

Net Zero Gwangju 2045

Net-Zero Policy and Citizen Participation

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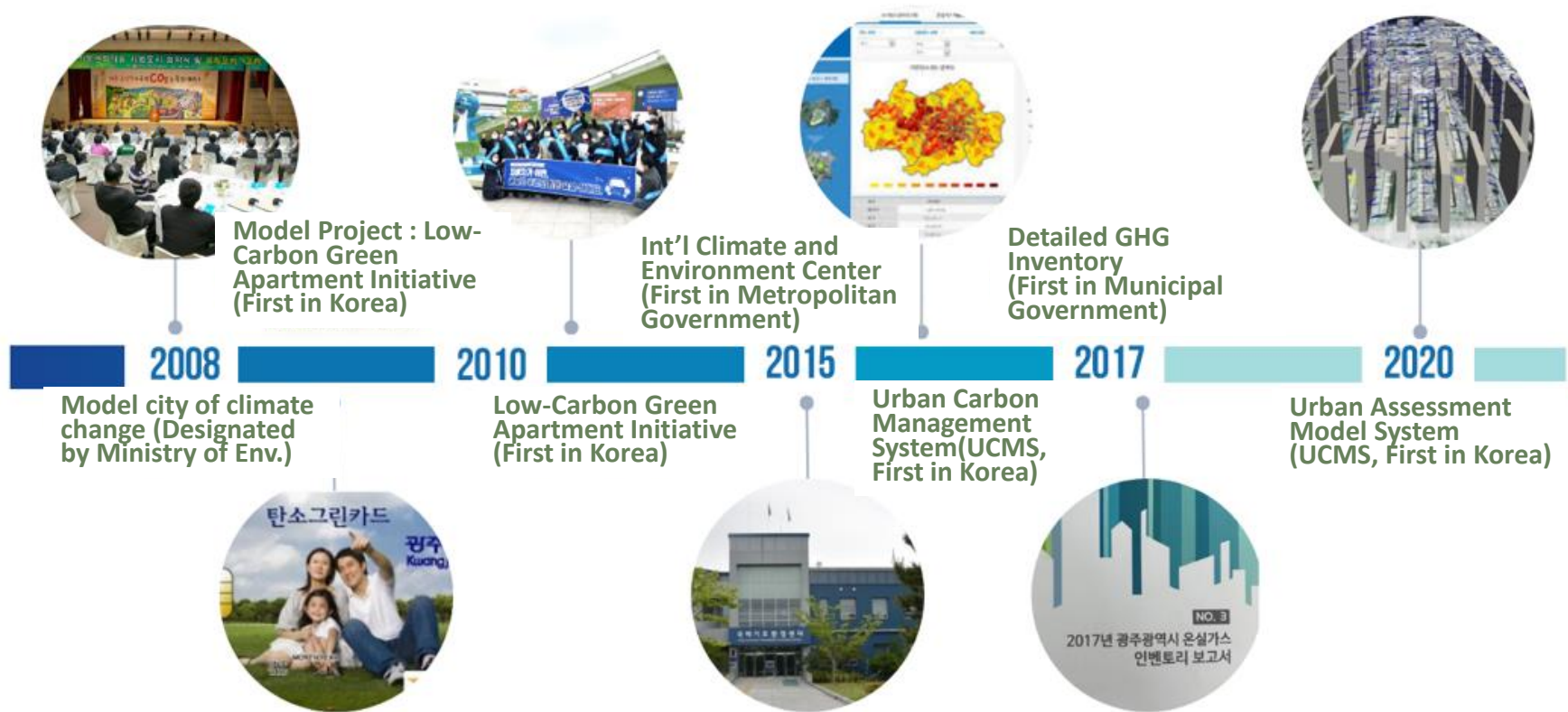
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1-1. Gwangju's Efforts for Climate Change Response



Key Outcomes

- Reduced 923kCO₂ from 2008~2020 by Carbon Bank (equivalent to 140 mil. of 30-year-old pine trees)
- Reduced 14kCO₂ for 10 years by Low Carbon Green Apartment for 10 years (430 apartment buildings, equivalent to 2.13 mil. of 30-year-old pine trees)
- Yearly average reduction since 2008 : 509kCO₂ (6.6% of emissions in 2008)

