GULF ECONOMIC UPDATE

Achieving Climate Change Pledges

Spring 2022

WORLD BANK GROUP
Middle East and North Africa Region
Gulf Economic Update

With a Special Focus
Achieving Climate Change Pledges

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<td>Government-Related Entity</td>
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CC countries experienced strong recovery in 2021 despite the continuing presence of the Coronavirus. Bahrain, Qatar, and the UAE had all fully recovered their pre-pandemic levels of growth by the third quarter with Saudi Arabia achieving this milestone by the fourth.

While it is premature to discount new potential outbreaks of Covid-19, the high vaccination rate in the GCC countries holds the promise of lessened economic effects from the virus if a new wave happens again. The intense but short-lived Omicron variant that appeared in December is a case in point. Its effects have largely disappeared from the scene within a matter of a few short months.

The war in Ukraine and associated economic sanctions coming on top of rising energy prices last year as the global recovery gathered steam add further uncertainty to the global economy. It will have significant effects, largely positive, on GCC countries, primarily from surging energy prices. The GCC region is expected to register strong surpluses on both the fiscal and current account balances in 2022, following improvements last year.

World Bank Staff estimate that GCC economies will grow by 5.9 percent in 2022 and will continue with strong momentum in the medium term driven by stronger hydrocarbon and non-hydrocarbon sectors.

International pressure resulting from the war in Ukraine and economic sanctions might trigger additional investments to expand hydrocarbon production in a bid to support energy security for major importers, particularly countries with large spare capacity such as Saudi Arabia and the UAE. Qatar and Oman are also likely to speed up investments of natural gas production planned for future years. This presents a conundrum since it might delay critical diversification towards a non-hydrocarbon economy in the GCC countries.

Policies geared to boosting competitiveness will become increasingly important for GCC economies to advance private-sector-led economic diversification. These policies include measures to stabilize the real effective exchange rate, strong supervisory regulation of key markets to support a level playing field, as well as continuing labor market and public sector employment reforms. These are themes which we have commented on regularly in the current and previous editions of the Gulf Economic Update.

More broadly, GCC countries face twin challenges of how to move to a more sustainable growth model that is less dependent on hydrocarbon and downstream petroleum sectors, while managing the transition to a global low-carbon economic environment that could see oil revenues reduced within the next few decades.

This will be a recurrent theme of future issues of the Gulf Economic Update (GEU). In this issue we focus on critical first steps towards higher level...
outcomes by revisiting energy subsidies, fiscal consolidation, and the importance of getting prices right for an enabling environment that can place the private sector at the forefront of the new growth model.
EXECUTIVE SUMMARY

The Gulf Cooperation Council (GCC) countries were characterized by a robust economic rebound from the pandemic in 2021 and the beginning of 2022 as well as a partial restoration of external and fiscal positions following deep plunges in 2020. COVID-19 infections spiked in December 2021 with the advent of the Omicron variant. But thanks to the lessened severity and lethality of the Omicron virus strain, as well as the successful high vaccination roll-out, the GCC has been able to weather the storm and resume strong economic activity. Easing of pandemic restrictions, and positive developments in the hydrocarbon market drove strong recoveries in 2021 across the GCC. Fiscal deficits across the GCC markedly improved and the GCC external balance is estimated at pre-pandemic levels for 2021, as energy prices and export earnings strengthened. The 3 percent rebound in real GDP growth in 2021, however, is relatively muted compared to other parts of the world due to the deep decline in oil prices witnessed in 2020 and the high reliance of GCC economies on the hydrocarbon sector.

The war in Ukraine is projected to provide a windfall for the GCC; it has also placed energy security at the forefront of major importers’ agenda, which could accelerate the global green growth transition. The GCC is projected to expand by 5.9 percent in 2022 and to continue recovery over the medium term driven by stronger hydrocarbon and non-hydrocarbon sectors. For the GCC region, the net macroeconomic effect of the war and associated economic sanctions is projected to be positive. The windfall will be registered as strong twin surpluses (fiscal and external) which should help to spur consumer confidence and investments in the GCC. There are risks to the outlook from slower global recovery due to the war and inherently from oil sector volatility. Yet the major opportunity from surging hydrocarbon prices is that it gives the GCC countries a major financial advantage to advance their green growth strategy and economic diversification. Our Special Focus elaborates on this.

The faster and bolder efforts to decarbonize the global economy, which the war in Ukraine is likely to speed up, implies that it is critical to invest the windfall in the GCC’s economic and environment transition. These global developments intensify the urgency to speed up the diversification of their economies to reduce the risk of their dependence on hydrocarbons, especially as countries around the world are committed to transitioning to greener development paths and the surge in hydrocarbon prices is already drastically hastening this transition in many countries.

Special Focus: Achieving Climate Change Pledges. GCC countries are facing limits to the oil economy on which they have flourished for the last
70 years. GCC countries face twin challenges of (i) how to move to a more sustainable growth model that is less dependent on oil and downstream petroleum sectors and that can provide valuable jobs for their inhabitants while (ii) managing the transition to a global low-carbon economic environment that could see oil revenues greatly reduced within the next few decades. The current situation has sometimes been portrayed as a threat to the GCC or at the very least as a trade-off between faster growth and climate sustainability. However, this Special Focus section reframes the discussion by focusing on the opportunities for the region to restructure energy subsidies, to become renewable-energy powerhouses, and the importance of getting prices right for an enabling environment that can place the private sector at the forefront of the new growth model. The section also highlights the fiscal space that can be created by rethinking energy subsidies and provides a political economy sensitive approach to addressing the concerns of households and industry. Linking the expected savings to investments in renewables and incentives for increased entrepreneurship and innovative sectors could represent a solution to one of the GCC’s greatest challenges, producing high income jobs for its youth.
Key Take Away Charts: Recent Trends in the GCC Economies

Most GCC economies achieved pre-pandemic recovery by end 2021...

...driven by positive developments in both the oil and non-oil sectors...

...as restrictions are lifted, and vaccine rollout is a success...

...resulting in narrowing fiscal deficits as oil prices rose in 2021...

...however, the GCC recovery is slower than comparators...

...highlighting the urgency to push forward the diversification agenda...

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...however, the GCC recovery is slower than comparators...

...highlighting the urgency to push forward the diversification agenda...
ملخص تنفيذي

شهد دول مجلس التعاون الخليجي انتعاشًا اقتصاديًا قويًا من جائحة كورونا في عام 2021 وأوائل عام 2022. بالإضافة إلى استعادة مراكز المالية العامة والخارجية إلى حد ما في أعقاب حالات الهبوط الحادة التي تشهدها تلك الدول في عام 2020. وكان معدل انتشار الإصابة بفيروس كورونا قد شهد ارتفاعًا حادًا في ديسمبر/كانون الأول 2021 مع اشتداد الوباء، إلا أنه بفضل طبيعة نزول تغيرات نمطية أوميكرون، ونجاحات حملات التطعيم، تمكنت دول مجلس التعاون الخليجي من تجاوز تلك العاصفة واستئناف نشاطها الاقتصادي القوي. وقاد تخفيف القيود المرتبطة بالجائحة، والتطورات الإيجابية في سوق النفط، إلى تحقيق نمو قوي في جميع دول المجلس، حيث تشير التقديرات إلى أن أرصدة الجهات الخارجية عادت إلى مستويات ما قبل الجائحة في عام 2021 مع زيادة أسعار الطاقة وإيرادات التصدير. وعلى الرغم من ذلك، فإن معدل النمو الإجمالي الحقيقي الذي بلغ 3% في عام 2021، يعتبر ضعيفًا إلى حد ما مقارنة بما تحقق في مناطق أخرى من العالم، وينصب على انخفاض أسعار النفط في عام 2020، وتحديداً بعد الصبر على الأسعار لفترات طويلة. ومن المتوقع أن تتيح الحرب في أوكرانيا مكاسب غير متوقعة لدول مجلس التعاون الخليجي، لكنها أيضاً أدت إلى وضع أروس اقتصادي جديد، مع اقتراب السعر الوقودي نحو الارتفاعات القلابية المبلغة، والتي تشير إلى أن دول مجلس التعاون الخليجي، أو على الأقل بعضها النافذة، قد تشهد انخفاضات كبيرة في عائدات النفط خلال العقود القليلة المقبلة. في الواقع، جرى في بعض الأحيان تصور الوضع الحالي أن هذه الأحداث الراهنة قد تتطلب على تغييرات كبيرة في قطاعاتهم الاقتصادية. ومع ذلك، فإن هذا القسم من التقرير المتعلق بالانتعاش الاقتصادي قد يعيد صياغة المناقشات المتعلقة بإعادة هيكلة علاقات أسرع النشاط على مدار العقود السبعة الماضية وكيفية تحويلها إلى عملية تحول اقتصادية دعم الطاقة، وتصبح مراكز محيطة بالمنطقة حيث يمكن اتخاذ القرار. ومع ذلك، فإن تهديدات أخرى قد تدفع العالم نحو مسارات إستراتيجية جديدة في مجال الطاقة، وتشمل تلك الاستثمارات في مشاريع الطاقة المستدامة والتحولات الإيجابية التي قد تساهم في تحسين اقتصادات دول مجلس التعاون الخليجي. ومن المتوقع أن تتيح الحرب في أوكرانيا مكاسب غير متوقعة لدول مجلس التعاون الخليجي، لكنها أيضًا أدت إلى وضع أروس اقتصادي جديد، مع اقتراب السعر الوقودي نحو الارتفاعات القلابية المبلغة، والتي تشير إلى أن دول مجلس التعاون الخليجي، أو على الأقل بعضها النافذة، قد تشهد انخفاضات كبيرة في عائدات النفط خلال العقود القليلة المقبلة. في الواقع، جرى في بعض الأحيان تصور الوضع الحالي أن هذه الأحداث الراهنة قد تتطلب على تغييرات كبيرة في قطاعاتهم الاقتصادية. ومع ذلك، فإن هذا القسم من التقرير المتعلق بالانتعاش الاقتصادي قد يعيد صياغة المناقشات المتعلقة بإعادة هيكلة علاقات أسرع النشاط على مدار العقود السبعة الماضية وكيفية تحويلها إلى عملية تحول اقتصادية.
رسوم بيانية عن الاستنتاجات الرئيسية: الاتجاهات الحديثة في اقتصادات دول مجلس التعاون الخليجي

