

A systematic design for 2050 carbon neutrality, leading the carbon-neutral policy of basic local governments through the localized implementation

Dobong-gu unveiled the “2050 Dobong-gu Greenhouse Gas Reduction Strategy” as the first district in Seoul in September 2020 and has set annual reduction targets and an implementation strategy by task since 2021. The district enacted and proclaimed the “Seoul Dobong-gu Ordinance on Carbon Neutrality” as the first local government in September 2021. In addition, the district has led the “2050 Net-Zero” policy for local governments by enacting “Dobong-gu Citizens’ Charter for Carbon Neutrality Implementation,” launched “a campaign for Dobong-gu residents to reduce four tons of greenhouse gas emissions per person,” and published a “Manual for Dobong-gu Residents to Implement Carbon Neutrality.”

2050 탄소중립 실천 범구민 결의대회 & 「환경교육도시, 도봉」 선언식

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01

Dobong-gu designed the “2050 Carbon Neutrality Plan” consisting of four P’s (Pledge, Plan, Proceed, and Publish),” reflecting the local characteristics of the district with the population of 330,000 residents.

Dobong-gu 2050 Carbon Neutrality Plan (Four ‘P’s)

Pledge	Jun 2020 Climate crisis declaration	»	Jul 2020 Solidarity of local governments for carbon neutrality	»	Aug 2020 Financial institutions for coal phase-out	»	Apr 2021 Enact practice charter-Hold a rally for district residents	»	May 2021 2021 P4G 2050 carbon neutrality declaration	»	Jun 2021 UNFCCC Race To Zero
	Aug 2020 Launch greenhouse gas reduction taskforce	»	Sep 2020 2050 Dobong-gu greenhouse gas reduction strategy	»	Dec 2020 Create ordinance for carbon neutrality	»	Jan 2021 Set the goals for the first year	»	Jun 2021 Carbon neutrality plan (2022-2031)	»	Sep 2021 Create the nation’s first carbon neutrality ordinance
Proceed	Seven Strategies		Strategic Goals		2021 Core Projects						
	Green Building		Energy self-reliance for the Dobong-gu Office Building (50%)		Install a built-in PV system in the Dobong-gu Office Building						
	Green Mobility		Conversion to electric and hydrogen vehicles (100%)		Construct infrastructure, such as hydrogen stations						
	Green Energy		Distribute renewable energy of 300MW (solar energy)		Install PV system at Darakwon Sports Park						
	Green Cycle		Reduce urban wastes by 50%		Set up material recycling facilities						
	Green Forest		Create urban forest space of 4.5m ² per resident		Build a park in the mountain behind a village (Choansan)						
	Green Life		Reduce greenhouse gas by four tons per resident		Launch a campaign to reduce four tons of greenhouse gas per resident						
	Green Education		Train 30,000 facilitators for greenhouse gas emissions reduction		Train instructors and facilitators						
Publish	Quarterly Greenhouse gas reduction taskforce assessment		»	Spot Dobong-gu Council Environmental Measure Research Group		»	Ordinary, Extraordinary -Climate Change Countermeasure Committee -Environmental Policy Committee		»	Once per year GCoM CDP (carbon disclosure)	

First, “Pledge”