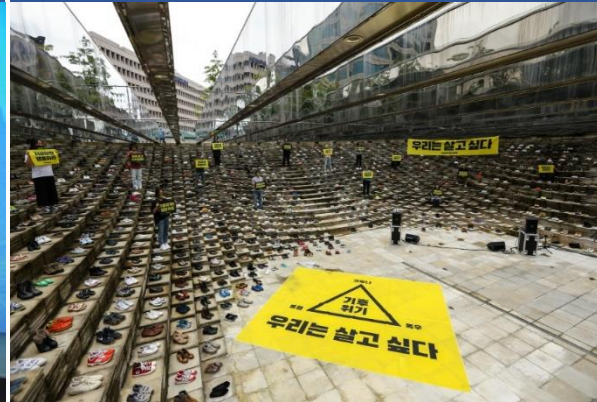
1-2. Call for a New Challenge

Raised Awareness on **Transition to Low-Carbon Society** As **Co-relation between Pandemic and Climate Change** becomes clear

Urge for global climate actions and accelerated AI-Green New Deal



Raised awareness on Climate Change due to COVID-19 Pandemic



Rise of Green Industry due to change in Global Value Chain (GVC)



Call by Citizens for Solution against Environment/Climate Issues



Aware the need for **Climate Change Response**



Feels Uncomfortable by **Fine Dusts**



Aware that the **Heat Waves** are severe

1-3. Beginning of a New Challenge

Citizen Announced Climate Crisis Emergency Actions



Gwangju Innovation Committee Recommended Declaring "Climate Crisis Emergency"



Announced Gwangju Community "Net-Zero 2045"



Net-Zero Energy Independent Gwangju 2045

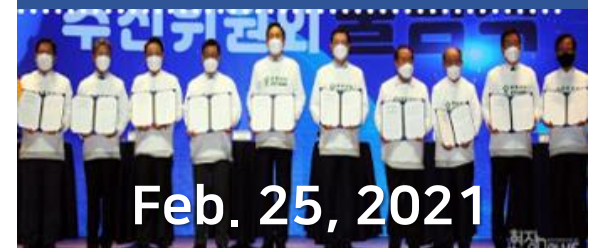
City Council Established Special Committee on Green New Deal



Established Net Zero City Implementation Group



Established Net-Zero City Committee



2-1. Vision and Strategy for Net-Zero Gwangju 2045

Vision for
Gwangju
New Deal

Leading Post-COVID19 Era
Global Leading City Gwangju

Strategies

Recover Local Economy
and Create Jobs

Expand
Energy
Independence
Village
Led by Citizen

Citizens Create and Use
Green Energy
**Green Transition
City**

- Green decentralization led by citizen
- Green energy
- AI-connected green infrastructure

Safe Citizens From
Climate Disaster
**Climate-Safe
City**

- Green Infrastructure
- AI-based smart environment mgt.
- Clean water env. infrastructure

Hub of
Future-Oriented
Environment
Convergence Industry
**Green Industry
City**

- Clean Air industry
- Climate/environment jobs and citizen participation
- Clean water env. infrastructure

