

Making Tokorozawa City a Zero Carbon City

~ Promoting New Local and
Renewable Energy Sources ~



"Machigoto Ecotown" Tokorozawa City
Promotion Section

Today we will discuss:



- ① Overview of Tokorozawa City
- ② Promotion of Renewable Energy
- ③ New Local Energy Sources (Tokorozawa Mirai Electric Power Company)
- ④ Subsidy Programme for Smart Houses
- ⑤ Other Projects
- ⑥ Challenges and Future Outlook for Tokorozawa City



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① Where is Tokorozawa City?

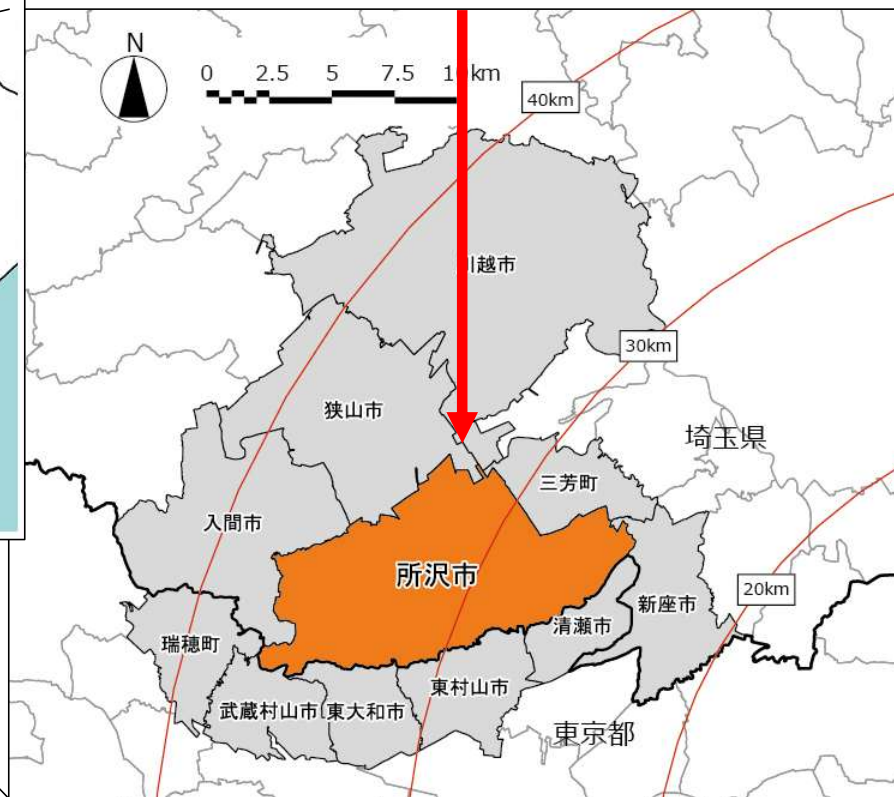


Japan



Tokyo

Tokorozawa City



① Basic Information about Tokorozawa City

Population: About 340,000 people
(160,000 households)

Area: 72.11km²

Strengths: Harmony of beautiful nature and urban features



① Climate Change and Tokorozawa City

Flooding caused by Typhoon in August 2016



① Announcement of Tokorozawa's Zero Carbon City Project



3rd November 2020

Tokorozawa declares it will be a Carbon Zero City by 2050



15th February 2021

5 Neighbouring cities make up the DIA PLAN for the Carbon Zero City Declaration (Tokorozawa, Hanno, Sayama, Iruma and Hidaka)