المصدر: قطاع الممارسات العالمية للاقتصاد الكلي والتجارة والاستثمار، البنك الدولي.
الإعمال السائدة لتحفز القطاع الخاص وتبني نموذج نمو اقتصادي جديد. ويسلط هذا القسم أيضاً الضوء على الحيز الهام المتاح في المالية العامة الذي يمكن إنشاؤه عن طريق إعادة النظر في دعم الطاقة، ويوفر نهجاً يراعي ظروف الاقتصاد السياسي للتصدي لمخاوف القطاع العائلي وقطاع الصناعة. إن ربط المدخرات المتوقعة بالاستثمارات في مصادر الطاقة المتجددة والحوافز لزيادة زيادة الأعمال وقطاعات الانتركارات يمكن أن يمثل حلًّا للتصدي لأحد أكبر التحديات التي تواجه دول مجلس التعاون الخليجي، مما يؤدي إلى توفير وظائف ذات أجور مرتفعة لشبابها.
The recent spike in Covid-19 infections has been short-lived and economic recovery has resumed in the GCC, buttressed by surging commodity prices that will likely boost real GDP.

Covid-19 infections spiked in December with the advent of the Omicron variant. All six Gulf Cooperation Council (GCC) countries (Saudi Arabia, UAE, Qatar, Kuwait, Oman, and Bahrain) were impacted (Figure 1). Thanks to the lessened severity and lethality of the Omicron virus strain, as well as the successful high vaccination roll-out (Figure 2), however, the GCC has been able to weather the storm and resume strong economic activity. Similar to other high-income countries, such as the United States, new infections at the end of 2021 approached the low levels seen in the early fall and continue to drop rapidly in the first quarter of 2022.

While it is premature to discount new potential outbreaks of Covid-19, the high vaccination rate and the corresponding herd immunity of the population holds the promise of lessened economic effects from the virus if a new wave were to happen again. Indeed, the restrictions that were reinstated following the most recent outbreak were less stringent than in previous waves of the disease (Figure 3) and were rapidly unwound as new cases plummeted. Bahrain has become the first GCC country not requiring any documentation of testing or vaccination to enter the country (as of February 20, 2022) and the UAE now also allows unvaccinated visitors to enter the country freely (although still requiring a test). Saudi Arabia and Kuwait also removed the need for PCR testing on entry.

High frequency Google Mobility data among all GCC economies had been steadily recovering in 2021 and by the third quarter broadly reached levels last seen in 2019 before the start of the pandemic (Figure 4). Activity as recorded in mobility data, however, was set back in the fourth quarter at the outset of the new Omicron wave, but this proved to be very short lived. Mobility in the GCC bounced back by the first quarter of 2022 with the exceptions

1 The data cut-off for the economic estimates and projections in this report is March 25, 2022. Any data published after that date will be reported in the next edition.
of Kuwait and Oman where workplace activity remains subdued, but even in these countries retail and recreation activity has recovered strongly. Bahrain, Qatar, Saudi Arabia, and UAE had reached levels of mobility data last seen in 2019.

Rapid vaccine rollout, easing of restrictions, and positive developments in the hydrocarbon market drove strong recoveries in 2021 across the GCC.

Official quarterly GDP growth data also shows that three of the GCC countries (Bahrain, Qatar, and UAE) reached their 2019 GDP levels by the third quarter of 2021, closely followed by Saudi Arabia, which achieved parity by the fourth quarter (Figure 5). Oman is expected to achieve parity in 2022. The Purchasing Manufactures Index (PMI) is also above 50 in Qatar, Saudi Arabia and UAE which implies expansion. The strong performance of Qatar is especially noteworthy as the country completes preparations for the FIFA World Cup in December 2022.

Despite strong economic recovery, with GDP growth estimated to have reached 3 percent in 2021, the GCC countries as a group were still lagging behind other high-income countries by the end of 2021 (Figure 7). The lag is in part due to hydrocarbon dependence in the GCC and the fact that oil prices plummeted in 2020 as COVID-19 lockdowns became a global phenomenon. The drivers of growth in the GCC have been predominantly private consumption and fixed investment which are likely to
FIGURE 4 • ...with Mobility Data Reaching their pre-Pandemic Levels in Most Countries...

Source: Google COVID-19 Community Mobility Reports.
remain buoyant even as extraordinary fiscal expendi-
tures implemented to ease the effects of COVID-19
lockdowns are phased out (Figure 8). Due to the com-
modity boom, the GCC economies are likely to make
up for any lost ground against other high-income
countries that occurred due to the pandemic.

In 2021, GCC GDP growth was mostly due
to the non-oil economy; the exceptions were
Oman and Qatar where growth was more bal-
anced between hydrocarbon production and the
non-hydrocarbon economy (Figure 9). The non-oil
private sector is of critical importance in transforming
the GCC toward a more sustainable and greener
growth model. Diversification toward a sustainable
greener economy is an objective which is shared by
all countries in the GCC, and which is present in virtu-
ally all their national development plans (see Special
Focus section). The weight of the oil economy in the
GCC in the coming years will likely be raised by the
extraordinary demands that will be placed on GCC
hydrocarbon producers to compensate for Russia’s
energy supply, due to the war in Ukraine and its asso-
ciated economic sanctions.

The price of oil has been rising steadily
throughout 2021, following the historic lows
recorded in 2020. They have jumped even more
due to the conflict in the first quarter of 2022, repeat-
edly breaching US$120 per barrel (Figure 10). The
price of natural gas has also risen steeply in Europe
where prices have jumped by more than a factor of
ten relative to 2020.

Geopolitical tensions have kept energy and
food prices extraordinarily high. Trade and supply
chain disruptions caused by the conflict, coupled with
those induced by the pandemic, from which global
markets are still recovering, have led to higher global
grain and food prices. Food prices are especially
sensitive given the significant share of global exports
from Russia and Ukraine, which supply nearly 25

FIGURE 5 • Pre-Pandemic Recovery Achieved in
Most of the GCC Countries...

Note: Oman does not yet provide quarterly GDP data at constant prices. Figure Haver Analytics.

FIGURE 6 • ...with High Purchasing Managers Index (PMI) Indicating Expansion...

percent of global wheat exports. As a result, wheat prices have doubled since 2020 (Figure 11) and are at their highest level since April 2011.

Overall, the GCC countries are less vulnerable than their MENA countries to disruptions and price increases stemming from the crisis. The region’s overall trade relations with Russia and Ukraine stand at 0.8 percent and 0.3 percent of GCC’s global trade, respectively. However, Oman, UAE, and Qatar have a higher degree of exposure to wheat imports from Russia and Ukraine, at 58, 53 and 30 percent, respectively, of their total imports of wheat. Nevertheless, ample grain storage facilities imply no short-term danger of supply shortages.
Inflationary pressure is rising as supply bottlenecks drive up global prices and as aggregate demand improves, reversing the trend of negative CPI growth (deflation) in most GCC states.

With the reactivation of aggregate demand and associated supply side-value chain delays which are still present from the pandemic, the rise in commodity prices from the war in Ukraine and associated economic sanctions has led to a rise in CPI inflation in the GCC (Figure 12). Food and beverages as well as transportation have been the common components of the CPI that have risen the most in the GCC, with some countries (Qatar and UAE) also experiencing a rise in recreation prices. In Saudi Arabia, headline inflation registered 3.1 percent in 2021, as the VAT-driven impact on inflation dissipated, but was partially offset by higher food and transportation prices.

Inflation has also been observed in other high-income countries, which has prompted central banks in the US and the UK to raise policy rates. Given that GCC currencies are pegged to the US dollar, their central banks have raised policy rates in tandem with the US Federal Reserve (FED). Several more rounds of FED tightening are expected in the coming quarters which should act as an effective brake on CPI inflation in the GCC.

Fiscal deficits across the GCC shrank in 2021 as hydrocarbon market conditions recovered...

Overall GCC fiscal balances went from a deficit of 10.7 percent of combined group GDP in 2020 to a deficit of 2.5 percent in 2021. Combined GCC central governments revenues are expected to have grown by 30 percent in 2021; meanwhile, tougher fiscal discipline measures adopted by several countries kept a cap on expenditures which are projected to have grown by only 0.8 percent during the same period. Revenues from hydrocarbons form the bulk of the public sector’s total revenues, ranging from a low of 58 percent in the case of Bahrain to 90 percent in Qatar and Kuwait. Accordingly, fiscal balances which had been deeply in deficit in 2020 when oil prices reached their historical nadir have greatly improved in 2021 (Figure 13). While most GCC countries had announced tighter fiscal policies, it is

2 The exception is Kuwait whose currency is tied to a basket of currencies, which includes the US dollar, and is thereby partially affected by US FED policy rate decisions.
anticipated that the cumulative GCC fiscal position will strengthen for 2022.