Solve
Environmental
Issues,
Make
Industrial
Innovation

2045

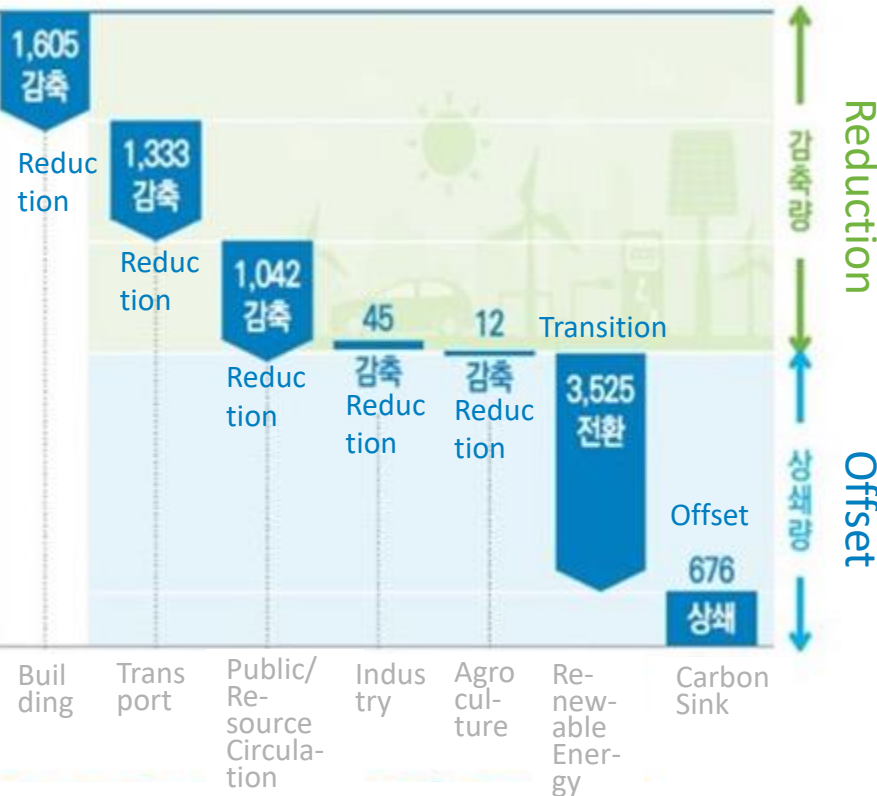
Net-Zero

Energy Independence

2-2. Reduction Target for Net-zero

8,236,8

Expected Emissions in 2045,
Gwangju



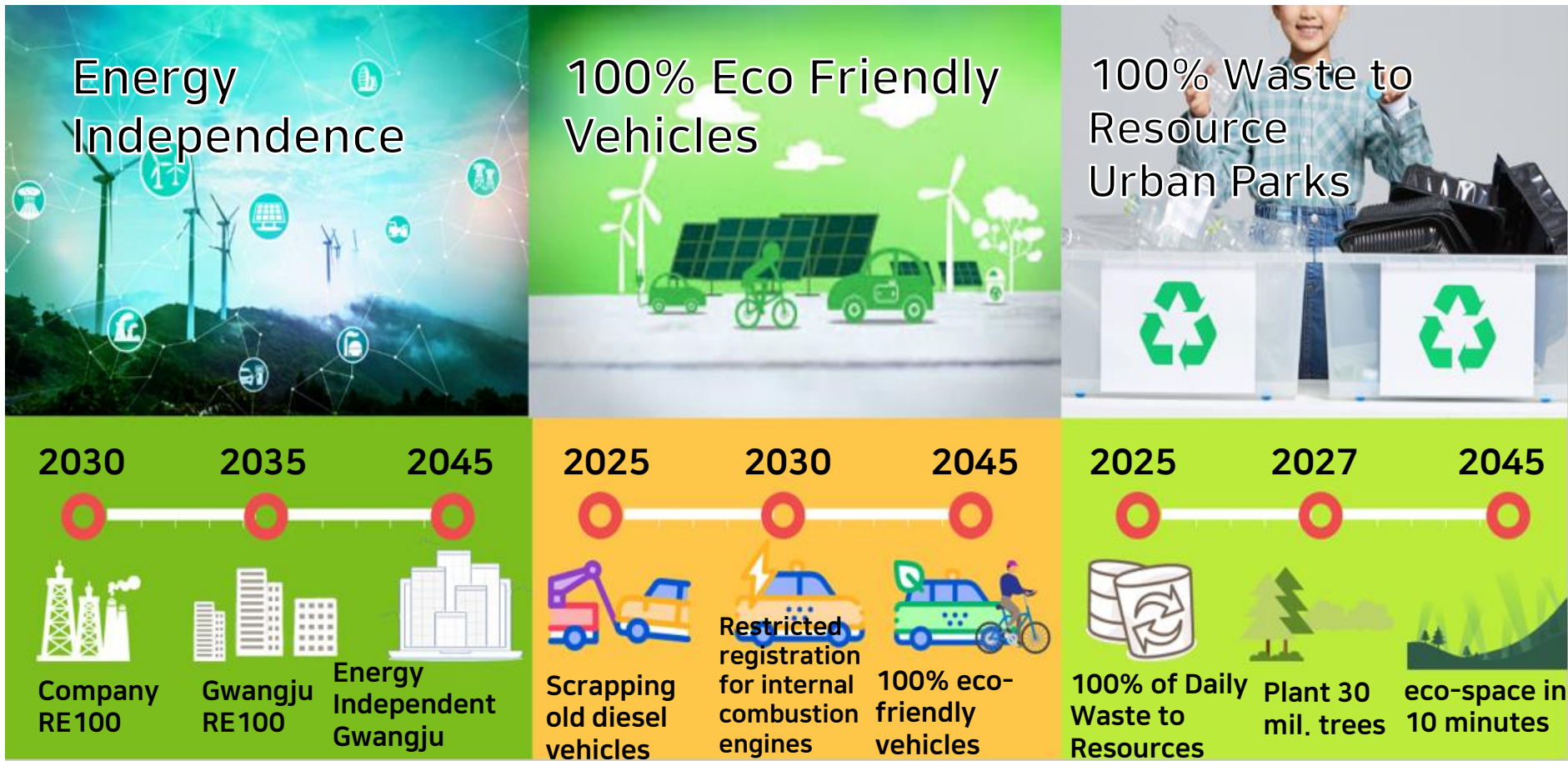
Reduction Target in 2045

2045
