



Qatar *Sustainability Report:* **A Leader in Green Initiatives**

Prepared by the US-Qatar Business Council



Washington, DC
May 2021

Your future business partner is waiting.

We advance trade & investment between the US and Qatar.

The US-Qatar Business Council (USQBC) envisions a seamless relationship between the US and Qatar; a permanent partnership built on a foundation of mutual interests and strong strategic, business, cultural, and security relations. USQBC is the leading organization dedicated exclusively to enhancing the bilateral relationship between the US and Qatar.

As a member, you will have access to USQBC's business and advisory services. We will matchmake and advocate with US and Qatari government and private sector entities on your behalf. Meet senior level officials at our events, roundtables, and networking opportunities. Join us and gain access to two of the most exciting and dynamic markets in the world.



US-Qatar Business Council Services

Membership

USQBC is a not-for profit, US-headquartered, membership-based organization and offers a broad range of services and benefits to its members including, but not limited to:

- Advice and counsel for investment in Qatar and the US
- Arranging appointments with government and business contacts in Qatar and the US
- Notifying members of business and other opportunities
- Advising and assisting in the preparation of projects, programs, proposals and other activities

Advisory and Consulting

USQBC provides a range of customizable services for those interested in expanding their business in the US and Qatar:

- Market Insight & Analysis
- Market Entry Strategy
- Partner Identification & Introduction
- In-Country Arrangement & Logistical Support

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Note: The USQBC is in the process of developing a more comprehensive sustainability report that will highlight initiatives by select US corporations and agencies aimed at addressing environmental challenges. This will include their global initiatives in Qatar to serve as case studies.





About the Council

The US-Qatar Business Council promotes, enhances and advances the bilateral business relationship between the United States and the State of Qatar.

The Council envisions a seamless relationship between the US and Qatar; a permanent partnership built on a foundation of mutual interests and strong business, cultural, and security relations. The Council is the leading organization dedicated exclusively to enhancing the bilateral commercial relationship between the US and Qatar.

The Council offers business advisory services, consultancy services, and coordinates trade missions for US and Qatari companies to facilitate bilateral business. The Council utilizes various vehicles to highlight Qatari happenings and engage stakeholders, including partnerships, events, and articles.

Visit us at www.usqbc.org for the latest updates.

Qatar's Policy is Driving Sustainable Development

Qatar National Vision 2030

Qatar's National Vision 2030 (QNV 2030) is Qatar's roadmap for future development, and it defines the long-term outcomes and goals the country is working towards. The National Vision aims to transform Qatar into an advanced country by 2030, capable of sustaining its own development and providing for a high standard of living for all of its people for generations to come. Throughout QNV 2030, the importance of building a sustainable and environmentally responsible country is evidenced throughout the four core pillars.

The State of Qatar foresees development through four interconnected pillars: Human Development, Social Development, Economic Development, and Environmental Development. The environmental pillar will be increasingly important as Qatar faces local environmental issues, such as the impact of diminishing water and hydrocarbon resources, and the effects of pollution and environmental degradation, as well as international environmental issues such as the potential impact of global warming on water levels in Qatar and on coastal urban development.

Assessing the severity of risks and dealing with anticipated changes will require mobilizing capabilities and coordinating efforts to tackle problems that arise. The State of Qatar's National Vision 2030 prioritizes environmental stewardship to build a more sustainable future. According to the QNV 2030, Qatar has implemented many programs and projects to curb air pollutants, reduce CO₂ emissions, and increase reliance on renewable energy.



The national vision aims to transform Qatar into an advanced country by 2030, capable of sustaining its own development and providing a high standard of living for its population and future generations.

The State of Qatar aims to achieve this through the following four pillars.



