introduced unexpected dynamics on the ground. As a result of soaring growth rates in electricity and desalinated water demand that eat up an increasing share of domestic fossil fuel production, three states in particular, the United Arab Emirates (UAE), Saudi Arabia and Qatar, are now increasingly focusing on the domestic side of resource security in their quest to maintain economic and political stability and citizens' welfare. Solar and nuclear energy, energy efficiency, new desalination technologies and carbon capture and storage, which can increase oil recovery rates, are on all governments' agendas, to varying degrees. The recent years' developments are also starting to reflect on how the three states perceive their interests and role in the international climate regime. While the role of the OPEC group led by Saudi Arabia and Kuwait has been seen as obstructionist by many, signs of a more proactive approach are now emerging—with the UAE having set up a Directorate of Energy and Climate Change in 2010, Saudi Arabia recently changing its long-term lead negotiator, and Qatar gearing up to host the 18th Conference of the Parties to the UN Climate Convention in late 2012.

This briefing paper first analyses the underlying factors that are driving the revolution of the Gulf domestic energy agendas, on the one hand, and engagements with the international climate regime, on the other. It then proposes a number of areas and ways in which the Gulf OPEC states, along with other Middle Eastern oil exporters, could engage with the international climate regime and carbon mar-

kets in a way that would bring both economic and environmental benefits for the governments, and better align the region's future energy and economic needs with the global fight against climate change and transition to lower carbon societies. Otherwise, the era of proactive climate policy in the Gulf Cooperation Council (GCC) states might be over before it has properly started.

2. Drivers of domestic energy security and sustainability agendas

The six states of the Gulf Cooperation Council (GCC) together own 30% and 20% of the world's proven oil and natural gas reserves, respectively, and are highly dependent on related export revenues, which constituted 34-54% of their GDP and 57-89% of government revenue in 2007-2011 (see also Table 1).¹ They share a number of historic, economic, political, demographic and social characteristics as well as economic and policy challenges related to natural resources. Most prominently, in the past decade, the GCC states' domestic electricity demand has grown at an extremely rapid pace, on average 8% per year in 2000-2009.² This demand growth is due to the rapid growth of GCC populations, high average consumption rates of electricity and water (see Table 1), harsh climate, and energy intensive diversification paths, which centre around the comparative advantage created by cheap energy and feedstock for heavy and downstream energy industries.

In some states, like Qatar, citizens receive electricity and water for free, while in others

¹ Economic dependence: Nominal GDP. QNB, *GCC Economic Insight 2012* (Doha: March 2012).

² International Energy Agency, *Energy Balances of Non-OECD Countries 2011* (Paris: OECD, 2011).

the cost of energy and water for citizens and residents remains highly subsidised, albeit to different degrees. The implicit social contract between the GCC governments and citizens is based on a complex allocation web of wealth derived from oil/gas export revenues, or 'rents', whereby the citizens expect provision of material welfare by unelected, but in most cases generally respected representatives of key families and tribes—hence the term *rentierism*. Any efforts to price energy and water according to the opportunity cost of fuel defined by the world market prices are therefore perceived as politically sensitive, particularly after the onset of the Arab Spring in early 2011. Thus, wasteful consumption patterns among consumers, disregard for energy efficiency in the construction sector, and large, high-consumption vehicles in transport predominate. Natural gas shortages (gas being the favoured source for domestic use due to its lower opportunity costs), and the use of crude oil for power production and water desalination are among the consequences.

Past years have seen an important transformation in the GCC states' energy agendas, with curbing the runaway growth of domestic electricity and water consumption rising as government priorities. Policy responses tend to be similar, albeit with important nuances, which stem from differences in the size of fossil fuel wealth in relation to (national) population, and elite autonomy, among others. On the negative side, related, recurrent features of GCC development patterns are duplication, competition and lack of coordination and data sharing—despite the stated GCC goal of creating a single trading area and exploring other areas of integration—most visible in the area of green building codes where different systems are being developed and implemented among and within the states. A positive example of cooperation is the interconnection of national electricity grids of all member states.

Below, we present a short analysis of the underlying factors driving domestic energy and sustainability agendas in each state.