Energy Independence
100%

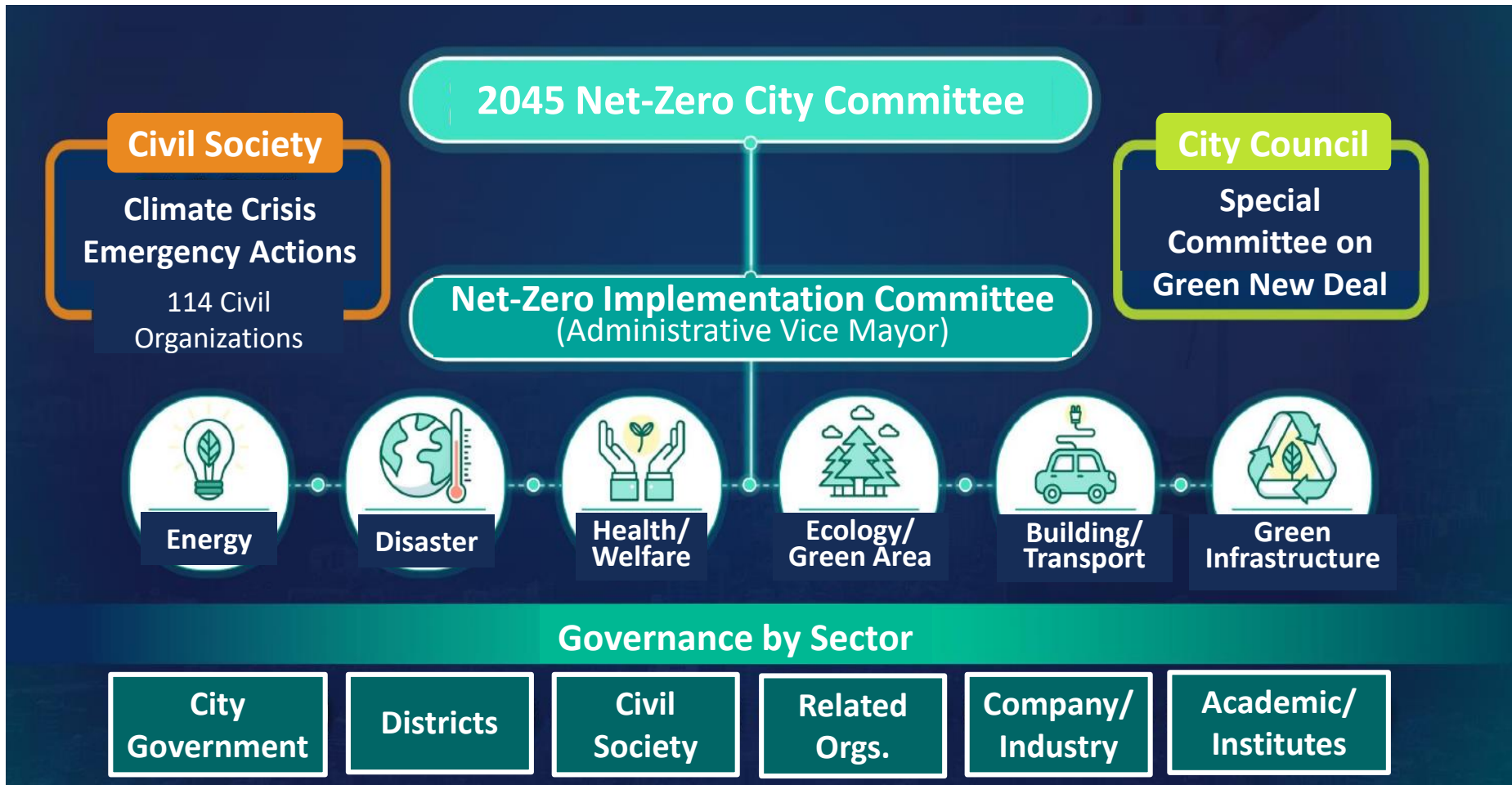
- Energy Policy Committee : Jan. 2020
- Announced 2045 Energy Independent City : Jul. 2020
- Special Committee on Green New Deal : Sep. 2020
- Implementation Committee on Company RE100 : Jan. 2021
- Net-Zero City Committee : Feb. 2021

