

INSIGHTS

China's Green Transition Benefits Whole World

Voice of the World

Edited by QI Liming

Green transformation and green development have become the focus of today's society. A feature of Chinese modernization is harmonious coexistence between humans and nature, and green transition is the key to reach the target. China's green transition is anticipated to provide the world with new opportunities for growth.

As the UNDP's administrator Achim Steiner said in a recent interview with Xinhua, China's green energy transition will contribute to the global fight against climate change and inspire other countries toward green transition.

"These transitions will enable China to be both a contributor to global response to climate change, but also with its technologies and policies will help many other countries, including many developing countries, to pivot forward into a green transition strategy," he said.

According to an article, *Explainer: how China is quietly becoming a green energy powerhouse* in *Energy Monitor* in February, China's brown economy is turning green, and the country has also quietly been transforming itself into a world leader in renewable energy.

Renewable energy had overtaken coal in China's electricity production capacity by the end of 2022. A report by the International Energy Agency (IEA) in January noted that China commissioned as much solar PV capacity in 2023 as the entire world did in 2022, and it installed 66 percent more new wind turbines that year than the year before.

It is not just renewables that are booming in China. The country's share



The Hanfu lovers put on a show in a rapeseed field in Meishan City, southwest China's Sichuan province on March 4.

(PHOTO: XINHUA)

of global nuclear generation capacity rose from five percent in 2014 to 16 percent in 2023, and it is set to build far more capacity than any other nation by 2025, according to the IEA.

"All this makes China the likely leader in electricity production emission reduction between 2024 and 2026, with falls of 1 to 2.4 percent each year. This is around half of global reductions in absolute terms," the *Energy Monitor* reported.

Meanwhile, China released carbon emissions trading regulations on February 4. Effective on May 1, the regulations provide a legal framework for the operation of China's carbon emission trading market and ensure the ef-

fectiveness of related policies.

"Over the past year, China has become the premier investment location for wind, solar and nuclear power, and now it is cracking down on emissions trading fraud to ensure that progress is not overshadowed by bad actors," the *Energy Monitor* added.

According to *Energy Daily*, in 2023 China installed more solar panels in one year than any other country has done to date, while producing an unmatched amount of batteries and electric vehicles. The clean energy industry's share in the economy was 11.4 trillion RMB, a 30 percent growth year on year. It accounted for two-fifths of China's total growth in 2023. So 2024 is likely to have more

than enough renewable power to meet additional needs, which means less use of coal and less emissions.

The African countries that have joined the Belt and Road Initiative saw a 47 percent jump in Chinese construction contracts and a 114 percent increase in investments in 2023 compared with 2022, according to the *Belt and Road Initiative Investment Report 2023* by the Griffith Asia Institute in Brisbane, Australia.

Chinese-backed projects grew at a speedy clip in 2023. A large number of green investment projects are being rolled out in Africa, the Middle East and Central Asia, welcomed by their hosts as the carbon reduction deadlines loom.

Opinion

An Advanced Knowledge Platform Can Boost Sci-tech Exchanges

By HAN Lin & TANG Zhexiao

The world is experiencing profound shifts unseen in a century. The construction of the Introduction of International Advanced Knowledge System Platform (IIAKSP) can be an important channel for non-governmental sci-tech exchanges. It can strengthen the integration of China's science and technology with the rest of the world, introduce international high-end talents and sci-tech resources, and promote the transformation of sci-tech achievements.

The aim of IIAKSP is to optimize the flow and allocation of technology, finance, data, talent and other resource, and promote private sci-tech exchanges and cooperation, which is relatively less affected by the current situation.

Here are some ways IIAKSP can play a role in promoting sci-tech exchanges:

First, the construction of IIAKSP can help integrate and share various resources in the fields of industry, education, research and teaching. It will focus on the needs of sci-tech innovation talents in key areas and develop international engineers and young talents.

Second, with the help of the Conference on International Exchange of Professionals, an annual event held in Shenzhen by the Ministry of Science and Technology and Shenzhen's local government, and other cooperation events, IIAKSP can link up with non-governmental sci-tech alliances to jointly organize non-governmental exchange activities such as theoretical frontier sharing, case interpretation, and academic seminars.

