Net-Zero World with Help from Taiwan

Supporting Taiwan's professional, pragmatic, and constructive participation in the UNFCCC

September 2022

1. Foreword

This year marks the 30th anniversary of the United Nations Framework Convention on Climate Change (UNFCCC). As heatwaves swept across Europe and the United States and triggered forest fires in July, and record-breaking floods devastated Pakistan in August, we were reminded once again that disasters caused by extreme weather events are becoming more destructive and continue to transcend national borders. Neither developed nor developing countries can escape the climate crisis. More ambitious climate action is needed to save our planet before it is too late. As a responsible stakeholder in the international community, Taiwan is calling on nations worldwide to support its participation in the 27th Session of the Conference of the Parties, which will be held from November 6 to 18 in Sharm el-Sheikh, Egypt. Taiwan hopes to contribute more substantially to the international community as we create a net-zero world together.

2. Taiwan and the world striving to jointly achieve net-zero emissions

2.1. Taiwan's net-zero transition pathway and strategies

On Earth Day 2021, President Tsai Ing-wen announced Taiwan's goal of net-zero emissions by 2050. The National Development Council then spearheaded an effort with the Ministry of Economic Affairs, the Ministry of the Interior, the Ministry of Transportation and Communications, the National Science and Technology Council, and the Environmental Protection Administration to

publish *Taiwan's Pathway to Net-Zero Emissions in 2050*, along with an overall strategy, in March 2022. Taiwan aims to promote four transition strategies focused on energy, industry, lifestyle, and society. Built on the foundations of technology research and development and climate legislation, these strategies will be complemented by an additional 12 strategic priorities, namely wind and solar; hydrogen; innovative energy; power systems and energy storage; energy savings and efficiency; carbon capture, utilization, and storage; carbon-free and electric vehicles; resource recycling and zero waste; carbon sinks; green lifestyles; green finance; and just transition. By integrating intragovernmental resources, Taiwan is taking a pragmatic and forward-looking approach to implementing its 2050 goal.

Taiwan will invest US$30 billion by 2030 to promote the four transition strategies, as outlined below.

2.1.1. Energy transition: Since 2016, the government of Taiwan has been actively developing the green energy industry and increasing renewable power generation capacity. Moving forward, the government will invest in the research and development of emerging technologies related to hydrogen and geothermal energy, as well as other innovative green energies. It will also continue to advance the development of smart grids and energy storage facilities. Taiwan aspires to become the green energy development hub of Asia.

2.1.2. Industrial transition: As a country with an export-oriented industrial sector, Taiwan must leverage public-private partnerships to make structural reforms, including improving manufacturing processes and electrifying public transportation. The government is encouraging leading companies to spearhead the transition, which would make Taiwan's industrial sector more competitive internationally and bolster Taiwan's

position in the global green supply chain.

2.1.3. **Lifestyle transition:** The government has been engaging in dialogue with the public to forge a consensus and promote a low-carbon lifestyle encompassing such aspects as diet, transportation, and architecture.

2.1.4. **Social transition:** The government aims to ensure public participation and a just transformation through public-private assistance, establishing a social support system that will assist disadvantaged groups from all sectors of society and help them turn the challenges of this transition into opportunities.

In building the foundation of technical R&D needed to plan for and develop the net-zero transition, Taiwan will focus on five areas: sustainable energy, low carbon, circularity, carbon negative, and social science. The Greenhouse Gas Reduction and Management Act is being amended and will be renamed the Climate Change Response Act. The amended act will stipulate a national goal of net-zero emission by 2050 and mandate the introduction of carbon levy mechanisms. This will stimulate low-carbon and green growth and gradually fill out the foundations of Taiwan's climate-related legislation and governance.

To achieve its 2050 net-zero goal, Taiwan has set out the following intermediate targets:

- By 2025, no new coal energy plants.
- By 2030, the capacity of wind and solar power facilities reaches 40 GW; all urban public buses are electric.
- By 2035, 100 percent installation rate for smart meters.
- By 2040, carbon capture, utilization, and storage has been developed and introduced in coal and natural gas facilities; 100 percent market share for electric cars and motorcycles.
- By 2050, renewable energy accounts for over 60 percent of the power

supply; 100 percent of new buildings and more than 85 percent of existing buildings are near-zero-carbon buildings; 100 percent installation rate for smart substations.