2-3. Policy Pathway for Net-Zero 2045

“I make my own electricity.”



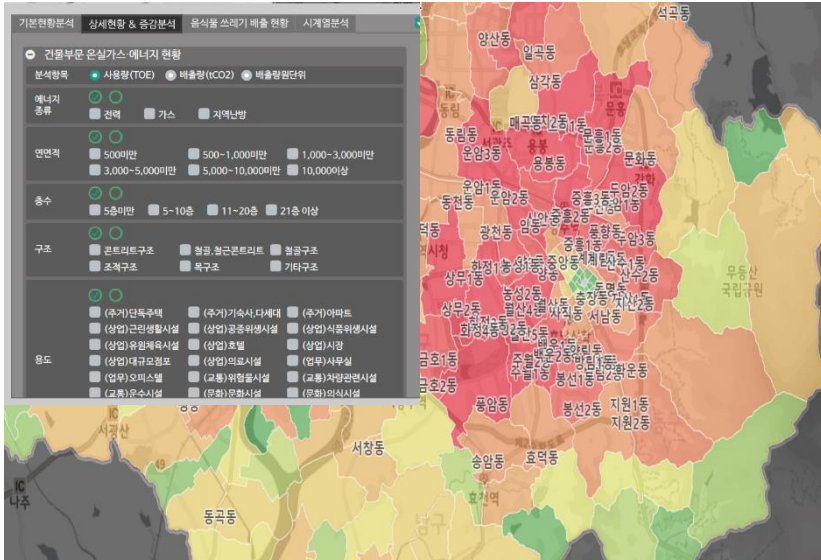
3. Governance for Net-Zero



- Climate crisis emergency headquarters(operation on demand)
- Implementation Committee for Company RE100(related organizations, enterprise, etc.)

4. Information Provision for Citizen Participation

Carbon Management System(UCMS)