Human development

Development of all Qatar's people to enable them to sustain a prosperous society



Social development

Development of a just and caring society based on high moral standards, and capable of playing a significant role in the global partnership for development



Economic development

Development of a competitive and diversified economy capable of meeting the needs of, and securing a high standard of living, for all its people



Environmental development

Management of the environment such that there is harmony between economic growth, social development and environment protection

Qatar's Policy is Driving Sustainable Development

Qatar's Progress Towards the UN Sustainable Development Goals

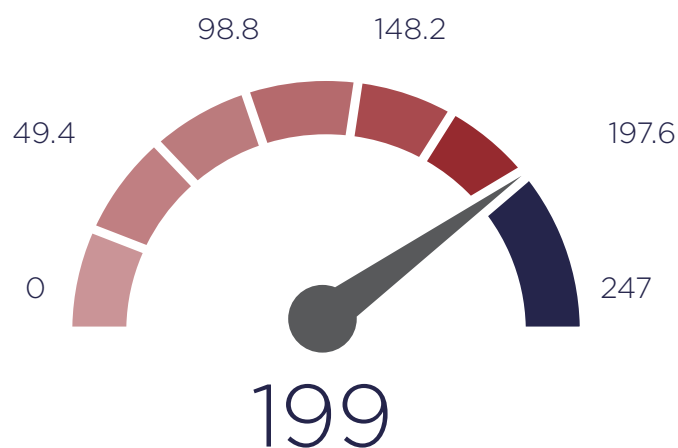
Established by the United Nations General Assembly in 2015, the Sustainable Development Goals (SDGs) are a collection of 17 interlinked global goals designed to be a “blueprint to achieve a better and more sustainable future for all” by 2030. Since 2015, Qatar has aligned the outcomes and goals of its National Development Strategy with the goals of United Nations’ Sustainable Development Agenda.

Tracking the SDGs in Qatar shows that the country has been able to accomplish most of the goals of eradicating poverty, fighting hunger, ensuring food security, ensuring equitable quality education for all, good health, access to basic services such as safe water, adequate sanitation, modern energy, decent work, adequate housing, and building a peaceful society in which values of justice and equality prevail.

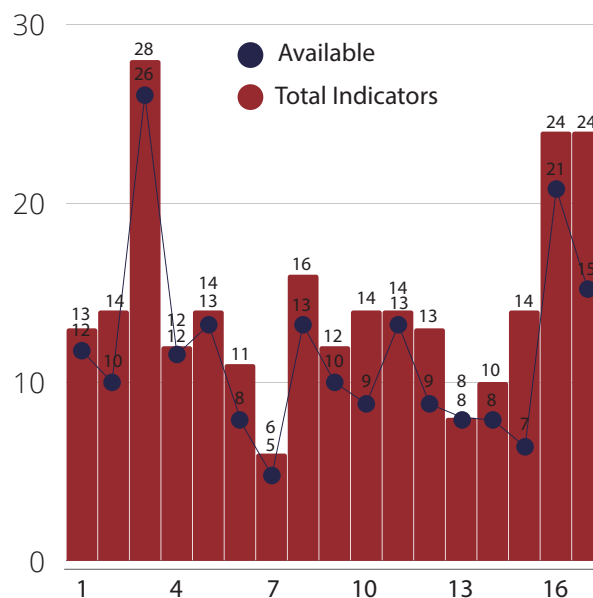
Qatar’s Planning and Statistics Authority (PSA), in cooperation with ministries and government agencies, has produced national indicators for the Sustainable Development Goals and targets. Currently, Qatar has developed 199 of these national indicators making up 80.2% of the total 247.¹

All of this has been reflected in Qatar’s ranking within the highest countries for human development in the 2018 Human Development Index.² Furthermore, Qatar has also managed to achieve some of the goals associated with addressing the effects of climate change, protecting ecosystems, conserving coastal areas and using marine resources in a sustainable manner. Qatar also played an active role in strengthening the global partnership in development.

Number of Available National Indicators in Qatar to Total Number of Indicators



Number of Available National Indicator in Qatar Compared to Total UN by Goal



¹ https://sustainabledevelopment.un.org/content/documents/20443SDG_Qatar_En_Draft7_Landscape_3.pdf

² http://hdr.undp.org/sites/default/files/2018_human_development_statistical_update.pdf

Qatar's International Leadership in Sustainability

In addition to being one of the highest scoring countries on the Human Development Index, Qatar topped the GCC region in 'The 2018 Environmental Performance Index', demonstrating the country's positive performance in the field of environment protection and sustainable development.³ Qatar has also surpassed its neighbors by a large margin by achieving 32nd rank in the index. More recently in January 2021, Qatar was ranked 18th overall in the Earth.org Global Sustainability Index and 5th in the "Policy" Category. In 2021, Qatar led the MENA Region in World Economic Forum's Energy Transition Index 2021.