Third, in the areas where non-governmental sci-tech alliances are engaged, such as high-tech zones, innovation heights, incubators and sci-tech transfer bases, IIAKSP can disseminate the concepts, tools and methodologies of international advanced management and innovation and improve scientific research project management and innovation practice.

Fourth, taking advantage of international cooperation mechanisms such as the Belt and Road Initiative and Asia-Pacific Economic Cooperation (APEC), as well as governmental cooperation memoranda, IIAKSP should be utilized to expand links in the international sci-tech innovation field and jointly contribute to non-governmental exchanges to build an innovation ecosystem.

Additionally, it can cooperate with renowned institutions in smart construction, green and low-carbon construction, advanced materials, intelligent manufacturing, aerospace and other aspects, taking talent training as the starting point, and gradually approaching the core areas and key technologies.

There is a large demand for high-tech professionals in China. The construction of IIAKSP can help the country increase the introduction of foreign high-end talents in the professional fields that lack such expertise, and promote international sci-tech collaboration as well.

Han Lin is the Division Chief of the Exchange and Development Department of China International Talent Exchange Foundation.

Comment

Major Step in Developing AI for Common Good

By GONG Qian

Recently, eight global leading technology firms, including the Lenovo Group, Microsoft, LG AI Research, Salesforce and Telefonica, pledged to adhere to the UNESCO's set of principles to develop "more ethical" AI. They signed an agreement at the second UNESCO Global Forum on the Ethics of AI 2024, indicating they will play their role in guaranteeing human rights in the design, development, purchase, sale and use of AI.

In 2021, the UNESCO made its *Recommendation on the Ethics of Artificial Intelligence*, the world's first and so far only normative framework on AI. The document focuses on "the promotion and protection of human rights, human

dignity, and ensuring diversity and inclusiveness."

"This is the first time that companies have engaged with the United Nations in this area," UNESCO's director-general Audrey Azoulay, said on social media platform X.

In a statement, Azoulay emphasized that the collaboration between the public and private sectors is essential for creating AI for the common good. "Today, we are taking another major step by obtaining the same concrete commitment from global tech companies," she added.

As AI becomes increasingly integrated into our daily lives, its potential to impact society is growing. Without a strong ethical foundation, the risks associated with AI—from privacy violations

to biased decision-making—could outweigh the benefits. By committing to ethical AI, these tech giants have acknowledged their responsibility to prevent such consequences and foster an environment where AI serves as a tool for human empowerment and progress, rather than a source of harm.

Their commitment also sends a powerful message to the rest of the industry. It sets a standard that others can follow, encouraging a collective effort to ensure that AI is developed responsibly and ethically.

Forbes magazine reported that private companies, regardless of their size, will need to develop their own ethical guidelines for implementing AI. It is expected that more businesses will adopt

and promote their policies on AI algorithms to maintain transparency and adhere to ethical norms.

Early in February, representatives of EU countries voted unanimously to approve the technical details of the EU AI Act, the world's first comprehensive attempt to regulate the technology from a risk-based approach. The new rules are scheduled to be approved in April and may enter into force in EU countries later this year.

Both internal self-restraint and external regulations are significant steps for healthy development of AI. Looking forward, as Azoulay said, all tech stakeholders need to follow the example of the eight pioneering companies to ensure that AI is for the good.

Strengthening Ties with Global South

By Staff Reporters

The *Financial Times* selected the term "Global South" as its "Year in a word 2023", defining it as a geographically vague but emotionally resonant term for what was once known as the developing world.

At the 19th Non-Aligned Movement Summit and the Third South Summit held in Kampala, Uganda in January, Chinese Vice Premier Liu Guozhong said this year marks the 60th anniversary of the G77. Over the past six decades, Global South countries have found the right path of equality, mutual trust, mutual benefit, solidarity and mutual help.

Chinese Foreign Minister Wang Yi's visits to Africa and Latin America in early January marked his first overseas trip in 2024, underscoring China's growing emphasis on Global South countries.

In February, China exchanged congratulations with the Republic of the Congo on the 60th anniversary of their diplomatic relations, and vowed to promote the strategic partnership.

During his state visit to China from February 27 to March 2, Julius Maada Bio, president of the Republic of Sierra Leone, expressed his wish to strengthen diplomatic relations and economic and trade partnership between the two countries, as well as promote deeper exchanges between their universities. He noted that since joining the Belt and Road Initiative in 2018, Sierra Leone has "benefited immensely from projects under this initiative."