Diversification from oil revenues is being pursued by all GCC countries with Bahrain (doubling the VAT rate to 10 percent), Oman, Saudi Arabia (with VAT at 15 percent) and UAE having introduced VAT; Kuwait and Qatar have yet to introduce this GCC wide measure but are committed to it. Additionally, the UAE announced the introduction of a corporate income tax to become effective in 2023. Oman stands out for having implemented the first Medium-Term Fiscal Balance Plan (2020–24), a fiscal consolidation program, which aims at putting public debt on a sustainable path through increased non-hydrocarbon revenues, expenditure rationalization and SOE reforms.

Public debt to GDP ratios, which had increased in 2020 in most GCC countries to combat the pandemic, are expected to remain stable or decline in 2021 (Figure 14). It should be noted that the levels of public debt in the GCC countries are relatively low with the exceptions of Bahrain and Oman.3

Exports and the current account in the GCC are also very closely tied to the price of oil (Figures 15 and 16). Despite the rise in food prices, the current account surplus has once again surged to more than 6 per cent of GDP with the rise in oil prices. For the time being, in an environment marked by no major shifts in the OPEC+ production strategy, the growth of net exports is mostly due to higher oil prices.

Saudi Arabia, Bahrain, and Qatar’s current account balances are estimated to return into surplus as energy prices and export earnings recover. In the UAE and Kuwait current account surpluses shrank in 2020 due to underperformance of both hydrocarbon and non-hydrocarbon exports mitigated by lower imports. However, as trade recovered in 2021 and export earnings increased, both countries registered wider current account surplus in 2021, with Kuwait reaching 25 percent of GDP. In Oman, higher hydrocarbon exports, reduction in public investment expenditure, and Omanization efforts that led to lower outward remittances all contributed to the marked

The overall GCC current account balance is estimated to have returned to pre-pandemic levels in 2021 as energy prices and export earnings recovered

3 While Qatar’s debt to GDP ratio is also relatively high at 59 percent to GDP, it needs to be compared to central bank reserve holdings in relation to GDP of 18 percent and QIA holdings in excess of 270 percent to GDP.
decline in the current account deficit, estimated to reach less than 4 percent of GDP in 2021, compared with 12 percent in 2020.

**GCC economies remain dependent on hydrocarbons despite efforts towards diversification over the last several of decades...**

As a result of the recent commodity boom, there is a risk that reform efforts to diversify the GCC economies away from oil may be delayed. In the year 2012, the oil economy represented 42 percent of total GDP in the GCC countries (GDP weighted average), whereas in 2022 the percentage that is expected is approximately 35 percent (Figure 17) which remains quite high. The rising demand for hydrocarbons caused by the war in Ukraine and associated economic sanctions, and the resulting windfalls that GCC energy producers will reap should be used to pursue deeper reforms to allow higher investments in the non-oil economy, as well as to move assertively to further develop renewable energy, climate friendly growth, and the private sector in general to generate jobs and wealth for citizens.

**Oil revenues for the public sector are another source of hydrocarbon dependence.** For countries that wish to provide high-income quality public services (such as education and health) and stability to cover recurrent expenditures (such as the wage bill and pensions), oil revenues are a source of acute volatility. As noted, oil revenues in the GCC average nearly 70 percent of total revenues.\(^4\) Nonoil revenues would therefore offer another vehicle to enhance the sustainability of public services.

As shown in Figure 18, a critical problem for GCC economies that are dependent on oil is that it is very difficult to expand non-oil exports. Only Bahrain, and to a lower extent UAE, have been able to make significant strides in non-oil exports, due in part to the running down of oil supplies in the former and in Dubai. For resource-rich GCC countries an impediment to export diversification that has been widely researched in the literature is the appreciation of the real exchange rate (the so called "Dutch disease").\(^5\) Appreciating real effective exchange rates, combined with a traditional growth model of higher

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\(^4\) GCC countries also have sovereign wealth funds which can and at times do act as stabilization mechanisms, but drawdowns are at the expense of future generations.

national labor costs, and weak total employment growth, act as a drag on export diversification and cost competitiveness.

**Industrial policies are being used to advance the drive toward diversification.** For example, Aramco has transferred 4 percent of its shares (the equivalent of $80 billion) to the Public Investment Fund (PIF) to boost assets under management and deploy capital to unlock investment opportunities in giga projects as envisioned in the National Investment Strategy.

**Despite the focus on managing the pandemic, the GCC countries continued to implement structural reforms over the past six months in areas with the potential to advance economic diversification...**

**BOX 1. TRACKING RECENT STRUCTURAL REFORMS (Q4 2021/Q1 2022)**

**Saudi Arabia continues to improve the investment environment:** The National Center for Privatization and PPP approved a new set of rules governing public-private agreements. Furthermore, Saudi Arabia launched new initiatives to improve the business environment, e.g., new services to investors to set up a business; developing the tourism sector such as the TROJENA project in NEOM; and attracting specialized labor by approving granting of golden residency to highly-skilled professionals.

**The UAE pushes forward green growth and business environment agendas:** The UAE and USA announced a $4 billion joint agricultural initiative to accelerate innovation for green agricultural and food systems over the next 5 years. In parallel, ADNOC announced a $127 billion capital spending plan for 2022–26 and approved the New Energies Strategy, aimed at reducing its carbon footprint and capitalizing on opportunities in renewable energy. Furthermore, the UAE government approved wide-ranging reforms to the country’s legal system to strengthen the economic, investment, and commercial environments. Finally, the UAE introduced a 9 percent corporate income tax (CIT) on businesses starting in June 2023.

**Qatar enhanced contract enforcement:** Qatar’s Shura Council approved a draft law concerning the establishment of the Investment and Trade Court to oversee legal disputes, including commercial contracts and bankruptcy disputes. Authorities launched the 1,000 Opportunities Initiative, allowing investors to obtain investment opportunities offered by major foreign and local companies.

**Kuwait enhanced competition:** Kuwait’s Parliament approved a new law in 2021 to protect economic competition.

**Oman opens property ownership for investors:** The Ministry of Housing and Urban Planning clarified the conditions under which expatriate investors could own real estate in Oman.

**Bahrain’s new economic growth and fiscal balance plan:** Bahrain announced a new economic growth and fiscal plan to enhance the economy’s competitiveness and to support its post-pandemic recovery. Furthermore, Bahrain introduced the Golden Residency Visa, which can be renewed indefinitely, to attract talent and investment.
As the coronavirus pandemic pressure fades, the global outlook is now dramatically altered by geopolitical tensions

As the recovery from pandemic-induced contraction had begun to gain momentum, the global economy is now faced with another supply shock from the war in Ukraine and associated economic sanctions. The conflict will have sizable economic implications through multiple channels, including commodity and financial markets, trade and migration links, and confidence. Globally, the economic impact would primarily be felt through higher commodity prices. Neighboring European and Central Asia countries are likely to suffer considerable economic damage due to their strong trade, financial, and migration links with Russia and Ukraine. The conflict has also raised the likelihood of a destabilizing wave of refugees, widespread financial stresses among some Emerging Markets and Developing Economies, a de-anchoring of inflation expectations, and food insecurity. A protracted conflict could heighten policy uncertainty and fragment global trade and investment networks.

Commodity prices surged after the start of the conflict, exacerbating previous increases. The increase in commodity prices comes on top of

a sharp rise since the start of 2021. In addition to the geopolitical risk premia, the overall rise in prices has been driven by rebounding demand for commodities as the global economy recovers from the pandemic. Production among OPEC+ countries has also been weaker than expected. With Russia accounting for 12.5 percent and 9.6 percent of global crude and refined petroleum exports, respectively, the negative energy supply shock has resulted in oil prices crossing US$100 per barrel in March 2022, for the first time since 2014 (Figure 19). Oil prices have thus been revised upwards without any major shifts in the OPEC+ production strategy. Higher energy costs have pushed up prices of other energy-intensive commodities, such as fertilizers and aluminum. Inventories of industrial commodities have fallen sharply, particularly for crude oil, natural gas, and tin.

The global outlook is clouded by uncertainty and subject to various risks. Global growth prospects will clearly be weaker and inflation higher. Swings in commodity prices and financial markets have been dramatic and volatility seems to be a feature of the outlook in the foreseeable future. Accordingly, economic forecasts are likely to be revised more frequently based on unfolding global developments and decisions that will affect the macroeconomic outlook.
Major energy importers will need to strengthen their energy security. Notably, European countries that remain highly dependent on Russian oil and gas, will, in the short term, search for potential substitutes that will likely focus on MENA and GCC hydrocarbon exporters as well as the United States.

Efforts to decarbonize the global economy are also very likely to speed up and intensify as a consequence of the conflict. Countries around the world were already committed to transitioning to greener development paths in their NDCs and latest COP agreements. The surge in hydrocarbon prices is already hastening this transition in many countries and in some a rethink of the role of nuclear energy is also in the offing. The rational for renewable energy has become more evident with higher hydrocarbon prices, including among the oil exporting countries.

Overall, and due to the limited trade relations between the GCC with Russia and Ukraine, the net macroeconomic effect of the conflict and associated economic sanctions on the GCC region is projected to be positive (Figure 20) with a significant financial windfall from higher energy prices. The hydrocarbon sector is expected to perform strongly in 2022, driven primarily by booming hydrocarbon prices. In addition, the successful management of the pandemic and the rapid rollout of vaccines opens the way for further gains in the non-oil sectors.