Taking a Global Stand⁴

- Qatar is hosting the first carbon neutral football FIFA World Cup ever in 2022 through the use of solar-powered stadiums and groundbreaking cooling and lighting technology.
- Qatar was among the first countries to accede to the United Nations Framework Convention on Climate Change in 1996, the Kyoto Protocol in 2005, and the Paris Agreement in 2016.
- Qatar Provided over \$2 billion to help other developing countries advance sustainability efforts.
- Qatar hosted the Council of Parties (COP18) to the United Nations Framework on Climate Change (UNFCCC) in 2012, which extended the Kyoto Protocol until 2020 and led to the successful negotiation of the Paris Agreement in 2015.
- In 2019, Qatar made a \$20 million contribution to the UNDP Accelerator Labs network in 60 developing countries to tackle the world's most pressing sustainable development challenges.
- In 2019, Qatar announced a \$100 million contribution to support small island developing states and the least developed countries to help deal with climate change, natural disasters, and environmental challenges.

Qatar's Sustainability Targets



RENEWABLE ENERGY

- Installing 2-4 gigawatts (GW) of Solar throughout the country by 2030



GREEN TRANSPORTATION

- 100% Electric Bus Transportation by 2022
- 400 Electric Charging Stations by 2022
 - 10% Electric Vehicles by 2030



GREEN BUILDING

- 5th Largest LEED Certified Building Outside the US
 - 1st Smart Downtown Globally
 - Msheireb Downtown Doha



WORLD CUP

- 1st Carbon-Neutral World Cup

³ https://earth.org/global_sustain/qatar-ranked-18th-in-the-global-sustainability-index/#::-:text=Qatar%20will%20host%20the%202022,in%20its%20production%20and%20delivery

⁴ Qatar Sustainability Fact Sheet, State of Qatar Embassy Washington, D.C.

Key Sustainability Initiatives

FIFA World Cup Qatar 2022

Sustainability is at the forefront of preparations for the FIFA World Cup Qatar 2022™, and the Supreme Committee for Delivery & Legacy (SC) is on track to achieve its commitment to deliver the first-ever carbon neutral FIFA World Cup™. The SC's efforts in achieving carbon neutrality have resulted in two FIFA World Cup™ stadiums receiving top sustainability ratings this year. Both Education City Stadium and Al Bayt Stadium achieved the five-star Global Sustainability Assessment System (GSAS) rating. Solar energy will contribute to powering the tournament as promised in the original bid. Qatar's national utility company, Kahramaa, is currently developing multiple projects including a large scale 800 MW solar energy plant. Upon the conclusion of the tournament, the plant will continue to produce clean renewable energy for decades, leaving a significant legacy in carbon reduction. In addition, some of the stadiums were constructed with the intent for parts of them to be disassembled and donated to developing countries around the world.⁵



Credit: FIFA World Cup Qatar 2022™

Solar Power

Considering the abundance of sunshine in the Arabian Peninsula, Qatar has made major strides to become a global leader in solar power electricity generation. Qatar aims to add 2-4 GW of solar energy by 2030 to reduce CO₂ emissions by 5 MPTA.

