

Towards a Greener World: China's Great Leap Forward

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BEIJING, Feb 18 (China Economic Net) - The world is currently facing warning climate change, and it's devastating effects due to mushroomed industrialization, urbanization, and extensive reliance on non-renewable energy resources. To address this formidable challenge, China is

investing heavily by leveraging its resources, technology, and workforce to transform itself into an environmentally friendly country, and making strides to share its gains with the rest of the world.

For the first time in the history of the Olympic Games, China has achieved a 100% green power supply, as well as the world's first mass usage of hydrogen fuel cell buses to serve sporting events. China has carried out technological innovations to ensure a smooth green power supply for the Winter Olympics. This includes the installation of a power supply grid station having 3.6 million Kw capacity, which is akin to installing a "supercharging treasure" on the power grid. Its massive warehouse can store over 40 million KW-hours of renewable energy at one time. All 26 venues in the three major sports areas of the Beijing Winter Olympics have been illuminated by green electricity, developed after years of trial and study.

Zhangjiakou, the mountain city in China's Hebei province, hosting the skiing events of the games, has renewable energy, exceeding that of most countries in the world. And a pioneering "Zhangjiakou Green Electric Grid" is also built to deliver power from the city to neighboring Beijing.

Furthermore, this pilot renewable power system is a scale model of a much larger plan that the Chinese government is implementing across the country, intending to champion carbon neutrality by 2060. At present, achieving the goal of carbon neutrality has become the shared obligation of major countries. A large-scale replacement of traditional fossil energy with renewable energy is integral to achieving this lofty goal.

Since the start of the Beijing Winter Olympics, not only the on-site competition but also its surrounding areas have drawn worldwide attention. This time around, the Olympic Games enable people to observe how China's energy transition is speeding up, and how it will have a significant impact on global economic and social change in the years ahead.

The Winter Olympics are more than just a sporting event. In fact, they have become a display forum for cutting-edge technologies, competitive advantages, and economic potential. An all-out "Green Olympics" is intended to expedite China's energy transformation, and to relay its resolve to the rest of the world under the "dual carbon" goal, a term referring to Chinese president Xi Jinping's 2030 and 2060 emission targets.

The Beijing Winter Olympics' pursuit of clean energy exhibited the Chinese government's confidence, and strength in developing the clean energy industry diligently, and proactively fulfilling its obligations as a principal country in decreasing carbon emissions.

Taking advantage of the Winter Olympics, it will focus on technical research and the exploration of new energy sources. This new integrated path of large-scale transmission, grid connection, and consumption completely demonstrated the application potential of new energy. This innovative technology will help revolutionize its industrialization, amassing significant experience for low-carbon energy transformation in China and around the world. In addition, the Winter Olympics' enormous influence will assist boost public awareness of low-carbon

development, popularize the use of clean energy, and foster an environment conducive to pushing for green environmental protection.

The Chinese renewable energy sector is gaining traction as the government strives to meet its declared target of generating at least 40% of its electricity from non-fossil fuels by 2030. According to the International Energy Agency (IEA), China will boost its renewable electricity capacity by almost 800 GW (an increase of 85%) between 2021 and 2026, accounting for roughly 43% of worldwide renewable energy capacity growth.

Through its iconic, Belt and Road Initiative (BRI), China has been ramping up efforts around the world to create renewable energy projects, and accelerate the replacement of fossil energy usage. China is also making significant progress toward green and low-carbon development targets through BRI's most active project, the China-Pakistan Economic Corridor (CPEC).

The 1000 MW Quaid-e-Azam Solar Park (Bahawalpur), 50 MW Hydro China Dawood Wind Farm, Gharo, Thatta 50, 100MW UEP Wind Farm, Jhimpir, Thatta, 50MW Sachal Wind Farm, Jhimpir, Thatta, and 100MW, Three Gorges Second and Third Wind Power Project are among the 21 energy projects under the CPEC umbrella that are in operation and producing 1300MW.

Two hydropower projects with a combined capacity of 1590MW are now under construction: the 884MW Suki Kinari Hydropower Project in KP and the 720MW Karot Hydropower Project in AJK/Punjab. The latter is aiming for a Commercial Operation Date of mid-2022, with the project estimated to reduce yearly carbon dioxide emissions by about 3.5 million tons, while also improving the clean energy output mix and optimizing the energy consumption structure. This is the first and most advanced hydropower investment project under CPEC, backed by the Silk Road Fund and built by the Three Gorges Group of China's well-known conglomerates.

Under CPEC, four projects, one each of hydel and wind, are being considered, with a total capacity of 1924.7MW. The projects are the 1124MW Kohala Hydropower Project in AJK, the 700.7MW Azad Pattan Hydropower Project in AJK/Punjab, the 50MW Cacho Wind Power Project, and the 50MW Western Energy (Pvt.) Ltd. Wind Power Project in AJK/Punjab.

For maintaining the baseload, initially in CPEC, the focus was on coal power generation, however, in the future, renewable projects will be further prioritized. The same was affirmed by Dr. Liaqat Ali Shah, policy head of the CPEC, Centre of Excellence, Islamabad, "the share of the renewable energy mix has been considerably improved through CPEC projects, which is a step taken in the right direction, and we must push it further to make Pakistan greener and cleaner."

It is pertinent to mention that Pakistan is one of the top ten countries, adversely affected by extreme weather, rendering it prone to erratic rainfall, drought, heatwaves, and increasing glacial melting. Water scarcity, natural resource deterioration, air pollution, and climate change are all major environmental concerns in the country. By 2025, the country may face a 31-million-acre-foot water shortage, accounting for roughly a third of its annual agricultural water use. Therefore, it is an opportune time for Pakistani policymakers to put their acts together with their Chinese counterparts and learn from their best practices to fend off the current and evolving environmental challenges in Pakistan.