The United Arab Emirates

Abu Dhabi holds over 90% of the UAE's proven oil and natural gas reserves. It provides massive transfers to other emirates through budget allocations and subsidised electricity and water. Since the mid-2000s, Abu Dhabi's leadership has set up two alternative energy initiatives, a civilian nuclear programme and the sustainable energy and technology company

Masdar. Besides contributing to the goals of economic diversification, knowledge-economy building, and providing jobs for the growing citizen population, both initiatives have important external political and economic motivations, including regional prestige, in relation to competitors Dubai, Qatar and Saudi Arabia, external branding, towards the West, which still provides much of the country's professional human capital and inward investment, and foreign trade relations. The iconic zero-carbon Masdar City eco utopia is a pertinent example of this. Launched in 2007, and originally planned to host 40,000 inhabitants by 2016, using the most advanced technologies conceivable, the project has been scaled down and deadlines have shifted far into the future.

The high and growing dependency on desalination for drinking water has prompted a number of successful pilot projects in water efficiency and conservation in the agricultural and residential sectors.

Due to delays in exploiting Abu Dhabi's substantial natural gas resources there is increasing pressure in all emirates to work on durable and sustainable solutions for domestic energy security to avoid burning of valuable liquid fuels for electricity production. Therefore, Abu Dhabi has announced a renewable energy goal of 7% of total capacity and is aiming at 5.6 GW (roughly 25% of total electric capacity) nuclear by 2020, while Dubai aims at a 1% production share of renewables by 2020 and 5% by 2030. Abu Dhabi has introduced ambitious building efficiency codes under the Estidama programme, while Dubai boasts the first modern metro system in the entire region.

However, the gradual withdrawal of electricity, water and gasoline price subsidies, initiated to different degrees in all emirates in the late 2000s, has slowed down after the onset of the Arab Spring in 2011.

Qatar

Qatar has been endowed with the world's third largest natural gas reserves, and owing to an extremely ambitious LNG export programme initiated in the 1990s, it became in 2006 the world's largest LNG exporter. After massive growth, Qatar has achieved the world's highest GDP per capita, and most of this wealth is concentrated among its citizen population, which accounts for less than 15% of the total population. Owing to its small population size and massive energy indu-

stries, Qatar has long held the unenviable title of having the world's highest per capita CO₂ emissions (see Table 1), roughly two thirds of which originate from the export sector.

Domestic energy policy in Qatar continues to be dictated by the still relatively comfortable availability of natural gas. This, combined with the government's high wealth allocation capacity, has removed the most immediate economic incentives for cutting fuel and utility subsidies. Some consistent efforts to educate the population on the need to avoid wastage of energy and water have recently been initiated, as part of the utility provider Kahramaa's broader Tarsheed ('conservation' or 'rationalisation') campaign.

As Qatar currently boasts a comfortable margin between electricity and water demand and available capacity and supply, the powerful Ministry of Energy and Industry continues to appear largely uninterested in larger-scale implementation of alternative sources of energy. But a narrow, yet consistent foundation for sustainable energy and environmental research and development is being laid under the auspices of Qatar Foundation, a government-funded vehicle for knowledge economy-building. Another government entity, the Qatar National Food Security Programme has proposed a massive solar desalination of up to 1 billion cubic metres per year (equivalent to roughly double the country's current total capacity). Some officials have optimistically floated a possible 10% share for solar of total electricity production by as early as 2018.

Saudi Arabia

Saudi Arabia is the dominant player in the GCC, given its total population of 27 million, position as a swing producer on the oil market, and role as the guardian of two holy cities of Islam. However, the Saudi GDP and CO₂ per capita figures are the lowest among the three OPEC members analysed here. Despite a rise in electricity prices for industrial, commercial and governmental consumers in 2010, they are kept substantially below the world market price. Some estimates place cost recovery at one third of production costs, if world market prices for fuels were applied.

During the 1980s and early 1990s, several hundred billion cubic metres of mainly fossil water were wasted in large-scale wheat cultivation, which made Saudi Arabia the 6th larg-

est wheat exporter in the world.³ Observers expect Saudi Arabia's non-renewable fossil water resources to deplete between 2025 and 2030, requiring massive expansion of desalination plants.

Despite an increasing domestic gas scarcity and the proximity to the vast natural gas fields of Qatar, Saudi Arabia does not import natural gas. In the past decade, Saudi Arabia has been diverting an important and increasing share of its oil production—now over 25%—for the power and water sector. According to some calculations, on an unchecked business-as-usual trajectory, Saudi Arabia could become a net importer of oil by 2038.⁴ As in Qatar, the first renewable energy projects are concentrated in the research sector, most prominently in the widely acclaimed King Abdullah University of Science and Technology (KAUST).