Qatar has multiple investments in solar power plants in the country to quickly transition to renewable energy sources. One of Qatar's important solar investments in the "Siraj Solar Energy" project which is expected to produce about 700 MW of electricity in the fourth quarter of 2021. In January 2020, Qatar signed

an agreement with French energy giant, Total, and Japan's Marubeni, to build a solar power plant capable of producing 800 MW, a tenth of the country's peak energy demand, according to the country's energy minister. The Al Kharsaah, which is the first large-scale solar power plant being developed in Qatar, will apply latest solar energy technologies, including dual panels to save space, automated systems for sun-tracking and robotic cleaning of solar panels to help increase production efficiency and reduce the plant's operational expenses. It is expected to be complete by 2022 when the country hosts the FIFA World Cup.⁶

⁵ <https://www.qatar2022.qa/en/news/qatar-on-track-to-meet-carbon-neutral-commitments-for-fifa-world-cup>

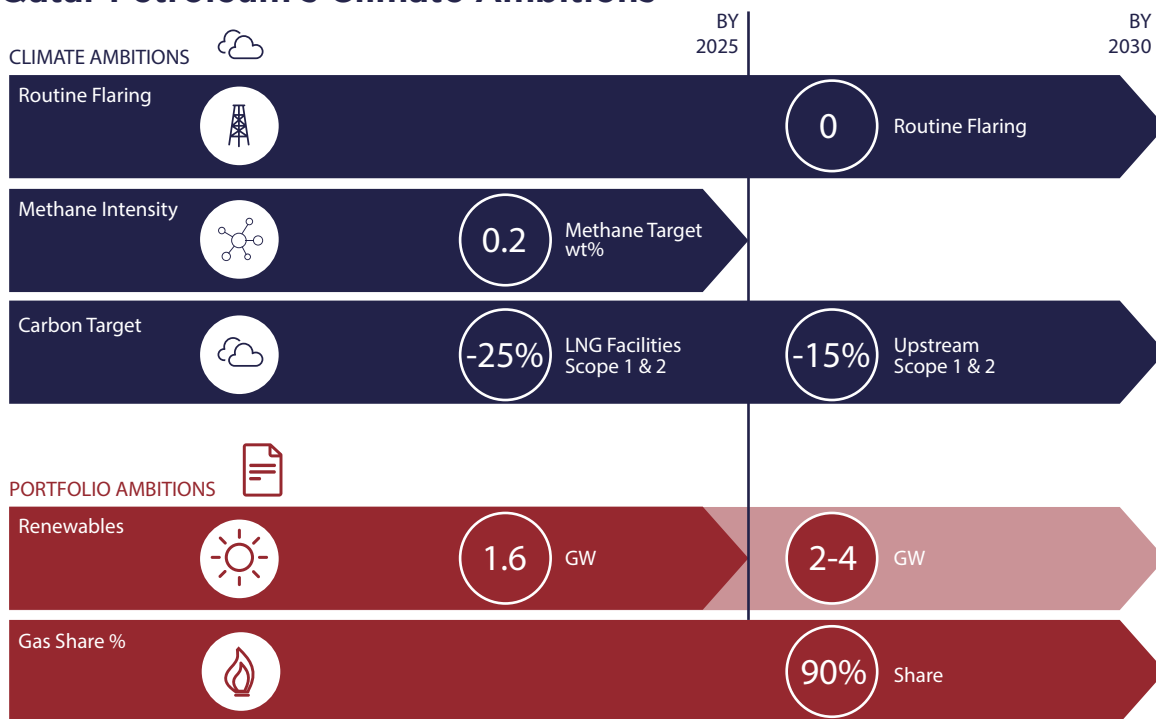
⁶ <https://www.greentechmedia.com/articles/read/totals-qatar-deal-nudges-middle-east-bifacial-pipeline-towards-2gw>

Key Sustainability Initiatives

Qatar Petroleum's Sustainability Drive

In 2021, Qatar Petroleum (QP) launched its new Sustainability Strategy, which establishes several targets in line with the goals of the Paris Agreement. This strategy sets a plan to reduce greenhouse gas emissions by 2030. It also mandates the deployment of Carbon Capture and Storage (CCS) facilities to capture more than 7Mtpa of CO₂ in the country. The strategy sets a direction toward cutting down the emissions intensity of the country's LNG facilities by 25% and its upstream facilities by at least 15%, in addition to reducing flare intensity across upstream facilities by over 75% and eliminating routine flaring completely by 2030. The plan also includes restricting methane emissions along the gas value chain by creating a methane intensity target of 0.2% across all facilities by 2025.⁷