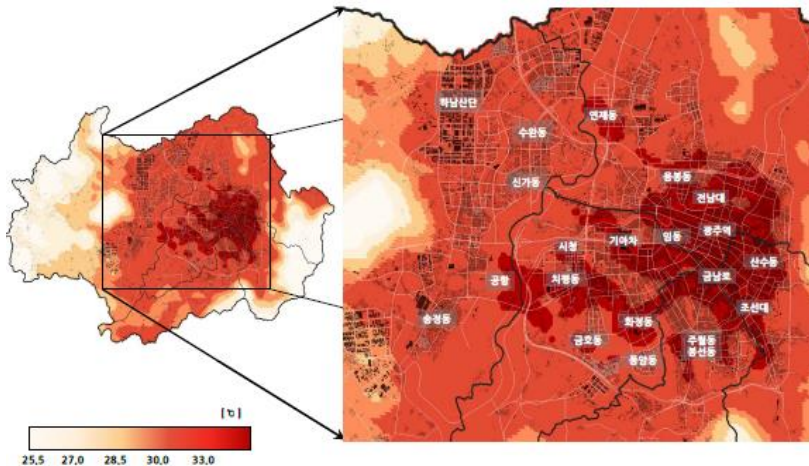
Emission Information by District



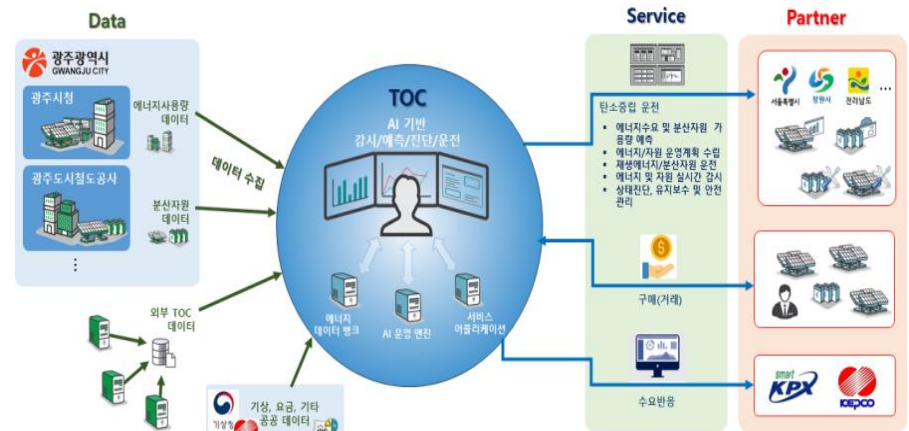
My Town's GHG Info Center



Heatwave and Fine Dusts(UAMS)



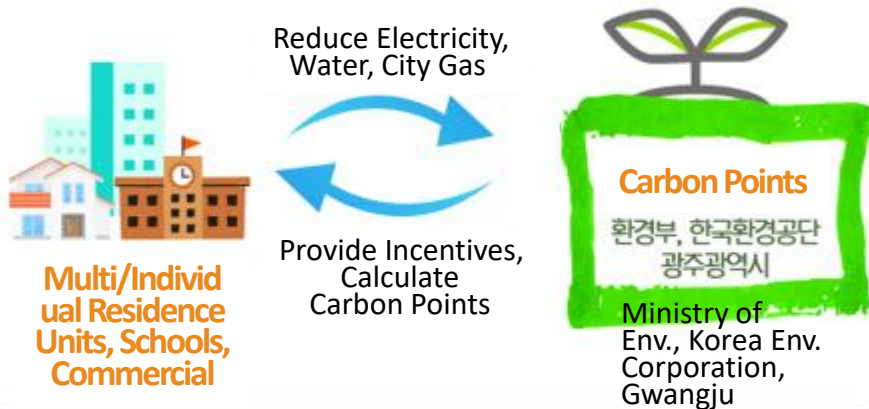
Energy Information Platform



5. Cases of Citizen Participation for Net Zero

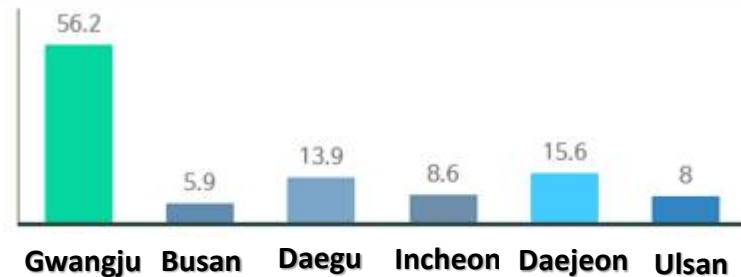
1 Carbon Bank (Gwangju as the first case, expanded national-wide)

