

## **SUBMISSION BY THE UNITED ARAB EMIRATES**

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### **Intended Nationally Determined Contribution of the United Arab Emirates**

In the post-2020 period the United Arab Emirates will continue to expand its ambitious actions to limit emissions and improve resilience through economic diversification, in accordance with Decisions 1/CP.19 and 1/CP.20. The UAE's actions are based on a strategy of economic diversification that will yield mitigation and adaptation co-benefits, consistent with the approach adopted under Decision 24/CP.18.

To this end, the UAE will pursue a portfolio of actions, including an increase of clean energy to 24% of the total energy mix by 2021.

### **Accompanying information**

#### **General Approach**

The Government of the United Arab Emirates is fully committed to the United Nations Framework Convention on Climate Change negotiating process, with a view of finalising a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties by the 21<sup>st</sup> Conference of the Parties (COP 21), in line with achieving the ultimate objective of the Convention as stated in Article 2.

The UAE welcomes the inclusive structure of the INDC model, which is consistent with a recognition of the special circumstances of developing countries with high dependence on fossil fuel production – an issue which was recognized by the COP in Decision 24/CP.18 on economic diversification. The UAE's actions are based on a strategy for economic diversification that will yield co-benefits in terms of both mitigation and adaptation.

The proposed approach shall not modify the objectives of the Convention, or the mobilization of climate finance, technology transfer and capacity building, which support action by developing countries on adaptation and mitigation.

#### **National Circumstances, and Implementing Policies and Frameworks**

The UAE was established in 1971. In the 44 years since, the country has undergone significant societal and economic transformation.

Hydrocarbon production has made a significant contribution to the country's social and economic prosperity. However, government strategy has focused on the diversification of the national economy and increased investment in other sectors, including clean energy, advanced manufacturing industries, tourism, information technology, transportation, ports, freight, aviation and space technology.

The UAE has set a series of goals for national development in its Vision 2021. In line with Vision 2021, the government has set forth the 'Green Growth Strategy', which is a roadmap for economic growth and social development rooted in sustainable initiatives.

Vision 2021 is also complemented by the National Innovation Strategy, which aims to place innovation, science and technology at the center of a knowledge-based, highly productive and competitive economy.

Abu Dhabi's Economic Vision 2030, as well as Dubai's Plan 2021 and the Dubai Integrated Energy Strategy 2030 (including the Demand Side Management Strategy), lead the drive towards economic diversification and sustainable development in their respective emirates.

## **Economic Diversification with Mitigation Co-benefits**

The UAE's population has more than tripled since 1995, and will continue to grow, putting increased pressure on the supply of energy and water. The UAE has therefore made the strategic decision to diversify its energy mix, increase efficiency, and continue to use world-class performance standards and the best available technologies in its energy intensive industries and its oil and gas sectors.

### Clean Energy Target

The UAE set the region's first renewable energy targets, at a time when there was widespread doubt about renewable energy's viability and value. Since then, the country's deployment of renewable energy has had a significant normalizing effect for the technology in the region. This is now joined by a compelling financial case, with recent results in the UAE recording the lowest cost for solar globally.

The UAE has set a target of increasing clean energy contribution to the total energy mix from 0.2% in 2014, to 24% by 2021. This will be achieved through renewable and nuclear energy, and is underpinned by detailed emirate level targets and policies.

### Improvements in Energy Intensive Industries and the Oil and Gas Sector

The UAE's energy intensive industries and oil and gas sectors will continue to use innovative technologies to improve efficiency and reduce emissions.

The UAE's oil companies are among the most efficient globally. The UAE's national oil company was the first in the region to promote the reduction of gas flaring, in order to reduce greenhouse gas emissions. In energy intensive industries, overall performance indicators will be improved through carbon abatement measures and increased resource efficiency.