Qatar Petroleum's Climate Ambitions



Credit: Qatar Petroleum

In response to increasing global energy demand, QP will grow its LNG capacity and provide cleaner energy. By 2030, QP expects their upstream production to grow substantially by around 46% along with a 28% increase in petrochemicals.⁸

However, when balanced against initiatives to curb emissions from QP's operations, compensating for residual emissions, and creating low-carbon energy sources, the carbon intensity of their upstream and LNG operations are expected to be reduced.⁸

⁷ <https://www.offshore-technology.com/news/qatar-petroleum-sustainability-strategy/>

⁸ <https://qp.com.qa/en/MediaCentre/Lists/QPPublications/Attachments/29/QP%202019%20Sustainability%20Report.pdf>

Key Sustainability Initiatives

Water Preservation & Conservation

Qatar is one of the world's most water-scarce countries in the world. But the continuous expansion of fossil fuel-led desalination technology and associated water infrastructure evaded the shortages and led to continuous access to safe and clean water for all citizens and residents. In recent years, Qatar became a desalination pioneer in order to ensure sustainable access to fresh water for its residents as the nation's growing household water consumption adds stress to the economy, infrastructure, and the environment. New measures were proposed to curb the demand through increasing water tariffs and recycling domestic wastewater for semi-productive use. Currently, seawater desalination constitutes more than 60% of total water consumption in Qatar.⁹

Conservation has been one of Qatar's key priorities in Qatar's National Vision 2030. Out of Qatar's total land and sea area, 30% has been designated as protected areas to protect desert ecosystems and prevent overfishing and overgrazing. This makes Qatar the top state in the world with the highest protected areas.¹⁰

Over the past decade, Qatar has managed to reduce the electricity and water consumption by about 20%. Qatar has been heavily investing in replacing its power plants with new ones that have better efficiency. By 2022, 25% of Qatar's public transportation will be electric, and 100% will be electric by 2030.¹¹

Partnership with NASA

Through the growing economic partnership between Qatar and the US, Qatar Foundation has partnered with NASA to find buried water in the earth's deserts. Through this collaboration, researchers with the Orbiting Arid Subsurfaces and Ice Sheet Sounder (OASIS) study project are designing a satellite mission to probe the sand dunes and ice sheets of some of earth's driest places with radar technology looking for water.



Credit: NASA

Qatar Sustainability Week

In November 2020, Qatar Green Building Council hosted the 5th annual edition of Qatar Sustainability Week, an event showcasing innovative and practical solutions of various stakeholders to overcome environmental challenges. It also provided Qatar's community to learn about how to adopt a more sustainable lifestyle. In the course of the 2020 event, the World Green Council's Health & Wellbeing Framework, an educational tool to drive healthy and equitable buildings in harmony with nature, was launched for the MENA region.

⁹ <https://www.ecomena.org/water-awareness-in-qatar/>

¹⁰ Qatar Sustainability Fact Sheet, Embassy of the State of Qatar in Washington D.C.

¹¹ Qatar Sustainability Fact Sheet, Embassy of the State of Qatar in Washington D.C.

Sustainable City Projects

Smart Qatar Program (TASMU)

Qatar has been working toward its smart cities vision for years and the country is quickly being recognized as a leader in digital transformation. Under the Ministry of Transport and Communications, the Smart Qatar Program (TASMU) focuses on harnessing the power of technology and innovation to drive sustainable economic diversification. This one-of-a-kind smart city solution connects all sectors and smart solutions. The initial launch of the TASMU Central Platform, planned to go live in 2021, will be a “central nerve system” for developers to build smart city solutions.¹²

Lusail City

Known as Qatar’s Future City, Lusail City is a \$45 billion urban development project located across 38 square kilometers envisioned to be a blend between residential and commercial neighborhoods. Investment and development are directed toward infrastructure, buildings, green energy, and mobility. It was developed to accommodate part of the projected growth of Qatar’s population and economy in line with Qatar’s 2030 Vision. Home of the FIFA World Cup Qatar 2022 opening event stadium, Lusail City will use the most up-to-date sustainability and green technologies.¹³