The GCC economies are projected to continue to recover over the medium term driven by stronger oil and non-oil sectors

The GCC region is projected to expand by 5.9 percent in 2022 before moderating to 3.7 percent and 3.3 percent in 2023 and 2024, respectively. The strong performance is driven primarily by the hydrocarbon sector, which is projected to collectively grow by 12 percent in 2022 with the gradual and scheduled expansion in supply among OPEC+ countries (Figure 21). With OPEC+ production cuts ending as announced by end-2022, growth of the hydrocarbon sector is then projected to moderate to 4.1 percent and 3.7 percent in 2023 and 2024, respectively. On the other hand, and as most of the GCC population is expected to be fully vaccinated by 2022, coupled with pandemic pressures fading away, the non-oil sectors are set to continue expanding by 2.7 percent in 2022 and 3.2 percent in the medium term. The main contributors to growth during the forecast period are private consumption, as all forms of social distancing are relaxed across the region, and fixed investments and exports, as higher oil receipts will be channeled through higher capital spending (Figure 22).

All GCC countries are projected to register strong recovery in 2022 (Figure 23). In Saudi Arabia, stronger oil output, which is anticipated to grow by
12.5 percent reflecting the gradual easing of voluntary output cuts initiated in 2021, coupled with firmer private consumption, reflected through an increase of religious tourism, and higher domestic capital spending—signaled through the PIF and other state agencies—should also enhance non-oil sector performance. Meanwhile, in the UAE, recovery is expected to strengthen in 2022 as oil production increases, according to OPEC+ planned

FIGURE 21 • GCC Growth is Primarily Driven by Hydrocarbon Sector...

FIGURE 22 • ...with Private Consumption, Investments, and Exports Mainly Contributing to Growth

FIGURE 23 • Individual GCC Countries are Expected to Register Strong Recovery Driven by the Hydrocarbon Sector...

Source: Macro-Poverty Outlook, Apr. 2022.
schedule, but headwinds to the tourism sector are expected with the disruptions of Russian and Ukrainian tourists’ arrivals. Oil production in Kuwait is also projected to increase by 8.6 percent in 2022 as new capacity at the Al Zour refinery comes online. Stronger domestic demand and credit growth will further build momentum of the non-oil sector. Non-OPEC GCC members, like Qatar, will also witness accelerated growth in 2022 on the back of a stronger hydrocarbon sector and the strengthening of the tourism sector as the country makes final preparations to host the FIFA World Cup 2022. Oman and Bahrain will experience strong recovery in 2022 benefiting from large projects implemented in the hydrocarbon sector—LNG projects in Oman and the development of oil refinery and shale oil projects in Bahrain.

In the future, international pressure might trigger production increases, in particular for countries with large spare capacity such as Saudi Arabia, and the UAE; this would materially boost economic activity. Similarly, and as Europe reduces its countries’ dependence on Russian gas, Qatar and Oman could benefit from ongoing expansion of LNG capacities to substitute for Russian exports and mitigate risk to energy supply. Qatar may speed up investments of natural gas production in the North Field which should see production increase by 60 percent at mid-decade. Furthermore, countries like Saudi Arabia, Oman, and the UAE that are able to deliver on and certify their green hydrogen energy projects could capture market share in Europe and replace Russian inputs of green hydrogen used in vehicles, heating, and shipping.

Overall, economic activity is expected to return to pre-pandemic levels by 2022—except for Kuwait in 2023 (Figure 24). In 2021, the recovery was subdued and highlights the continued reliance of GCC economies on the oil sector despite their diversification efforts. Furthermore, the recovery momentum lost steam as most governments tightened fiscal policy during 2021 (cutting spending on non-COVID related items and raising taxes) to address many public finance distortions that were building up prior to the pandemic. Paradoxically, the recovery from the pandemic’s twin shocks (demand- and supply-induced shocks) is projected to be the slowest in Kuwait, which is ranked as the most oil-dependent country among the GCC countries.

As hydrocarbon prices shift higher from an already strong position, the GCC region is expected to register strong twin surpluses in 2022.

The regional fiscal balance is projected to register a surplus in 2022—the first surplus since 2014—reflecting ongoing recovery, higher oil receipts, and fiscal consolidation efforts. Following record deficits in 2020, government finances in the GCC are expected to significantly improve over 2022–2023 (Figure 25). This is driven by a rebound in oil receipts, spurred by the sharp increase in oil and gas prices following the war in Ukraine and with the OPEC+ gradual lifting of production quotas. Furthermore, fiscal performance in the medium term is underpinned by authorities’ commitment to compress expenditures and build credible budget envelopes. Stronger oil revenues might entice governments in the Gulf to loosen fiscal policy somewhat; especially, those with lower oil-price breakeven points and healthier balance sheets like Saudi Arabia, UAE, Kuwait, and Qatar. So far, the 2022 published budgets across the region suggest the continuation of tight fiscal policy which is appropriate to further consolidation.
All GCC countries are expected to report a fiscal surplus in 2022 except for Bahrain, which is expected to report a deficit (Figure 26). In Saudi Arabia, the budget balance is expected to register a surplus of 9.1 percent of GDP in 2022 driven by higher oil receipts, with most of capital spending channeled through the PIF and other state agencies—signaling that the overall fiscal stance is more expansionary than officially reported through the budget, reflecting the absence of a unified budget in the country. This is also affecting the push for reforms to get the real private sector to become the main driver of the economy per Vision 2030. In the UAE, fiscal balances will receive a boost from both higher oil revenues and the introduction of CIT. Meanwhile, Kuwait is projected to register a large surplus of 13 percent of GDP in 2022, which will enable the partial clearance of US$7.7 billion in arrears that Kuwait’s finance ministry owes to other ministries and public bodies. Unfortunately, the Kuwait government might use this increase in oil price to delay much needed reforms. The continuation of high oil prices with a premium expected for natural gas in Europe from geopolitical tensions, as well as the EU’s recent classification of this hydrocarbon feedstock as a green target investment, should lead to surpluses for the fiscal balance in Qatar and Oman estimated at 3.4 percent and 4.4 percent of GDP, respectively. The fiscal deficit is projected to continue narrowing over the medium term in Bahrain, supported by high hydrocarbon revenues and implementation of fiscal adjustment measures under the Fiscal Balance Program (FBP).

Overall, government debt as a share of GDP is on a downward trajectory relative to peaks reached during the pandemic. In Bahrain, the debt-to-GDP ratio is projected to fall against the backdrop of narrowing deficits but continue to be elevated above 120 percent (Figure 27.A.). Meanwhile, Oman’s public debt-to-GDP ratio is forecasted to gradually decline to an average of 46 percent of GDP by 2024 supported by higher oil and non-oil revenues. Collectively, the region is projected to reduce the need to tap into international capital markets for financing needs during the medium-term supported by stronger fiscal positions.

However, contingent liabilities remain a problem in the GCC. For instance, the UAE’s government related entities (GRE’s) remain a significant source of vulnerability and risk to the public sector and the ability of GREs to meet their debt obligations
is uncertain specially in an environment of increasing interest rates (Figure 27.B). Abu Dhabi’s GRE debt increased by 32 percent from 2017 to US$64.2 billion in 2020, while Dubai’s GRE debt was US$51 billion in 2020 (IMF, Feb 2022). Despite changes in the composition of debt (i.e., a shift from loans to bonds and lengthened maturity profiles), Abu Dhabi and Dubai GREs face short-term rollover risks with a combined US$68.8 billion debt in 2021–23. GRE debt servicing capacity is low, and risks could be exacerbated by a prolonged pandemic and/or tightening global financial conditions. Contingent fiscal risks from GREs should be closely monitored and pre-emptively mitigated, and GRE efficiency and productivity must be improved.

Favorable oil market conditions are expected to improve external balances over the medium term...

Higher oil prices and exports are expected to strengthen GCC countries’ external positions, with the regional current account surplus projected to reach 14 percent of GDP and hover around 11 percent of GDP during the forecast period. With hydrocarbons continuing to dominate the GCC’s export basket, the recovery in global oil and gas demand and prices will drive the region’s trade performance. The region’s goods exports are anticipated to grow at higher rate compared to imports in 2022 before growing in tandem in the forecast period (Figure 28). The services trade balance will remain in deficit across the GCC, except for Oman and Bahrain, while deficits in the primary and secondary income accounts will persist, except in Kuwait (Figure 29).

Promising external balance positions across the GCC should help the region in rebuilding buffers that dropped significantly during the pandemic. Higher oil receipts and recovery of non-oil earnings as pandemic pressures ease and tourism travel picks up again, should strengthen foreign currency positions and build-up sovereign funds. Foreign reserves should also be re-shorn as GCC countries continue with tighter fiscal policies, which lower overall import spending.

Inflation is expected to pick-up in 2022 in most GCC countries, driven by stronger recovery, before moderating in later years...

Across all of the GCC countries, after nearly two years of low inflation and bouts of deflation, higher consumer prices are projected during 2022. With the exception of Saudi Arabia, where higher-base effects from the tripling of the VAT rate continues through most of 2021, as well as a doubling of VAT in Bahrain, price levels are expected to rise driven by strong recovery in the non-hydrocarbon sector and higher global food prices (Figure 30). Price controls...
and regulations of power, water, and fuel in most GCC countries offer protection from a full pass-through effect of higher global prices. Furthermore, and in light of the continuation of the US dollar peg, central banks in the Gulf are and will be on a tighter monetary policy path following the US Federal Reserve (FED) policy outlook (Figure 31). The recent FED decision to hike the policy rate by 25bp was matched by GCC central banks in the same amount. Higher rates will act as headwinds to domestic demand, dampening consumption and investments, and reduce further inflationary pressures. Accordingly, inflation is anticipated to hover around 2.2 percent in the GCC region during 2023–24, far below other markets. Risks to the outlook remain significant notwithstanding the recent oil price increase...