The King Abdullah City for Atomic and Renewable Energy (K.A.CARE) in Riyadh, was established in 2010 with the task of enhancing domestic energy security and creating new jobs by investing in alternative energies. It has recently floated a plan to install a massive 41 GW solar power capacity (equal to 170% of the current solar power capacity of Germany), within two decades as well as to construct 16 nuclear reactors by 2030.

Several energy efficiency strategies have been discussed in the past years, leading to the setup of the Saudi Energy Efficiency Centre. While actual measures so far have been limited, the national oil company Saudi Aramco's engagement in developing a country-wide energy efficiency strategy shows the growing relevance of this policy field. Water saving measures in the agricultural sector are planned to curb water demand by almost 20% by 2014 from current levels. In the residential sector, the Ministry of Water and Electricity has implemented an ambitious nationwide water conservation programme since 2005. The innovative programme has led to average savings of 25-35% among its participants⁵.

³ Elie Elhadj, *Experiments in Achieving Water and Food Self-Sufficiency in the Middle East: The Consequences of Contrasting Endowments, Ideologies, and Investment Policies in Saudi Arabia and Syria* (Boca Raton: Dissertation.com, 2006).

⁴ Glada Lahn and Paul Stevens, *Burning Oil to Keep Cool: The Hidden Energy Crisis in Saudi Arabia* (London: Chatham House, 2011), p. 2.

⁵ Khodran Al-Zahrani, 'Sustainable Development of Agriculture and Water Resources in the Kingdom of Saudi Arabia,' in: *Conference of the International Journal of Arts and Sciences*, (17), 2009, pp. 3-37.

Table 1: Energy and climate profiles of the GCC countries

	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
Population (million, 2011) ¹	1.3	3.7	2.8	1.7	27.1	7.1
GDP/capita (PPP, US\$, 2011) ¹	24,512	45,593	24,784	81,572	24,434	56,916
Share of proven global oil and natural gas reserves (%) ²	n/a (oil) 0.2 (gas)	6.1 (oil) 0.9 (gas)	0.3 (oil) 0.5 (gas)	1.5 (oil) 12.0 (gas)	16.1 (oil) 3.9 (gas)	5.9 (oil) 2.9 (gas)
Share of fuel revenue of merchandise exports and govt. revenue (2008-9, %) ³	69 85	95 77	83 87	83 57	89 89	65 80
Share of domestic fuel consumption in total energy production (%; 2010) ⁴	101 (oil) 100 (gas)	14 (oil) 108 (gas)	16 (oil) 59 (gas)	12 (oil) 19 (gas)	25 (oil) 100 (gas)	19 (oil) 121 (gas)
Per capita electricity consumption (kWh, 2010) ⁵ (Nb. global: 2,892, Middle East: 3.493, OECD: 8,315)	9,813	18,318	5,934	14,995	7,967	11,044
Gasoline prices (super, US\$ /litre, 2010) ⁶	0.21	0.23	0.31	0.19	0.16	0.47
Per capita CO ₂ emissions from fossil fuel consumption (t CO ₂ , 2009) and global ranking ⁷	28.8 5 th	28.9 4 th	13.7 14 th	40.1 1 st	16.2 12 th	32.0 2 nd
CDM projects submitted for validation (2012) ⁸	0	0	2	2	5	19

¹ Economic Intelligence Unit estimates, consulted in August 2012. ² BP, *Statistical Review of World Energy* (BP, June 2012).

³ Authors' calculations, various sources. ⁴ CIA, *The World Factbook* (Washington D.C., 2012).

⁵ IEA, *Energy Balances of Non-OECD Countries* (Paris: OECD, 2012). ⁶ GIZ, *International fuel prices 2010/2011*, 7th edition (Eschborn, 2011).

⁷ IEA, *CO₂ emissions from fossil fuel consumption* (Paris: OECD, 2011). ⁸ UNEP Risoe Centre, *CDM Pipeline*, (Roskilde, August 2012).