Overview



Participating Households : 356,363 (as of Dec. 2020)
Highest rate in Nation
Budget in 2021 : 1,156 million KRW
(495(National)+661(Municipal))

Participation



Outcomes

GHG Reduction :
923ktonCO₂ (2008~2020)



5. Cases of Citizen Participation for Net Zero

2 Low-Carbon Green Apartment Project

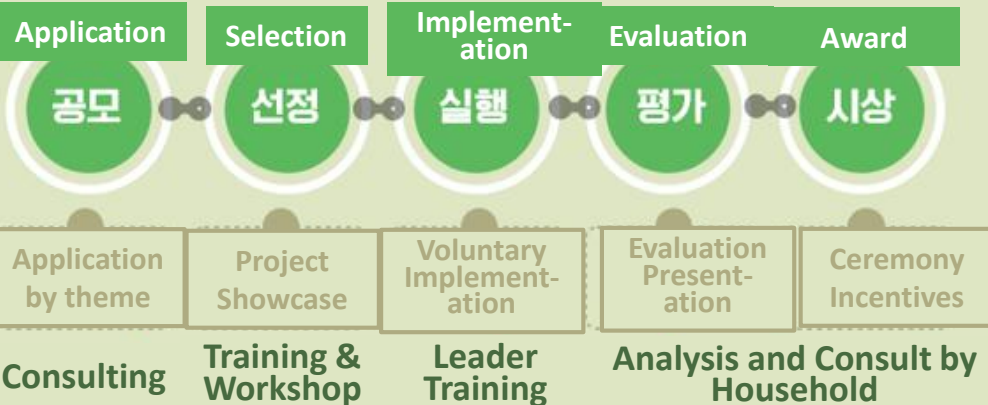
Background

- About 56% of Gwangju's emission come from a building sector
- 68.7% of Gwangju Citizen lives in multi-residence units
- Low-Carbon Green Apartments as a non-industry reduction model

Overview

- Duration : 2020 ~ present
- Targets : multi-residence units (apartments) in Gwangju
- Participants : 430 apartment buildings (2010~2020, including overlapped participants)

Procedure



Outcomes

GHG Reduction :
14ktonCO₂ (2010~2020)



Equivalent to planting 2.13 million trees
(30-year-old pine trees)

5. Cases of Citizen Participation for Net Zero

3 Energy Transition in Town Led by Citizen

Changes that citizens feel : *“Expand where citizens gather, learn, and act”*



Citizen training on energy transition :
813 trainees



Gwangju Declaration on
Net-Zero Transition Town



Energy transition town
(5 base centers)
- 97 centers by 2030



Energy Park(Sep. 2021)

5. Cases of Citizen Participation for Net Zero

4 Energy Transition with Citizen

Changes that citizens feel : *“Expand solar power generated by citizens”*



600kW solar power plant in high school
The 1st solar generation between Gwangju office of education and citizen union
“The first solar power plant in Gwangju on the rooftop of the school, invested by citizens”



1st private-public partnership solar plant (rooftop of multi-residence unit building)
274kW capacity



Solar panel on balconies
- 820 spots, 287kW

Solar power with 1GW capacity established by citizen-led union (27% of entire solar power)

5. Cases of Citizen Participation for Net Zero

5

Gwangju-Daegu (Dalvit : Moonlight) Alliance for Energy Collaboration

Changes that citizens feel : “Gwangju-Daegu RE100 citizen club, together beyond city boarder”



Certificate given to citizens who voluntarily contribute to transition to renewable energy (goal : 100 thousands participants by 2030)

- RE100 White : to citizens agreeing with RE100 and pledging to reduce individual reduction goals
- RE100 Green(2kW: electronics, fuel) : citizens generating more than 2kW of renewable energy
- RE100 Blue(5kW: electronics, fuel, transport) : citizens generating more than 5kW of renewable energy, and contributing to net-zero

Gwangju will make a lead of The Korean Green New Deal

1.5°C

To Protect the Earth

2030년

To Realize Gwangju Companies' RE100

2045년

Net-Zero Gwangju