A prolonged war in Ukraine and associated economic sanctions could intensify policy uncertainty and fragment global trade and investment networks. The conflict as resulted in a broad-based supply shock to the global economy at a time when some parts of the world are still recovering from the pandemic. Furthermore, the degree of escalation and duration of the military operations will determine economic implications on commodity and financial markets, trade, and overall confidence. Despite their small contributions to global output and trade (around 2 percent), both Russia and Ukraine are important suppliers of essential commodities, notably cereals, fertilizers, gas, oil, and vital metals, whose prices in world markets have all soared. This could indirectly dampen non-oil recovery in the GCC region.

The battle against COVID-19 is not over yet. Although there is some optimism that the global pandemic is evolving into an endemic, the resurgence of cases in North Asia and regional lockdowns in important manufacturing hubs in China pose risks to supply chain disruptions. Furthermore, the risk of new variants that are vaccine-resistant could still emerge anywhere in the world. The GCC has passed through multiple infection waves, but the peaks have fallen rather than risen in terms of the death and hospitalization rates which are now mercifully low.

Higher oil prices and the financial windfall that they entail for GCC economies reemphasize the urgency to delink their path from oil and speed diversification efforts. The region is still strongly commodity dependent, which leaves it exposed to...
both near-term price declines and a longer-term shift away from hydrocarbons. If oil revenue holds near its current level, it will test the commitment to reform. The conflict has exacerbated the energy security risk. Higher oil prices exert more pressure on GCC countries for faster output increases to compensate for lost production from Russia and make up for OPEC members (such as Nigeria and Angola) that have persistently missed their quota, which could make GCC countries more dependent on oil. Structural reforms are therefore urgently needed targeting strong, sustained, inclusive, and greener growth; while at the same time hydrocarbon revenues should continue to play a valuable role in financing the transformation and adaptation of these reforms (see Special Focus section). Most notably, reforms that target private-sector development and growth and the creation of jobs is what is most needed.

Taking a closer look at exchange rate management in the future and continuing to implement competitiveness boosting policy reforms will become increasingly more important for GCC economies. The non-oil economy is now a much more important part of total GDP, but it will need a concerted push to expand non-oil exports. Saudi Arabia, as discussed in Box 1 on structural reforms in the GCC, has been leading a path toward these changes that need to be accelerated and sustained, with the Public Investment Fund enabling many industrial policies.

In addition to oil price volatility, fiscal risks in the region stem from large public sectors and state-owned enterprises. Oil price volatility and uncertainty in the oil market will continue, which is especially detrimental for the fiscal sustainability of the region. GCC budgets remain dominated by rigid and high spending on wages and transfers which hampers the capacity of fiscal reform. Contingent liabilities in the form of state-owned enterprises, such as those in the UAE, pose significant risks to the outlook. The GCC needs to move to a more targeted social safety net that could support necessary reforms on the fiscal side.

Tighter global financial conditions due to rising inflationary pressures would result in a monetary tightening in the GCC, further damping recovery. Central banks in the Gulf will import tighter monetary policy from the US by virtue of their dollar pegs, which will act as headwinds on domestic demand and recoveries in the non-oil sectors. Furthermore, tighter monetary conditions will raise debt servicing costs for existing loans, increasing vulnerability of households, businesses, the GREs, and the banking sector. This is also the case with debt servicing costs for the public sector. Governments in the Gulf have been issuing debt, in tandem with reserve drawdowns, to finance large budget deficits since 2014, although as noted most public debt to GDP is on a downward path among GCC countries.
Special Focus: Achieving Climate Change Pledges

Abstract

Countries across the world are committed to the decarbonization of their economies. For the GCC, the traditional view is that this creates an existential threat given the predominance of hydrocarbons. This Special Focus argues that ample opportunities exist for the GCC to successfully transition to a new development model that supports their diversification and fiscal consolidation agendas, while increasing the potential for economic growth and job creation. This will be a recurrent theme of future issues of the Gulf Economic Update (GEU). In this issue we focus on critical first steps towards higher level outcomes by revisiting energy subsidies, fiscal consolidation, and the importance of getting prices right for an enabling environment that can place the private sector at the forefront of the new growth model.

Restructuring energy (and water) subsidies, with resulting positive effects on fiscal space and balance of payments, would allay household and firms’ concerns towards certain decarbonization. It is also a first step in a strategy to address the GCC’s twin challenges of moving to a more sustainable growth model that is less hydrocarbon dependent and managing the transition to a global low-carbon economic environment that could see oil revenues greatly reduced within the next few decades.

Linking the expected savings to investments in renewables and incentives for increased entrepreneurship and innovative sectors could represent a solution to one of the GCC’s greatest challenges, that of producing high income jobs for its youth and women. The savings can also be used to protect the GCC against the effects of climate change such as drought and desertification, coastal erosion due to rising sea levels, and an increase in the intensity and frequency of climate related events such as flooding and cyclones.

Starting from the announced Vision statements and national commitments to a net-zero emissions economy, this note looks at critical first steps needed to usher in a Green Growth strategy that we will be revisiting in future issues of the GEU. It is not intended to provide prescriptive solutions but rather shine a light on win-win first steps around which stakeholder dialogue can begin.
The economies of the GCC have been hit hard by the twin crises: the Covid-19 pandemic and the concomitant oil price shock. 2020 and 2021 have been challenging years, but a well-managed pandemic response and a bounce back in oil prices in late 2021 has provided the basis for a robust economic recovery. More recently the war in Ukraine has provided temporary windfall profits from spiking energy prices that can be utilized to bring about lasting structural transformations to GCC economies. Over the medium term, however, it is important that the region seizes the opportunity to shed the old “brown” growth models and switch to a green resilient and inclusive development (GRID) model. COP26 concluded on November 13th, 2021. Although it did not manage to confirm pledges of $100 bn for climate finance (now postponed to 2025), it did manage to keep alive the original 1.5-degree target pledged at Paris and produced some important breakthroughs, including increasing the pace of implementing the Paris agreement, introducing a global goal on adaptation, and announced the need for $130 trillion of private capital to accelerate the transition to a net-zero economy and greater private sector transparency.

With COP27 scheduled to take place in Sharm El-Sheikh, Egypt in November 2022 and COP28 in the UAE in November 2023, the region has an excellent chance to shape the global agenda going forward, keep the 1.5-degree goal alive, and encourage countries to develop more ambitious Nationally Determined Contributions (NDCs) and long-term strategies for a green future. GCC countries can also take the lead in encouraging the G20 (responsible for more than 80 percent of emissions) to provide more climate finance to developing countries, build on the progress and commitments of COP26, and hold all countries accountable for meeting and exceeding their targets.

Limiting the world’s temperature rise to 1.5°C requires net human caused CO2 emissions to fall by 45 percent by 2030 and to reach net zero by 2050 (Figure 32). Even limiting the temperature rise to 2°C will require CO2 emissions to fall by 25 percent by 2030 and to reach net zero by 2070. Without any action the world is likely to warm by 2.7 degrees by the end of the century. Despite some positive signs, the COP26 pledges close less than 20 percent of the gap to the Net Zero by 2050 scenario. Implementing the pledges made at COP26 will result in warming of 2.2 degrees. To keep global warming below 1.5°C this century, the world needs to halve annual greenhouse gas emissions in the next eight years. Another way to consider the scale of the challenge is to look at global emissions which currently stand at around 4.5 metric tons per capita. The sustainable rate is 2.5 tons a figure that has not been seen since the mid 1950s (Figure 33).

Without any action the world is likely to warm by 2.7 degrees by the end of the century. Despite some positive signs, the COP26 pledges close less than 20 percent of the gap to the Net Zero by 2050 scenario. Implementing the pledges made at COP26 will result in warming of 2.2 degrees. To keep global warming below 1.5°C this century, the world needs to halve annual greenhouse gas emissions in the next eight years. Another way to consider the scale of the challenge is to look at global emissions which currently stand at around 4.5 metric tons per capita. The sustainable rate is 2.5 tons a figure that has not been seen since the mid 1950s (Figure 33).

**However, the GCC faces green growth challenges...**

Up until now, the GCC has been firmly on a “brown growth” strategy based around the exploitation

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and export of fossil fuels and the development of downstream industries that rely on heavily subsidized energy prices. The region’s natural endowments and economic policies have led to a situation where GCC members are among the countries with the highest emissions of CO₂ per capita in the world (see Figure 34). Saudi Arabia is among the top ten CO₂ emitters in the world (see Figure 35). Reducing CO₂ emissions in Saudi Arabia will impact national and GCC regional outcomes and ultimately affect global CO₂ levels.

As can be seen in Figure 36: GCC has potential to grow greener, there are many other countries with similar and even higher levels of GDP that have much lower emissions levels. With technological advancements and availability, GCC countries should start the transition process to a greener growth model.

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**Figure 33** • Per Capita CO₂ Emissions - a Long Way to go Still


**Figure 34** • All GCC Countries are among the Top CO₂ Emitters Per Capita (CO₂ Emissions Metric Tons Per Capita, 2018)


**Figure 35** • Saudi Arabia Amongst the Top 10 CO₂ Emitters (CO₂ emissions metric tons, 2020)


**Figure 36** • GCC Has Potential to Grow Greener (GNI and CO₂ emissions mt per capita, 2018)

GCC countries can become more like Norway, while Norway can become more like Switzerland by moving to lower emissions technologies for energy, transport, and real estate, while Switzerland and almost all higher income countries still need to bring down their per capita emissions to 2.5 mt of CO₂ per year. The latter is the sustainable rate at which the world will keep global warming below the 1.5-degree level. 9 GCC countries have taken bold actions and made several commitments to moving in this direction as the next section illustrates.