The UAE is also developing the region's first commercial-scale network for carbon capture, usage and storage. The project notably captures and compresses emissions at a steel manufacturing facility, which will be compressed and transported to oil fields, where it will be used to enhance oil recovery and ultimately be stored underground providing one of the first viable mechanisms to decarbonize essential energy intensive industries.

### Energy and Water Efficiency

In addition to supply side targets, the UAE is undertaking comprehensive policies to reduce energy and water demand and promote the prudent use of resources, through the following actions:

- **Tariff reform:** The UAE recognizes the value of energy and water tariff reform in reducing inefficiencies and promoting low-carbon development, as well as addressing energy security concerns. To this end, utility authorities in

the UAE have introduced a number of initiatives and policies, and revised the country's tariffs over the years and gradually adjust the tariffs for commercial and industrial customers, so as to reflect the cost of generation by 2021.

- **Building and efficiency standards:** the UAE is comprehensively targeting emissions from its building sector, which account for a significant percentage of the country's electricity and water consumption, through green building regulations, efficiency standards, retrofit programs and support structures for energy service companies across the UAE.
- **Demand side management:** the UAE has launched a number of initiatives based on consumer awareness and demand management, including new formats for water and electricity bills, which give residents detailed consumption and subsidy information.
- **District cooling:** air-conditioning accounts for a significant share of energy consumption, given the UAE's harsh climate. Comprehensive infrastructure investments are being undertaken to move towards district cooling and improve efficiency as compared to decentralized cooling.
- **Appliance efficiency standards:** the UAE introduced the region's first efficiency standards for air-conditioning units, eliminating the lowest-performing 20% of units on the market, and is introducing efficiency standards for refrigeration and other appliances. The UAE has also established an indoor lighting standard that introduces energy efficient lighting products and phases-out inefficient lighting products in the UAE market.

### Transport and Infrastructure

Infrastructure development is critical to the UAE's plans for economic diversification and the country has made infrastructure development a key priority area. The government is investing heavily in world-class traffic and transport systems. For example, the Emirate of Abu Dhabi has adopted a comprehensive urban structure framework plan, to optimize the city's development up to 2030.

The UAE is undertaking the following investments and initiatives, which will have significant mitigation co-benefits in addressing the transport sector's greenhouse gas emissions, including:

- the introduction of a new fuel pricing policy, which will put the UAE in line with global prices. This reform aims to support the national economy, lower fuel consumption, and protect the environment;
- a federal freight rail network crossing the country and eventually integrated into the GCC network;
- the Emirate of Abu Dhabi has also set targets to shift 25% of government vehicle fleets to compressed natural gas; and
- the Emirate of Dubai has invested in a multi-billion dollar light-rail and metro system, which will continue to add new lines.

The UAE continues to improve the emission standards for new motor vehicles, in accordance with European emission standards, as well as through the introduction of standard labels. These initiatives target both improvements in fuel economy and reduction in local air pollution.

The UAE will also introduce comprehensive regulations for electric vehicles, so as to facilitate their uptake domestically.

## Waste Sector

The UAE will increase the amount of treated waste, and waste diverted from landfill, through a number of key initiatives, including:

- developing a federal law to regulate and oversee waste management;
- defining a federal roadmap for integrated waste; and,
- developing a federal database to gather and collect information regarding waste.

## **Adaptation Actions with Mitigation Co-benefits**

The UAE, along with other countries in the region, will be affected severely by a changing climate. For these reasons, the UAE sees adaptation as equally important as mitigation.

The UAE aims to mainstream climate change adaptation in its environment management activities through initiatives such as the National Biodiversity Strategy Action Plan, as well as through developing a national policy on climate change adaptation.

## Water Management

Possibly the most threatening impact of climate change to the UAE will be stress on water resources. Even small long-term variations in temperature and precipitation are expected to have adverse effects, due to the fragile nature of the country's natural resources. In the absence of fresh water supply, desalination and waste water reclamation are some of the critical means to ensure water availability in the UAE.