3. A catalytic role for the GCC in international climate policy?

Saudi Arabia, in particular, and the OPEC group, in general, have been perceived by the majority of other participants as slowing down international climate negotiations through a number of demands and tactics with the aim of securing the role of oil in the global energy economy. Many Saudi negotiators have been participating since the late 1980s and thus have unparalleled experience. Saudi Arabia's legacy in the UNFCCC includes blocking the agreement on the rules of procedure, which means that, up to the present, all decisions need to be taken by consensus (minus x). In 1991, Saudi Arabia pushed for the adoption of the principle of 'common but differentiated responsibilities,' which led to the emergence of the current division into Annex I and Non-Annex I countries and which to date has exempted the latter from binding emission reduction commitments. This, and other positions by which Saudi Arabia has sought to profile itself as an advocate of poor developing countries, have secured the country support from the region and beyond in a number of rather controversial positions.

In the most controversial cases, however, Saudi Arabia has relied on the support of its GCC OPEC peers. Throughout the 1990s and the first half of the 2000s, in the IPCC, Saudi

and Kuwaiti negotiators insisted on the scientific uncertainties regarding climate change. For many years, Saudi Arabia has also led a group of countries that have called for (financial) compensation for the negative impacts of international mitigation policies and measures. However, in contrast to other parties with an obstructionist's reputation, such as Venezuela or Bolivia, Saudi Arabia has in the past decade refrained from declaring opposition to a final outcome of a negotiation session.

Since the mid-2000s, signs of a diversification of domestic interests vis-à-vis the international climate regime have begun appearing. Most visibly, the GCC OPEC states have grown increasingly interested in the mitigation and enhanced oil recovery potential of CCS technologies, as well as the financial opportunities available through the clean development mechanism (CDM), and have started to consider adaptation to climate change. In 2006-2009, the UAE, Qatar and Saudi Arabia set up national authorities for the approval of CDM projects and have, in some cases, actively reached out to government agencies and companies to mobilize CDM projects. This effort has led to the emergence of a small but dynamic constituency interested in the successful implementation of carbon markets in the Gulf region in at least three UAE emirates and Saudi Arabia.

External political actions and gestures have followed the domestic changes. In 2009, Abu Dhabi won its surprise bid to host the International Renewable Energy Agency (IRENA) and Qatar declared its candidacy to host COP18, to be held in 2012. A rhetorical sea change however, happened in early 2012 when Saudi oil minister Ali Al Naimi publicly declared climate change to be ‘among humanity’s most pressing concerns’ and that Saudi industries would take leadership.⁶ At the same time, Mohammed Al Sabban, the Saudi lead negotiator since the start of UNFCCC negotiations, infamous for his hardline negotiating tactics, was quietly replaced.

Even before Saudi Arabia’s signs of more moderation, the UAE, led by Abu Dhabi, had begun developing its human capacity to actively engage in international climate policy, including through the establishment a Directorate of Energy and Climate Change (DECC) under the Ministry of Foreign Affairs in 2010. Until 2008-2009, despite its support for the OPEC group’s positions, the UAE had never been a vocal player in the UNFCCC. Since then, prompted by the emergence of new domestic players, particularly Masdar, and new foreign policy interests, in the form of hosting IRENA, the country has been gravitating towards the ‘middle,’ and has purposely but carefully sought to differentiate itself from the more controversial positions and demands of the OPEC and Arab groups, and most recently the new like-minded group. As a notable achievement, the new UAE delegation substantially contributed to the COP decision in 2010 to include carbon capture and storage (CCS) as an accepted project type under the CDM.

The UAE also participates in the Cartagena Dialogue, and the government has been actively engaging with South Korea’s Global Green Growth Institute initiative, including hosting the organisation’s regional office and launching in early 2012 a 10-year green growth plan. Despite its short existence and rocky path, Masdar has quickly become a driving force in developing CDM projects in the region. In mid-2012, the UAE boasted 5 registered projects, with another 14 in the validation pipeline.

Prior to announcing submitting its bid to host COP18, Qatar had been barely visible in the international negotiations. The COP bid, how-

ever, fits nicely into Qatar’s present foreign policy strategy to forge a unique and bold role for the tiny gas-exporting nation, coupled with serving as a venue for ever higher profile international events. Given its previously thin engagements with the UNFCCC and the growing complexity of the negotiating agenda, there are many challenges ahead for Qatar to set up a solid strategy as a COP host, and navigate the parties to an ambitious negotiating outcome.