2.2. Taiwanese enterprises promoting supply chain links with the wider world

Taiwan's total trade value ranks 16th in the world and its ICT industry plays a crucial role in global technology supply chains. At present, 20 major Taiwanese enterprises are members of the RE100—a global corporate renewable energy initiative launched by the Climate Group and the CDP—and have committed to using 100 percent renewable electricity by 2050. Furthermore, eight Taiwanese tech giants, including Taiwan Semiconductor Manufacturing Company, founded the Taiwan Climate Partnership (TCP). The TCP aims to lead the tech industry toward low-carbon transition by building a transparent and accurate database of corporate carbon emissions, setting an agenda for carbon reduction goals, and utilizing digital technologies to increase energy efficiency and low-carbon manufacturing. This demonstrates Taiwanese enterprises' ambitious leadership in advancing a sustainable economy in the Indo-Pacific.

2.3. Taiwan actively establishing diversified partnerships to fulfill the net-zero vision

Taiwan has long upheld a spirit of steadfast diplomacy and mutual assistance for mutual benefit. Through technology transfer, loans and investments, capacity building, and talent training, it has assisted diplomatic allies and developing countries to build the capacity to address climate mitigation and adaptation. In order to realize the vision of net-zero emissions, Taiwan hopes to share with more countries the following experiences of combating climate change:

2.3.1. Enhancing disaster prevention capabilities: By employing geographic

information systems technology and assessing Belize's natural environment and the prevailing software and hardware in use at its disaster prevention agencies, Taiwan helped Belize establish early warning systems for flooding and strengthen technical capacity at its disaster prevention institutions.

2.3.2. Increasing energy efficiency: Taiwan implemented the Home Energy Efficiency and Renewable Energy Project in the Marshall Islands through the application of green energy technology, one of the major pillars of Taiwan's 5+2 Innovative Industries Plan. The project helped local people replace traditional high-energy-consumption home appliances and increase solar power usage, significantly improving quality of life.

2.3.3. Increasing agricultural resilience: Utilizing agriculture adaptation strategies and technologies, Taiwan helped Saint Christopher and Nevis build agricultural resilience by establishing an early warning data-collection mechanism, developing crop disaster mitigation and prevention techniques, and increasing the availability of agricultural information. Taiwan also helped Eswatini optimize industrial chains for the production and sale of high-value fruits, creating a new approach toward agricultural development.

2.3.4. Carbon-neutral tourism: In Palau, Taiwan cooperated with Sustainable Travel International to launch the world's first carbon footprint calculator that accounts for the scope of a nation's overall industrial capacity. The initiative allows tourists to understand how much carbon will be emitted as part of their trip to Palau and encourages carbon offsetting with the overall objective of further strengthening Palau's climate resilience.

2.3.5. Talent training: Taiwan implements professional workshops and the International Higher Education Scholarship Program for the benefit of its diplomatic allies and developing countries, assisting its partners to cultivate professional talent in such areas such as economics, social

development, and environmental protection.

2.3.6. Green finance: Through special funds, Taiwan and the European Bank for Reconstruction and Development have cooperated to support the implementation of the Green Energy Financing Facility throughout the Eastern European and Central Asian region, advancing the development of the green economy and associated markets and encouraging the private sector to invest in such areas as renewable energy, sustainability, and climate recovery.

3. Conclusion

As the world's 21st-largest economy, Taiwan stands jointly with other nations in facing the immense impacts caused by extreme weather events. Taiwan is willing to draw on its leadership in the global high-tech sector and has already contributed much toward building a net-zero world with nations around the globe. Facing unprecedented climate disasters, the international community should put aside political considerations and turn challenges into new opportunities so as to uphold the common fate of humanity. Therefore, Taiwan once again calls on nations around the world to take action to support Taiwan's professional, pragmatic, and constructive participation in the UNFCCC, the Paris Agreement, and associated mechanisms. Let Taiwan contribute and give back even more to the global vision of net-zero emissions.