GCC countries can take firm measures to readjust their economies to a low carbon environment. CO₂ emissions continue to grow rapidly in almost all GCC countries (Figure 37) while most other OECD countries have managed to decouple their economies from emissions even prior to the pandemic.

The GCC countries continue to be committed to their climate change pledges...

The GCC countries take climate change very seriously since they are likely to be hardest hit by global warming. It is estimated that even if the world were to heat by 2 degrees, the Gulf region might see a 4 or 5 degree increase in surface temperatures. 10 Given that Kuwait already experiences summertime temperatures above 50°C, that could make the country effectively unlivable for many months of the year. It is estimated that Bahrain could lose up to 15 km of coastline with a rise in sea levels associated with a 2 degree rise in temperatures. UAE and Saudi Arabia are already among the most water stressed countries in the world. Despite this, they have suffered flooding in recent years. Rising sea temperatures also cause more intense storms, quite evident in Oman which suffers from regular devastating cyclones including Cyclone Shaheen which hit the country in October 2021 killing at least a dozen people and causing an estimated US$190 million of insured damages.

In the runup towards COP26, all GCC countries updated their NDCs and made additional bold climate change pledges and commitments. The UAE announced a commitment to net-zero emissions by 2050 while Saudi Arabia and Bahrain have pledged to achieve it by 2060. While not embracing a net-zero emissions (NZE) target, Qatar announced its aim to reduce GHG emissions and reduce carbon intensity of its LNG production by 25 percent by 2030.

Saudi Arabia has launched an ambitious national renewable energy program with a commitment to increase the percentage of its electricity generated from renewables from currently less than 1 percent to 50 percent by 2030 and to transform its existing power plant to gas, along with a pledge to spend SAR 700bn (US$187 billion) in climate action. The renewable energy expected to be generated from three main sources are 40 GW of solar PV, 16 GW of wind power, and 2.7 GW of Concentrated solar power (CSP) (AlOtaibi 2021). Saudi Arabia has also signed up to cut methane emissions by 30 percent by 2030.

Saudi Arabia has also championed global cooperation in the Circular Carbon economy, an idea that has received support from Kuwait and other GCC countries. Saudi Arabia has launched the Saudi Green initiative, which aims to plant one billion trees and raise protected areas to more than 30 percent of the country.

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10 One of the World’s Wealthiest Oil Exporters is Becoming Unlivable. Bloomberg Green, January 16, 2022.
In addition to introducing strong climate mitigation measures at home, Saudi Arabia has also launched the MENA Green Initiative and aims to provide 15 percent seed funding with a target to collect more than US$10 billion for green initiatives in the region (see Figure 38).

Likewise, the UAE, which is selected to host COP 28 in 2023, has created the world’s first Climate Change Ministry and has pledged to spend AED 600bn (US$163 billion) in clean and renewable energy up to 2050 in a bid to generate 23.5 percent of its electricity from renewables by 2030 and 50 percent by 2050. The UAE supports green infrastructure and clean energy projects worldwide and has invested in renewable energy ventures worth around US$16.8 billion in 70 countries with a focus on developing nations. Bahrain’s Joint National Committee on Climate Change launched a national renewable energy action plan (NREAP) targeting 5 percent renewables by 2025 and 10 percent by 2035. Qatar’s National Environment and Climate Change Strategy provides a strong policy framework to safeguard Qatar’s environment and implement Sustainable Development Goals (SDGs) – with ambitious plans in GHG emissions reduction & air quality, land-use, circular economy & waste management, water resource management and biodiversity.

In Oman, climate action is central in the country’s development strategy. In 2019, Oman adopted its National Strategy for Adaptation and Mitigation to Climate Change 2020–2040, addressing Oman’s development aspirations in the low carbon and resilient transition by driving employment, reducing climate risks for vulnerable people and sustainably managing national resources.
Kuwait recently made significant efforts by designing climate-smart projects, including desalination plants, improving data infrastructure for environmental research and wastewater treatment plants. Following the Paris Agreement, the Kuwaiti government passed a domestic policy setting a target of 15 percent of energy producing from renewable sources by 2030. However, significant policy gaps should be addressed, including in energy efficiency, private sector engagement and sustainable finance.

A summary of GCC climate change pledges and commitments is presented in Figure 38: GCC Climate Change Commitments.

By 2030, based on the current national commitments and project plans, GCC countries are on track to save the equivalent of 354 million barrels of oil using renewables. That represents a 23 percent reduction in oil consumption that would also create more than 220,000 jobs. It would also reduce the power sector’s carbon dioxide emissions by 22 percent and cut water withdrawal in the power sector by 17 percent. Given that renewable energy costs less than oil and gas fired energy, the efficiency gain from using renewables also boosts fiscal and balance of payments effects.

GCC countries are also increasingly involved in the global climate change dialogue towards action. In addition to joining and endorsing a series of global climate alliances, such as the Global Methane Pledge, the Low-Carbon, Climate-Resilient Health Systems: COP26 Health Joint Program, and the Network for Greening Financial Services (NGFS). 2021 was an important year for climate diplomacy in the region. Saudi Arabia and Qatar co-founded the Net Zero Producers Forum, along with the United States, Norway, and Canada. The UAE, Qatar, and Saudi Arabia participated in the Leader’s Summit in Climate—where they made a series of announcements, such as the Saudi Green Initiative and the Middle East Green Initiative, launched in April 2021. (Figure 39).

Despite these impressive set of commitments to low carbon and resilience building actions, there is limited progress achieving the bold commitments. Many of these commitments and actions lack broad institutional support, institutional capacity nor the adequate ecosystem for the private sector to foster an enabling environment and implement clear strategies aligned with this agenda.

The question is “how” to transition to low carbon economy...

At its heart, moving towards a low carbon economy is a new twist on the age-old story of how to diversify...
the GCC economies away from oil. In the past, GCC countries’ diversification strategies led them to move into high emissions sectors that relied on cheap energy and low-cost petroleum products for their competitiveness. The new paradigm is not just a diversification away from oil but a diversification towards green technologies. As seen above, the region is taking bold steps towards this end goal with ambitious country and regional commitments and clear vision strategies. There is broad agreement on “what” needs to be done to advance the low carbon transition. Now the focus is on “how” it can be implemented.

GCC are not the first countries to contemplate this transition. Several European and Asian countries have successfully made the transition away from a manufacturing base of high polluting industries to high-tech non-polluting industries. Countries like Germany, the UK, and South Korea offer excellent examples of what can be done with strong political will and public support (Figure 40).

The first step in the transition is to take stock of current energy usage and find ways to make it more efficient. Eliminating subsidies on energy and raising prices provide a monetary incentive for households and consumers to start thinking seriously about ways to conserve energy. Improving energy efficiency is the single most important element of moving to net zero emissions (see Figure 41).

Reducing emissions towards net-zero is multifaceted, complex, and will require addressing every sector with new policies, incentives, and a conducive framework to attract the private sector. Policies will have to include mitigation as well as adaptation elements to reconfigure business models, use new technologies, and develop the infrastructure and markets required to move to low-carbon. Figure 42 indicates the most prominent sectors to tackle. Clearly the electricity sector is the largest. Within the GCC approximately 70 percent of electricity production is spent on air-conditioning. Introducing emissions and efficiency standards for AC units as well as for better insulated homes can go a long way to addressing this but will take time to implement. Government can target the major

reforms to high emitting sectors and create niches for the first demonstrations and testing of new technologies.

GCC energy and carbon intensity can decline at a higher pace while there is an improvement to productivity. Such a decline would mean optimizing carbon emitting resources and increasing the use of cleaner resources, that is, using more renewable energy, implementing energy efficiency standards, and expanding the circular carbon economy (Figure 43).

The way forward for the GCC region to a win-win scenario...first steps

The world is moving towards green energy, but the old economy is unlikely to contract quickly. Policymakers in the GCC need to make far-sighted decisions to adapt to the transition, matching the climate dividend to the economic dividend.

Given the magnitude of the challenge, GCC governments cannot succeed alone but need the support of the domestic and international private sectors. How can GCC countries bring in the expertise and funding needed? Is there a way to achieve their targets ahead of time, moving towards a lower carbon economy while also increasing jobs and economic activity?

This section attempts to answer these questions with a focus on the following topics which we consider as first steps in the process of a comprehensive green growth strategy: (i) removing energy subsidies; (ii) scaling up renewable energy; and (iii) creating a conducive environment for green growth.

Energy Subsidies

Why fossil fuel subsidies should be removed

Traditionally GCC countries have provided cheap gasoline and energy to their citizens and businesses.
In some cases, such products are sold at less than the cost of production. This has come to be seen as an entitlement or citizen’s dividend: a way of sharing the benefits of GCC countries’ hydrocarbon endowments with their population. Low prices have in turn led to burgeoning demand from a growing population along with inefficient usage and wasteful practices both in households and industrial settings. Subsidized energy prices are the main driver behind GCC economies high per capita emissions as presented in Figure 43.