While the GCC states have come a long way from their controversial role in the past, it is clear that the recent engagements of the three most dynamic GCC countries in international climate policy are still tentative and might suffer a reversal if the current initiatives end in failure or are not met by support by other parties. Therefore, industrialised countries willing to overcome the current doldrums should seek to proactively engage with key GCC states and their new, pro-mitigation interest groups to help make COP 18 a success.

4. ‘Lighthouse NAMA pilots’ as a tool to boost energy security and climate change mitigation in the GCC

Given the substantive technical potential for emissions mitigation in large sectors of the economy, GCC countries are an excellent testing ground for policies and large-scale attempts to reduce greenhouse gas emissions, known as Nationally Appropriate Mitigation Actions (NAMAs) since the Bali conference. Given the political constraints to introducing full-cost energy tariffs for residential users, the concept of ‘integrated climate finance’ could be tested. In this concept, the cost gap between fossil fuels and renewable energy technologies would be covered by the sale of emissions credits and a reduction of the difference between fossil fuel production costs and revenues from sale of these fuels on the world market. In his January 2012 speech, the Saudi oil minister stressed the potential for collaboration and partnerships between Saudi and European companies in the context of solar energy. While it will be difficult to convince European governments to directly subsidize such NAMA pilot schemes, technical support would certainly be seen as a serious means to engage in collaboration. As has been shown in the context of CDM-related North-South collaboration in other parts of the world, investing a few million euros in a series of pilot NAMAs in the Gulf region might be crucial for bringing new momentum into the

⁶ Ali Al Naimi, *Investing for the Future in Turbulent Times*, speech at the MENA Energy 2012 conference, Chatham House, London, 30 January 2012.

currently flagging international climate negotiations. Such NAMAs could include renewable energy roll-out, water-savings policies, improvement of domestic energy efficiency, and efficiency of transport systems. Here the EU could play a leading role, especially if the effort were to be integrated in a wider strategic frame such as the Desertec initiative or sectoral new market mechanisms. Obviously, an ambitious post-2015 treaty would be needed to bring prices for credits from new market mechanisms to levels where they become a significant incentive.

These lighthouse NAMAs could become a stepping stone for a wider integration of the GCC in the international greenhouse gas mitigation effort. The new renewable energy and energy efficiency constituencies in this region have repeatedly shown their willingness to consider mitigation commitments in the long run. A system which allows governments to generate emissions credits from CDM and new market mechanisms in order to bank them for future commitments would create trust that mitigation would not be disruptive to economic diversification and transitioning to more sustainable knowledge-based, low-carbon economies. Domestic financing, which will later be recouped through the sale of oil and natural gas freed for export, could mobilize negative or very low-cost options unlikely to be accepted under the market mechanisms. For this latter purpose, revolving funds should be set up, which initially receive government allocations to finance investment costs of the mitigation options and are replenished by earmarked revenues from the export of the saved fuel. Measures with costs above the credit price could be financed through integrated carbon finance by combining grants from the revolving funds and revenues from market mechanisms. Integrated carbon finance should stop where the benefit from the sale of emissions credits and export of saved oil becomes smaller than the cost of the measure.

5. Opening the window of opportunity

The last months of 2012 will yet again be a crucial period for international climate policy. The Gulf region, which so far has been either seeking to limit success in international greenhouse gas mitigation or standing on the sidelines, is on the verge of getting (pro)actively involved. The driving forces are many,

most importantly the rising domestic energy and water challenges, the economic diversification imperative, and the need to create new jobs for the growing national populations, as well as prestige and positive international reputation. But there are no guarantees that this positive turn will automatically materialise and be sustained. Policymakers, especially from the EU, need to support the fledgling climate policy interests in the GCC. The former need to take the latter seriously, with the aim of long-term, strategic collaborations. In the worst case, governments from outside the region would ridicule the GCC countries' efforts to take climate change seriously. This might lead to a backlash of reinforced stubbornness and obstructionism, for many years to come. The region's sense of pride should be nurtured, not suffocated.

The positive dynamics of the present could be harnessed through the kinds of lighthouse collaborative exercises described in this paper. By aligning their domestic energy and economic needs with the global fight against climate change, the GCC states would not only enhance their energy and water security in an environmentally and economically sustainable way. They would also reap a number of synergistic benefits, ranging from lower wastage of precious resources (with more left for future generations), increased competitiveness in 'future energies' (due to an early start in implementation), increased foreign direct investments and economic diversification (through new energy sectors and high-skill jobs), and improved human and environmental health (due to lower emissions).

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