Credit: Lusail

¹² <https://www.tasmu.gov.qa/>
¹³ <https://www.lusail.com/>

Sustainable City Projects

Msheireb Downtown Doha

Msheireb is a \$5.5 billion initiative that will be the world's first sustainable downtown regeneration project, that will revive the old commercial district with a new architectural language. Utilizing the latest in sustainable technologies, Msheireb will adhere to the highest standards in green building management and have one of the highest concentrations of Leadership in Energy and Environmental Design (LEED) certified buildings in the world with all buildings targeting Gold LEED certification. Solar panels installed on buildings, efficient irrigation systems, and integration of Doha's new Metro, are just some of the measures being taken to place Msheireb at the forefront of smart cities worldwide.¹⁴



Credit: Msheireb Properties



Credit: Msheireb Properties

Sustainable City Projects

District Cooling

Qatar's employment of district cooling technology has a current capacity of one million tons of refrigeration (TR) which accounts for 17 percent of total air conditioning demand in the country, making it one of the global leaders. With 39 plants operational in the country, district cooling employs chilled water that is transported through underground pipes using water that can be recycled from a number of sources like seawater. Qatar Cool, a global leader in district cooling, uses Treated Sewage Effluent (TSE) in two of its cooling plants, which is essentially wastewater that has been filtered of contaminants. Most of the 2022 FIFA World Cup stadiums will use district cooling technology which will help regulate the temperature inside the stadium while also conserving energy.¹⁵



¹⁵ <https://thepeninsulaqatar.com/article/05/04/2020/Qatar-leads-region-in-district-cooling-regulation>

Organizations Propelling Sustainability

Ministry of Municipality and Environment

The Ministry of Municipality and Environment (MME) is a service Ministry directly related to the general public and is equipped to meet the many requirements of the public's daily life. The Ministry fulfills its mission and mandates through contribution by its subsidiary departments, municipalities and centers, as well as leading and supporting the rapid development of the State of Qatar. This is in line with the Qatar National Vision 2030 which aims to place the country among developed countries based upon pillars of human development, economic social, and environmental development.

Qatar Airways

Qatar Airways is committed to tackling climate change by measuring and reducing energy consumption and greenhouse gas emissions across all operations. The Qatari airline has recently enacted its carbon-offset program, which gives passengers the option to offset the carbon emissions of their flight when they book. This is a program in partnership with the International Air Transport Association, who will help verify these purchases and ensure their emissions tokens are used quickly to offset their trip. Furthermore, Qatar Airways was the first airline in the Middle East to secure accreditation to the highest level in the International Air Transport Association (IATA) Environmental Assessment Program, while its home and hub, Hamad International Airport, will be the first airport in the region to achieve a 4-star Global Sustainability Assessment System (GSAS) rating as part of plans to expand its capacity to more than 53 million passengers annually by 2022.¹⁶

Qatar Petroleum (QP)

Established in 1974, Qatar Petroleum is the state-owned petroleum company that operates all oil and gas activities in Qatar including exploration, production, refining, transport, and storage. In January 2021, QP launched its new Sustainability Strategy, which establishes several targets in line with the goals of the Paris Agreement.

¹⁶ https://www.qatarairways.com/en-press-releases/2020/July/QR350_787.html

Organizations Propelling Sustainability

Ashghal

Established in 2004, Ashghal is the Public Works Authority of Qatar. Ashghal is an autonomous body which designs, delivers and manages all infrastructure related projects as well as public amenities of the State of Qatar. Ashghal is responsible for the construction and maintenance of local roads, drainage systems, highways and public buildings like mosques, schools, hospitals, health centers, parks, etc. In 2020, Ashghal won the “Government Sustainability Initiative” Award in recognition of the organization’s efforts in asphalt recycling which reduces emissions resulting from the transfer of old asphalt to landfills.