Providing energy at low prices has also effectively absorbed resources that could otherwise have been invested in modern social safety nets, roads, education, health care, or saved for future generations. In addition to the explicit subsidies (where supply costs are greater than retail costs) there are also implicit subsidies which is the gap between the actual price and the socially efficient price. The latter is the level at which prices would capture the costs to society of all the negative consequences of fossil fuel use such as pollution, traffic accidents, and global warming. Some industrialized countries tax energy heavily to capture these externalities and encourage a greener and more efficient production model but most still fall far short of efficient pricing (Figure 44).

In recent years, a combination of climate change awareness and the desire to limit emissions along with resource constraints have led many GCC countries to reconsider these policies. Subsidizing energy tends to be regressive since those that benefit the most from subsidies are the urban non-poor. This group tend to have larger homes that need to be cooled in the summer and heated in the winter. They are likely to own private cars rather than take public transport. A recent review finds that when fossil fuels are subsidized, the richest 20 percent of households receive six times more in subsidies than the poorest 20 percent. Withdrawing energy subsidies should therefore be a pro-poor strategy that can generate considerable savings for government that can then be reallocated to more productive uses. It can also divert oil and gas consumed for petrochemicals and fertilizer industries.

How much do energy subsidies cost the GCC?

Energy subsidies in the GCC result mainly from providing oil, natural gas, and electricity at lower than market prices (the bulk of the latter is used to power air conditioning units in the summer months) and in many cases lower than the cost of production.

Figure 45 illustrates the breakdown of energy subsidies in the GCC (including both explicit and implicit subsidies). Saudi Arabia is the most affected country in the GCC, losing an estimated US$158 billion a year in energy subsidies or 22 percent of GDP. The UAE is the best performer in terms of GDP although it comes second after Saudi Arabia in absolute terms with US$27 billion lost, each year, in explicit and implicit energy subsidies.

A further breakdown of subsidies by component indicates that the explicit losses are only a small fraction of the total losses to society (Figure 46). To effectively end the subsidies associated with energy in the GCC will require not simply recovering the total costs of supply but also taxing the sale of energy domestically to capture the externalities. The first step would be to move towards cost recovery and then towards international market prices. Making a regional decision on retail prices could also be important as large discrepancies in retail prices have, in other regions, often led to smuggling of petroleum products to take advantage of arbitrage opportunities. Of course, this could be done simultaneously while modernizing the social safety net for the society.

to eliminate hardships of the lower income segments of society.

Removing energy subsidies has the potential for substantial welfare gains. It is estimated that GCC countries could recover US$57 billion or 5 percent of GDP annually if explicit subsidies alone were removed. The bulk of the gains in absolute terms would accrue to Saudi Arabia (see Figure 47). However, Bahrain stands to benefit the most as a percentage of GDP (7 percent). Raising energy prices to cover costs will support the GCC efforts for fiscal consolidation, helping to pay down deficits run up during the pandemic years but will also have additional benefits such as reducing CO₂ emissions and premature deaths from air pollution.
Raising retail energy prices will also ensure that renewable energy projects become more financially attractive, supporting the energy transition to a lower emission economy. Higher domestic prices for fossil fuel products will inevitably lead to lower demand as consumers will choose smaller and more economical vehicles and appliances as well as better insulated homes. The reduction in domestic demand will have a knock-on effect in that GCC countries will be able to sell the saved supplies at market prices rather than providing them to domestic consumers at subsidized rates, thereby potentially raising revenues for the government without having to invest in creating increased production capacity. Alternatively, this could be diverted to higher value-added petrochemicals or fertilizers. Increased revenues can be used to directly compensate the most vulnerable groups who will have to bear the higher costs.

Given all these arguments it is no surprise that the G20 has repeatedly called for a phasing out of inefficient fossil fuel subsidies. The International Energy Agency has also stated that, “In the next few years, all governments need to eliminate fossil fuel subsidies,” in a 2021 report laying out a road map to a world with net-zero carbon emissions. Many countries are moving in this direction including those in the GCC and yet progress remains slow. What is holding back quicker removal of subsidies?

There are a few key reasons why it remains difficult to end fossil fuel subsidies including: the strength of the industry lobby, a concern that rising prices will hurt the poor, concern over the future of industries that have relied on low-cost energy for their competitiveness, and a concern that rising fuel prices will feed into inflation and dampen economic growth.

Countries that have tried to remove subsidies rapidly and without consultation have often been faced with widespread protests that have in turn resulted in back-tracking on the price rises. Those that have succeeded have often put in place a social safety net to protect the most vulnerable or expanded an existing scheme with cash transfers. Price increases have been transparently communicated and introduced gradually over time.

Governments can also soften the blow by targeting future subsidies at industries and firms that could be hurt. For instance, providing incentives for fossil fuel companies to migrate into renewables or investments in replacement industries and re-skilling in areas that have traditionally been heavily dependent on fossil fuels. As the GCC has diversified into energy-intensive industries such as chemicals, plastics, and metals and mining these companies will see their costs rise and an increased pressure to increase the efficiency of their production processes to compensate for higher energy costs.13 Judging from how these industries have fared with price increases to date it seems that gradual increases have been manageable across the GCC. In the future we would expect a combination of adjustment through improved efficiency and a rotation out of energy intensive industries towards high-tech non-polluting industries as well as a switch to lower cost solar/wind/hydrogen energy as it comes on stream.

Renewable energy is the new oil

As we witness the slow sunset of the fossil fuel industry, we are simultaneously witnessing sunrise on the renewable energy industry. The promise of renewables has long been talked about, but several false dawns have caused investors and observers to be cautious. However, recent technological developments have moved ahead of even the most optimistic commentors, and we are now in an age where energy derived from renewable wind and solar is far cheaper than that from oil and gas (Figure 48).

The cost of large-scale solar energy projects has fallen by 85 percent in the last decade. There has been a significant decline even in the last five years with the cost per kilowatt hour falling by about 75 percent from $0.50 to $0.135. The International Renewable Energy Agency (IRENA) suggests that two-thirds of the wind and solar projects built last year will be able to generate cheaper electricity than even the world’s cheapest thermal plants.

13 Energy price reforms in the GCC. IMF 2015.
Just as the GCC countries are fossil fuel leaders so too can they become renewable energy powerhouses. The GCC region has the lowest price solar energy generation with Saudi Arabia and UAE vying to break records with every new installation, reaching close to 1 cent per KW. The GCC countries have a tremendous comparative advantage with much unused land that is highly suited to house solar installations needed for the energy transition. Coastal regions also have tremendous wind potential. The location of the GCC within the sunbelt also brings with it a match between peak sun hours and peak electricity demand in key export markets.

Furthermore, the development of alternative energy sources can help the GCC to meet their increasing domestic energy demands resulting from general economic development, together with population growth and increasing standards of living. Additionally, developing alternative energy sources is in line with the GCC economic diversification strategies embodied in various vision documents that aim to diversify the economy by substantially reducing reliance on hydrocarbons. Within this context, the GCC countries have been actively engaged in joining global forces to addressing climate change and managing energy transition both at international and domestic levels.14

A good example of this is Saudi Arabia’s plans to adopt a circular carbon economy approach (CCE) in line with its economic diversification plan, Vision 2030 and its commitment to reach 50 percent renewables by 2030. To meet its renewable energy target the Kingdom plans to spend up to $50 billion on new infrastructure by 2023. Saudi Arabia has also added ambitious targets for localization to ensure that job creation will benefit Saudi nationals, especially the youth. The UAE National Energy Plan 2050 calls for clean energy to represent 50 percent of the nation’s total energy mix by 2050. That would reduce the carbon footprint of power generation by 70 percent, bringing with it cost savings estimated at $190bn.

It is predicted that the world will have to increase its annual clean energy investment by more than seven times—from less than $150 billion in 2020 to over $1 trillion by 2030—to put the world on track to reach net-zero emissions by 2050. These energy and other changes could bring in massive investments that could create employment for GCC citizens, especially the youth. If education and

training in the region focused more on the changes to come, those employment benefits could be multiplied. However, turning these ambitions into reality will also require the right government policies and regulations. The following section highlights some key principles.

Creating a conducive enabling environment

Moving away from the status quo

Regulated low energy prices for industrial use have played a critical role in structuring GCC economies around energy-intensive industries. This has significant costs, hampering long-term competitiveness of GCC industry, and diverting scarce fiscal resources from investments in new skills and infrastructure that could support a new low-carbon knowledge-intensive economy. Subsidies also favor incumbents over new entrants and innovation-seeking private-sector firms and reduce the incentives for improving operational efficiency. Additionally, the billions spent on fossil fuel subsidies creates a powerful lobby to maintain the status quo. This is the reason that, despite all the arguments for removing fossil fuel subsidies, they remain larger than the amounts governments devote to clean energy.

Moving towards a green economy

In a green economy, growth in income and employment is driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, create new industries and jobs, and prevent the loss of biodiversity and ecosystem services. The key aim for a transition to a green economy is to “eliminate the tradeoffs between economic growth and investment and gains in environmental quality and social inclusiveness…the environmental and social goals of a green economy can also generate increases in income, growth, and enhanced well-being” (UNEP). The development path should maintain, enhance and, where necessary, rebuild natural capital as a critical economic asset and as a source of public benefits. This is especially important for poor people whose livelihoods and security depend on nature.

The green growth policy framework

There is a three-step approach to the policy framework: (i) remove fossil fuel subsidies; (ii) introduce a carbon price; and (iii) stimulate innovation and green technologies.

For the policy to be successfully implemented there needs to be a shift in public attitude towards the true costs of using fossil fuels and an understanding of the damage that subsidies are doing to the GCC’s long-term prospects. Social and political support for the transformation will be essential. Deepening and extending the coverage of existing social protection programs, reducing income and wealth inequality, broadening access to finance, jobs, markets, and education, and maintaining a dialogue with the major industrial players will all be important to ensure that key stakeholders can cope with the change in domestic energy costs and the deep structural changes in the economy.