As a member of the Global South community, China has provided development assistance to more than 160 countries, worked with more than 150 countries to jointly build the Belt and Road, and worked together with more than 100 countries and international organizations to advance the Global Development Initiative.

Under the framework of South-South cooperation, China has engaged in collaborative efforts with countries in the Global South across various sectors including healthcare, education, climate change, agriculture, and infrastructure. This collaboration involves sharing development experience, imparting professional and technological knowledge, promoting international trade and investment, as well as alleviating debts.

The China International Development Cooperation Agency set up the Global Development Promotion Center in 2022, upgraded the South-South Cooperation Assistance Fund to a Global Development and South-South Cooperation Fund, and added one billion USD to the fund on top of the three billion USD already committed, to help developing countries resolve development problems.

Singapore's *Lianhe Zaobao* said China has upgraded bilateral relations with a record number of countries in 2023, and is seeking ways to unite the Global South.

Japan's *Nikkei* said China has strengthened the Belt and Road Initiative in its bid to expand cooperation with the Global South.

China has strengthened the weight of the Global South, remarked Joseph Olivier Mendo'o, head of the African Youth Delegation in China, adding that it is looking to bolster South-South cooperation.

Today, amid transformation of the world unseen in a century, Global South countries face a complex international environment.

As Vice Premier Liu said, we need to continue our endeavor under the new circumstances to explore the path to modernization, promote higher-level South-South cooperation, take part in the reform of the global governance system, and deepen the global partnership for development that is united, equal, balanced and beneficial to all.

Hi! Tech

Solar Cells Thinner than Paper

By TANG Zhexiao

A crystalline silicon heterojunction solar cell that is paper thin, more flexible, and more efficient, has been manufactured by researchers from Jiangsu University of Science and Technology and Australia's Curtin University in collaboration with LONGI, a green energy company.

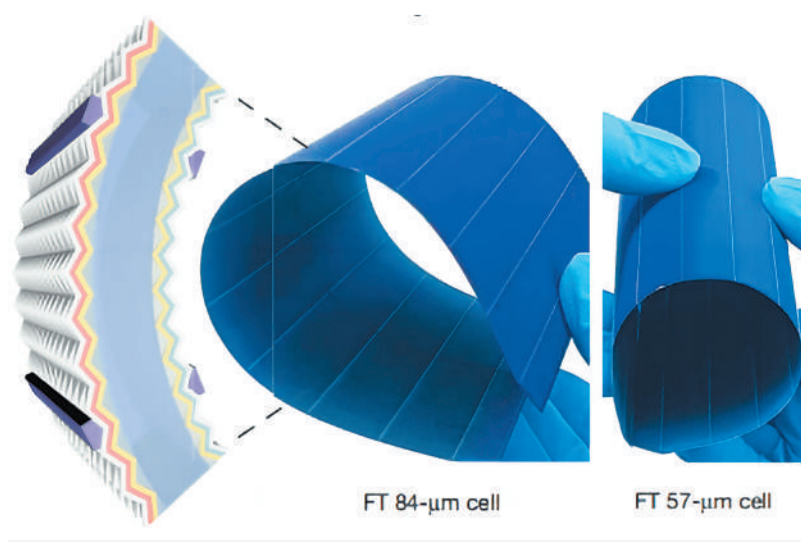
The thickness of such silicon cells is currently generally 150 μm to 180 μm , which makes them difficult to apply to scenarios requiring flexibility or strict weight limits, such as curved roofs, floating solar panels or aerospace applications.

According to a paper published in *Nature*, a combined approach that can improve the power conversion efficiency of

silicon heterojunction solar cells and render them flexible at the same time has been developed by scientists.

Notably, the 57 μm -thick solar cell stands out with a power-to-weight ratio of 1.9 watts per gram and a curvature radius of 19 mm, surpassing existing products by two to three times.

Now, we have reduced the thickness of silicon wafers to less than 100 μm , which is thinner than an A4 sheet of printing paper, making up for the major shortcomings of silicon cells, said the paper's first author Li Yang, adding that, in the future, the research team will continue to develop more flexible, lightweight, low-cost and highly efficient solar cells that can be as portable as film.



Flexible silicon solar cells with high power-to-weight ratios. (PHOTO: LONGI)