KAHRAMAA (Qatar General Electricity and Water Corporation)

Established in 2000, KAHRAMAA is the sole transmission and distribution system owner and operator for the electricity and water sector in Qatar. It buys, distributes, and sells electricity. By 2030, it aims to set global benchmarks in performance, innovation, environmental sustainability, and social responsibility. KAHRAMAA launched the National Program for Conservation and Energy Efficiency (Tarsheed) which is aimed at reducing carbon emissions and bringing down water and electricity consumption in all sectors.

Qatar Environment and Energy Research Institute

Qatar Environment and Energy Research Institute (QEERI) conducts and coordinates long-term and multidisciplinary research that addresses critical national priorities related to water security, energy, and environment. The research is conducted at QEERI’s world class facilities, which include Core Labs, Micro- and Nano- Fabrication Labs, and a 35,000 square meter Outdoor Test Facility.

Organizations Propelling Sustainability

Qatar Green Building Council

Qatar Green Building Council (QGBC) is a non-profit, membership-driven organization providing leadership and encouraging collaboration in conducting environmentally sustainable practices for green building design and development in Qatar. QGBC also aims to support the overall health and sustainability of the environment, the people, and economic security in Qatar for generations to come.

Qatar National Research Fund

The Qatar Foundation (QF) established Qatar National Research Fund (QNRF) in 2006 as part of its ongoing commitment to establish Qatar as a knowledge-based economy. QF views research as essential to national and regional growth, as the means to diversify the nation's economy, enhance educational offerings and develop areas that affect the community, such as health and environment. Qatar National Research Fund's mission is to advance knowledge and education by supporting original, competitively selected research in all fields of sciences, with emphasis on, Energy and Environment, Computer Sciences and ICT, Health and Social Sciences, Arts and Humanities.

Hamad Bin Khalifa University

Based in Education City in Qatar, the Hamad Bin Khalifa University (HBKU), a member of Qatar Foundation, embodies a research environment, delivering multidisciplinary programs that are aligned to current and future global challenges. Qatar Foundation and Hamad Bin Khalifa University have sealed a trio of agreements with American institutions - including the country's space agency - that span educational connections, water and climate change research, sport, and heritage preservation, at the latest in a series of annual meetings designed to strengthen ties between Qatar and the US.

Organizations Paving the Way for Sustainability

Texas A&M University at Qatar

To address the pressing energy and water problems facing Qatar, Texas A&M at Qatar has introduced a major program, designated the Qatar Sustainable Water and Energy Utilization Initiative (QWE). This initiative will serve the community by working with the energy and industrial sectors, as well as research and educational institutions. Additionally, Texas A&M University at Qatar will be presenting the virtual Sustainable Smart Cities and Territories International Conference. Texas A&M's Qatar campus and research teams are playing a crucial role in converting carbon byproducts from natural gas production into Syngas and solid carbon nanotubes, which are raw materials important in many of Qatar's manufacturing facilities. This research is the first of its kind, creating a process that does not produce even more carbon in the conversion of these unusual byproducts.

Qatar Science & Technology Park

Qatar Science & Technology Park (QSTP) is an integral part of Qatar's National Vision 2030 which aims, through sustainable development, to transform Qatar into one of the world's most advanced economies within two decades. QSTP provides a unique facility where a cluster of premier companies work under one roof to research critical local and global issues. The close proximity to Qatar Foundation's Education City provides opportunities for QSTP partners to collaborate with top scientists, allowing access to key facilities and employs graduates from world-class universities. The ConocoPhillips Global Water Sustainability Center (GWSC) occupies 1,000 square meters in the Qatar Science and Technology Park.

Qur'anic Botanic Garden

The Qur'anic Botanic Garden (QBG), the first garden in the world to exhibit all plant species mentioned in the Holy Qur'an, Hadith, and Sunnah, aims to maintain and preserve the plants and the environment in general against any dangers or threats. The Garden is conserving special kinds of plants that are collected from different parts of the world to be restored at one place for preservation and study purposes. The Garden is following the Islamic principles of Conservation in order to highlight these Ethics and explain them for all people. The Garden emphasizes multi-activities, campaigns, events, fairs and exhibitions for the general public in order to encourage people to preserve our natural resources.

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