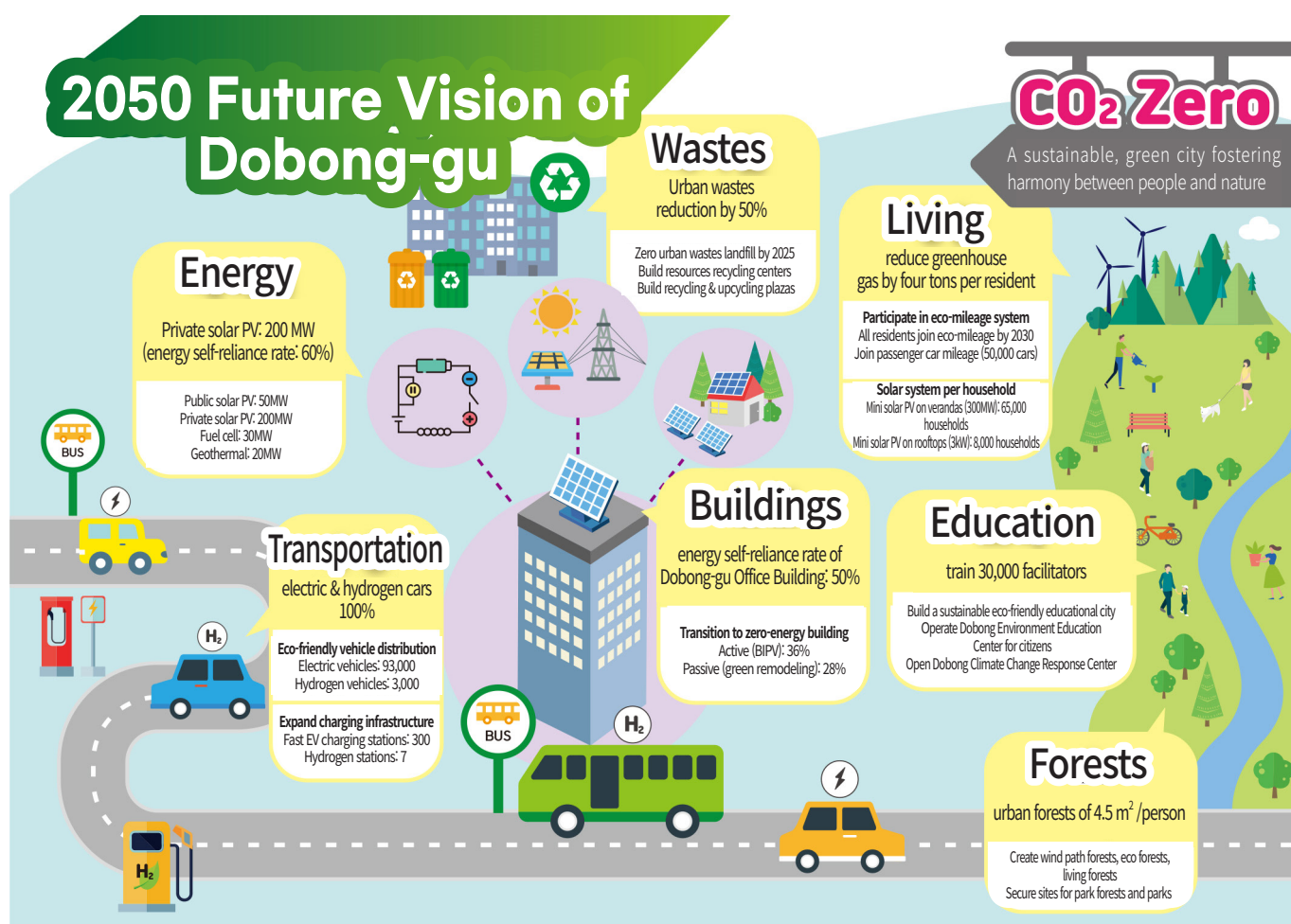
On June 5, 2020, Dobong-gu participated in the climate crisis initiative of basic local governments. On July 7, 2020, the district joined the launch of local government solidarity for carbon-neutrality to reduce carbon emissions to net-zero by 2050. On April 22, 2021, it enacted the “Dobong-gu Residents’ Charter for Carbon

Neutrality Implementation” to build a consensus for a carbon-neutral society by 2050, and residents gathered to express their commitment. In June 2021, Dobong-gu participated in the UNFCCC Race to Zero¹⁾ and announced its commitment to carbon neutrality to the international community.

Second, “Plan”

In order to establish an action plan to fulfill its commitment to 2050 carbon neutrality, Dobong-gu formed a greenhouse gas reduction task force comprised of related departments of the district office (12 departments, 25 teams) in August 2020. In September, it established and unveiled the “2050 Greenhouse Gas Reduction Strategy” for the first time among the 25 districts of Seoul Metropolitan City.

The district presented “2050 Dobong-gu’s Future Vision” along with a roadmap for greenhouse gas emissions reduction of 1,342,000 ton CO₂eq by 2050 (2025: 25% → 2030: 40% → 2040: 70% → 2050: Net-Zero). In addition, in June 2021, Dobong-gu commissioned research to establish the Dobong-gu Climate Change Response Plan for more systematic and substantial implementation. Dobong-gu created and unveiled the “Seoul Dobong-gu Ordinance on Carbon Neutrality,” a first in Korea on September 16, 2021, to support its carbon neutrality policy.



Dobong-gu’s future vision for 2050

1) UNFCCC Race To Zero: a global campaign launched by the United Nations Framework Convention on Climate Change (UNFCCC) in June 2020, urging all entities to act to attain zero carbon emissions by 2050

Third, “Proceed”

Dobong-gu set 2021, the first year to implement the accords agreed to in the Paris Agreement, as the year to start its drive for “2050 Dobong-gu Carbon Neutrality,” established a greenhouse gas reduction goal of 50,763 tons CO₂eq, and implemented 61 projects under seven strategies.