Introducing a carbon tax or a carbon price is often seen as an environmentally effective but highly politically sensitive step. Carbon pricing aims to increase the costs of polluting fuels and technologies effectively capturing the externalities involved in fossil fuel use. It also has the advantage of potentially raising fiscal resources that can then be used to support clean energy. But it is also equally sensitive as removing energy subsidies and must be handled in the same careful manner to avoid economic hardship for vulnerable communities and potential social unrest.15

An additional way forward is to adopt emission, efficiency, and product standards that are in line with international best practices. The reciprocal adoption of environmental standards for fuel efficiency that prevail in major consumer markets such as the EU, can help GCC countries maintain access and competitiveness amid increasing consumer preferences for green

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products. Adopting such standards and using Carbon Capture and Storage (CCS) to offset emissions could lead to GCC products being branded as having a low carbon footprint. It could also support the scaling up of innovative environmentally sustainable products.

Initiatives to remove subsidies and introduce carbon taxes can be supported by targeted public expenditure, policy reforms, and regulation changes that support clean energy. Expenditures can be focused on adding new capabilities to the economy, rather than adding value to hydrocarbons, and prioritizing non-oil produced assets, human capital and renewable natural assets over oil-related products and services. Governments in the GCC also need to remove preferences for industries within the hydrocarbon value chain and prioritize those that can discover new greener sources of comparative advantage and shelter the oil and oil-dependent exports from external policy shocks.16

Sustainable Finance Strategies for Green Growth

GCC countries’ commitment to adopt a green growth approach can be supported by sustainable finance practices through a whole of economy approach. Governments can adopt sustainable finance guidelines and taxonomies in national expenditures (e.g., green budgeting) institutional and governance mechanisms, and in the financial/banking system to manage climate risks and exploit opportunities from green investments. Sustainable finance represents a great potential for the GCC by facilitating clean energy technologies, and green financial instruments such as green bonds and green sukuks.

GCC countries have already adopted a series of programs and reforms to crowd in foreign capital and improve the business environment for climate-smart investments. It is important to keep improving the business environment and incentivize the industries that would create the diversification and contribute to green growth. Countries in the region have implemented Environmental and Social Governance (ESG) investment principles to encourage sustainability reporting and are increasingly involved in diversifying their financing debt instruments such as green bonds and green sukuks. A few examples are listed here. The National Bank of Abu Dhabi was the first to issue a green bond in the region in 2017. The UAE was also the first country to the GCC’s first green Sukuk to finance energy efficiency investments. More recently, Abu Dhabi issued a Sustainable Finance Declaration which documents its commitment to addressing climate change and the pursuit of a sustainable growth pathway. The authorities in Bahrain are promoting investments in green projects and working on the development of innovative financing structures to serve growing investment needs in green industries. However, GCC countries can also establish legal enforcement mechanisms for an effective use green finance guidelines and policies through penalties for corporations that violate ESG obligations and increase awareness of sustainable of the benefits of finance.

Creating the conducive environment for green growth

All GCC countries have long-term vision statements that highlight the role of the private sector in future economic growth. Given the size of the investments that are needed, even GCC governments with deep pockets cannot finance the transition without the support of the private sector and know how that accompanies FDI.

Earlier World Bank studies have shown that asset diversification along with climate change mitigation co-benefits represent the best strategy for moving to a low-carbon economy.17 However, because the comparative advantage of GCC countries in energy and emissions intensive products is so entrenched, additional domestic policy efforts are needed to transform their dependence on the fossil fuel-intensive value chain. In addition to offering a conducive environment for private sector participation, GCC governments can also consider explicit support policies. Below are some concrete ideas that GCC countries can pursue in this endeavor:

17 Peszko et. al. 2020.
• **Green public procurement**: defined as the acquisition of goods, works, services, or consultancies whose results have the least possible harmful effects on the environment, human health, and safety when compared to other competing and similar acquisitions or, those that make a positive impact on the environment. GPP can be a major driver for innovation, providing industry with incentives to develop environmentally friendly works, products, and services. Most OECD countries have already adopted GPP initiatives and are tracking outcomes.  

• **Public-Private Partnerships**: PPPs will be crucial to economic recovery and diversification efforts in the post-pandemic era. They can take several forms from management or operating contracts to concessions through to full privatization, depending on the level of private sector involvement. Although PPPs have been successfully utilized in the energy sector, they remain underutilized in other sectors due to uncertainty over the supporting legal framework for PPPs. A comprehensive PPP ecosystem with a successful PPP law would permit 100 percent private sector participation, repatriation of profits, appropriate dispute resolution processes, consistency with other legislation, and government support. This should be enhanced by capable and independent regulator, a transparent bidding process, and a clear and reliable dispute resolution system.

• **Low carbon transportation systems**: Transport is the second largest sector for GHG emissions, but it receives the largest subsidy. GCC countries have made progress in this area by introducing mass transit systems. Rail links between the GCC countries can be accelerated and the use of electric and hydrogen powered vehicles and even trains have a potential to further green the transportation sector.

• **Improving the built environment**: GCC countries continue to grow rapidly. While many of the new planned cities incorporate energy efficiency aspects such as building certifications, only a few (mostly to be constructed) cities are incorporating a comprehensive low-carbon development approach. NEOM in Saudi Arabia is one such city, planned without cars and incorporating a clean underground transportation system. Compulsory energy certification systems and incentives for Leadership in Energy and Environmental Design (LEED) certified projects as well as subsidies for retrofitting existing buildings can generate savings and build consensus and momentum towards a low carbon economy.

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US Energy Information Administration

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## ANNEX 1
### GCC SUMMARY
#### STATISTICS TABLE

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<td>-0.2</td>
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<td>0.6</td>
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<td>1.3</td>
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<td>GCC, Net Exports, Contr. to Growth %</td>
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<td>2.0</td>
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KEY ECONOMIC INDICATORS

BAHRAIN

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### Kuwait

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**Memorandum Items**

Hydrocarbon sector, % GDP | 60.0 | 57.3 | 53.8 | 53.5 | 53.2 | 51.6 | 48.9 |


### Oman

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**Memorandum Items**

Hydrocarbon sector, % GDP | 26.6 | 29.7 | 35.9 | 34.4 | 28.1 | 29.3 | 32.1 |

### Qatar

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| **Merchandise Imports, % nominal change**     | -21.5| 17.5 | 20.4 | -10.3| -21.9| 19.8  | -1.8  |
| **Current Account, % GDP**                    | 7.1  | -2.0 | 5.8  | 1.5  | -2.7 | 5.5   | 2.4   |

**Memorandum Items**

| **Hydrocarbon sector, % GDP**                  | 39.9 | 39.6 | 39.0 | 38.0 | 38.7 | 38.7  | 38.0  |


### Saudi Arabia

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**Memorandum Items**

| **Hydrocarbon sector, % GDP**                  | 40.1 | 38.9 | 38.0 | 37.4 | 36.4 | 35.3  | 37.1  |

### UNITED ARAB EMIRATES

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**Memorandum Items**

| Hydrocarbon sector, % GDP | 30.6 | 29.0 | 29.3 | 29.1 | 29.1 | 27.8 | 29.0 |

*Source: World Bank, Macro Poverty Outlook, Spring 2022.*
As part of its G20 Presidency 2020, Saudi Arabia, led by the Ministry of Energy, put forward the concept of the Circular Carbon Economy (CCE) and plans to put it at the center of its climate mitigation plan (Williams 2019). A key insight from CCE is to achieve a pathway towards net zero emissions.

This is based around ‘four Rs:’ Reduce: energy efficiency, renewable energy and other low carbon energy such as nuclear; Reuse: carbon capture and utilization (CCU) and emissions to value (E2V); Recycle: natural sinks such as forests and oceans, bio-energy and hydrogen; and Remove: carbon capture and storage (CCS) and direct air capture (KAPSARC 2020).

Carbon capture, use and reuse, and sequestration could also be extensively used. Circular carbon economies could be developed, whereby the carbon that is an externality can be put back into the economic system as something useful via reusing and recycling. Carbon dioxide can be feedstock to make fuels, building materials, and other useful chemicals and products. Carbon could also be removed from the air or redirected into old oil and gas wells, and other caverns underground for storage, and even later use as inventions for the use of carbon dioxide are developed.

CCE builds on the kingdom’s earlier efforts on reducing its carbon emissions, including the kingdom’s first carbon dioxide enhanced oil recovery demonstration project, which commenced its operation in 2015. The Uthmaniyah plant compresses and dehydrates carbon dioxide from the Hawiyah natural gas liquid recovery plant in Saudi Arabia’s Eastern Province (Global CCS Institute, 2018). The captured carbon dioxide is transported via pipeline to the injection site at the Ghawar oil field (a small, flooded area in the Uthmaniyah production unit) for enhanced oil recovery.

At the center of this ambitious CCE approach are the Ministry of Energy and the Energy Ecosystem consisting of King Abdullah Petroleum Studies and Research Center (KAPSARC), King Abdullah City for Atomic and Renewable Energy (KACARE), Saudi Energy Efficiency Center (SEEC), Designated National Authority (DNA), Electricity and Cogeneration Regulatory Authority (ECRA), Nuclear and Radiological Regulatory Commission (NRRC), and the Executive Committee for Governance of Price Adjustment of Energy and Water Products.

Source: Zawya.com, Aramco.