The UAE is undertaking the following key initiatives in relation to water management:

- **Water Conservation:** the UAE is in the process of establishing a strategic federal framework for the sustainable management of all water resources in the country. The strategy is based on an integrated approach that aims to meet future water demand through a mix of new water infrastructure and improving the efficiency of existing water supplies.
- **Desalination:** the UAE is moving towards more efficient forms of desalination, and is investing in research and development of new technologies, including renewable energy to power desalination plants

## Wetlands, Coastal and Marine Environment Conservation (Blue Carbon)

The coastal and marine environments of the UAE are diverse and include mangrove forests, saltmarshes, sabkha, intertidal mudflats with cyanobacterial mats and extensive sub-tidal sea grass meadows.

The UAE has developed and implemented a number of strategies and plans, which aim to improve understanding of wetlands, including coastal carbon systems, and will also assist in minimizing anthropogenic impacts. The UAE is also undergoing significant restoration and plantation efforts of both mangroves and sea-grass, supporting ecosystem-based adaptation as well.

In 2013, the UAE initiated the Blue Carbon Demonstration Project, which provided decision-makers with a stronger understanding of the carbon sequestration potential in the Emirate of Abu Dhabi. In 2014, the project's scope was expanded to cover the entire country, and is known as the UAE's National Blue Carbon Project.

## Food Security

The UAE imports more than 90 per cent of its food. With continuing population growth, and an environment with scarce renewable-water and agriculture potential, the UAE's food imports are expected to more than double by 2030. This reliance represents a major challenge for the UAE. In an effort to improve food security, the UAE has been diversifying its sources of food and investing in agriculture projects and technologies. The UAE has also developed a National Biodiversity Strategy and Action Plan, as well as the UAE Sustainable Fisheries Programme, which aims to rebuild fish stocks.

The UAE welcomes and encourages food security research and development, such as modeling to assess the impact of climate change on the agricultural productivity of the major food exporting countries on which the UAE currently relies, and incentivizes technology to increase productivity and resilience.

## Innovation and Research & Development

The UAE has invested heavily in world-class graduate education for sustainable energy development, establishing Masdar Institute for Science and Technology in partnership with the Massachusetts Institute of Technology, the Dubai Centre of Excellence for Innovative Energy and Water Solutions and the Solar Innovation Center under Sheikh Mohammed bin Rashid al Maktoum Solar Park in Dubai.

Moreover, the UAE has established the Local, National, Regional Climate Change Assessment Programme, which contributes to addressing the data challenges across the wider region, as relating to climate change adaptation and vulnerability issues.

The Zayed Future Energy Prize further supports innovation, and is one of the most prestigious recognitions in the field of clean energy development.

## Education, Training and Public Awareness

The UAE has developed and implemented a National Environmental Education & Awareness Strategy, which sets six strategic objectives that aim to strengthen education, empowerment and engagement of stakeholders and major groups.

The UAE has also begun reforming school curriculums to improve science and training, including around climate change. Outside of academics, UAE government entities have launched public awareness campaigns, including "Waterwise" and "Powerwise", "Heroes of the UAE", the "Sustainable Schools" and "Sustainable Campus" initiatives as well as the "Ecological Footprint Initiative".

## **Monitoring, reporting and verification**

Monitoring, reporting and verification will proceed as per the arrangements agreed at COP 16 in Cancun and COP 17 in Durban.

The UAE has launched a process to develop a full national inventory of greenhouse gas emissions. The UAE is also undertaking a process to improve its air quality measuring and reporting, in terms of pollution and the negative effects it may have on human health.

The domestic actions communication in this INDC are voluntary and will be implemented in accordance with the principles and provisions of the Convention, in particular Article 4 paragraph 1, Article 4 paragraph 7, Article 10 paragraph 2(a), Article 12 paragraph 1(b) and Article 12 paragraph 4.