By strategy, the Green Building sector is to install a 100kW built-in PV (BIPV) at the Dobong-gu Office Building, the Green Mobility sector is to set up hydrogen stations in the northeastern part of Seoul, and the Green Energy sector will install a 204kW solar PV system in the Darakwon Sports Park. The Green Cycle sector aims to build a material recycling smart factory, and the Green Forest sector aims to build a park on Choansan Mountain. The Green Life sector focuses on reducing greenhouse gas emissions of four tons per resident, and the Green Education sector will train 100 greenhouse gas reduction facilitators.

Fourth, “Publish”

The district's carbon neutrality plan and implementation are reviewed and assessed quarterly by an internal task force and reported to public-private governance organs such as the District Council, the Climate Change Countermeasure Committee, and GCoM²⁾. Furthermore, in the 2021 Carbon Disclosure Project (CDP) assessment, Dobong-gu was the only city to be graded an “A,” the highest rating among domestic cities (95 out of 965 cities in the world (9.8%) received an “A” rating.).

02

Encouraging Dobong-gu residents' participation in the carbon neutrality campaign by distributing a practice manual

To overcome the climate crisis, the participation of residents is essential. On April 22, 2021, the district created the “Dobong-gu Residents' Charter for Carbon Neutrality Implementation,” reflecting the commitments of families, communities, schools, and workplaces towards carbon neutrality, and hosted a rally for residents online and offline for 2050 carbon neutrality to share the charter and strengthen their pledges.

The district prepared “Manual for Dobong-gu Residents to Implement Carbon Neutrality” (subtitle: “Green Life, Green Dobong”), a manual covering the seven strategies in the buildings, transportation, energy, circulation, forests, living and education sectors, and distributed the manual to heads of tong and ban, schools, committees, and new households that moved into the district (4,700 copies distributed as of December 31, 2021).

The district also launched a practice campaign to promote implementation by reducing four tons of greenhouse gas emissions per resident. The campaign allowed residents to adopt more than two options among multiple options, such as: (i) install an eco-friendly boiler and keep it at a fixed temperature for heating and cooling (summer: 26°C or higher, winter: 20°C or lower); (ii) drive an eco-friendly vehicle and use mass transportation once a week; (iii) install a mini solar PV system at home; (iv) cook a proper amount of rice (reduce the keeping-warm duration of electric rice cookers by three hours); (v) use television sets and electric rice cookers with high energy efficiency; (vi) use a shopping basket instead of disposal plastic bags; (vii) reduce food wastes by 20%; (viii) unplug television sets, washing machines,

2) GCoM : an international organization created in 2017 by integrating Compact of Mayors for climate change response and the Covenant of Mayors in Europe, with the participation of 10,600 cities from 130 countries across the world

electric rice cookers, microwave ovens, and humidifiers not in use; (ix) separate and send out recyclable glass bottles and cans; (x) become a member of the Eco Mileage System and consume eco-friendly products). A total of 13,423 residents committed to reducing greenhouse gas by 11,782 tons as of the end of 2021.



Charter for carbon neutrality implementation



2050 Residents Rally for carbon neutrality implementation



Dobong-gu residents' campaign to reduce greenhouse gas by four tons per person (offline/QR/PC, mobile)



"Manual for Dobong-gu Residents to Implement Carbon Neutrality"

03

Operating educational programs at the Dobong Environment Education Center to foster the citizens' awareness for carbon neutrality

The Dobong Environment Education Center offers about 20,000 residents classes on climate change response. For example, the state and Seoul Metropolitan City selected the Dobong Lifecycle Climate Change Education Program as an outstanding environmental education program accredited by government in August 2021 and is being offered for preschoolers, children, and adolescents, and has been distributed to schools and nurseries in Seoul.

"Climate Change Response Education by Generation" projects of the district are programs tailored for each generation of residents to increase awareness and build capacity to respond to climate change. Among them, the "Youth Environment Expedition to Learn About My Town" and the "Youth Climate Preservation Artworks Competition" are the leading sustainable development education programs of the district, which have been operated for over 20 years, and have been offered as education for sustainable development (ESD) project of the Korean National Commission for UNESCO since 2018.

We have reviewed Dobong-gu's implementation plans to achieve carbon neutrality (net-zero emissions) and various efforts to expand the citizens' participation. It is hoped that this article helps areas around the globe to overcome the climate crisis.