① Enforcement of Ordinances



Enforcing ordinances in order to implement Zero Carbon Cities

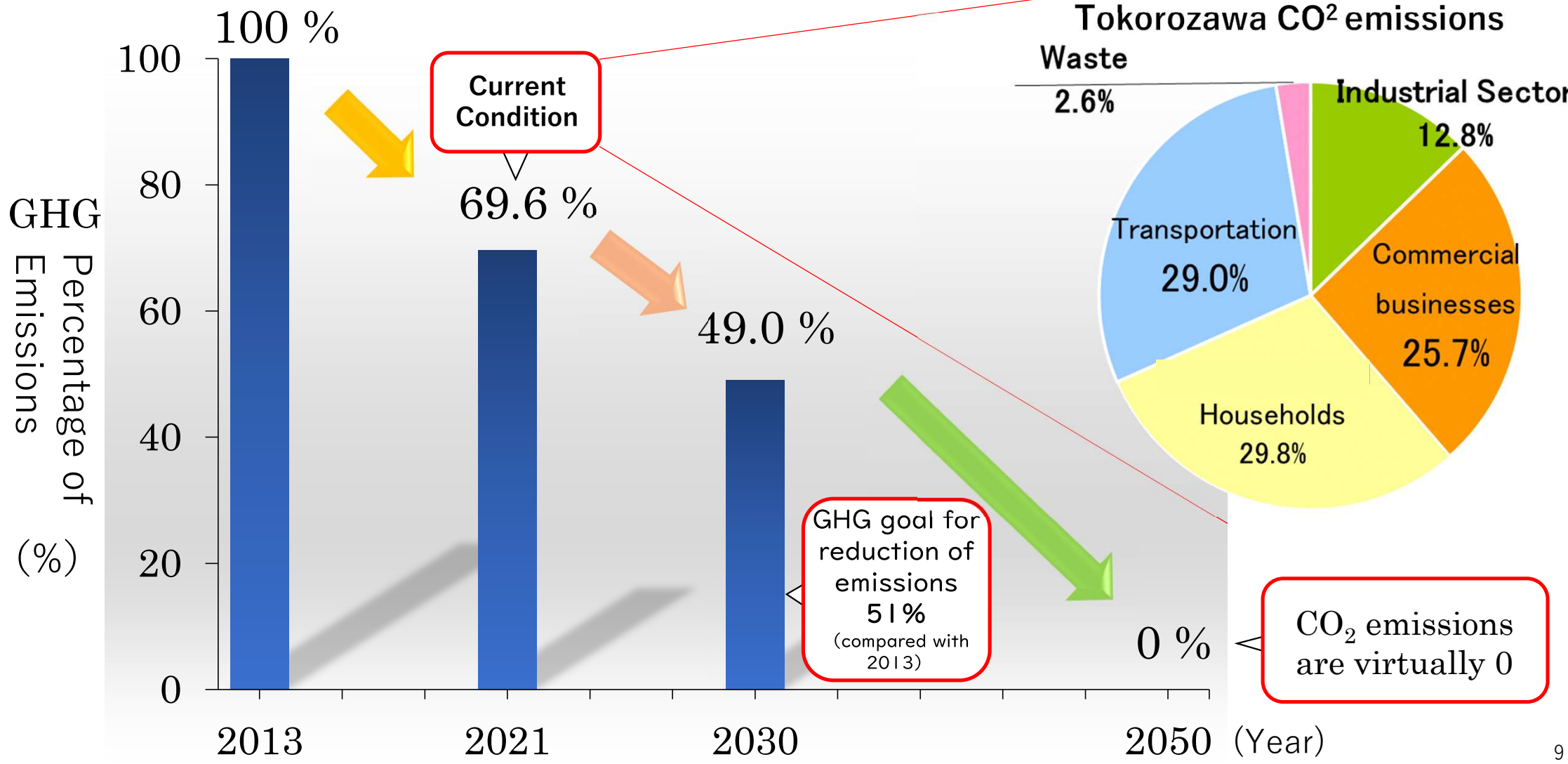
Carried out on the 1st April 2023

Ordinances for Tokorozawa to become a Decarbonised Society

A clear statement showing how government, businesses
and people will work tirelessly to create a prosperous
society for children to grow up in.



① Proposed Goals in order to achieve a Zero Carbon City (Compared to 2013)



① Tokorozawa City's Initiatives to become a Zero Carbon City



- Creating renewable energy power generating facilities
(Solar power businesses, waste incineration power generation businesses, small hydropower businesses)
 - Introducing and using electric cars and fuel cell vehicles
 - Introducing and using new local electric power companies
 - Subsidy programme for Smart Houses (Promote ZEH and solar)
 - Promote Zero Carbon Cities
-
- Projects cooperating with private sector
 - Promote environmental education (to local government staff and local residents), train a Town Eco Leader

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② Renewable Energy (Creating Large Solar Power Generation Facilities)



■ Mega Solar : 1,053kW



▶ Using general waste landfill sites

Average power generated in 1 year : about 1,180,000kWh

Number of panels : about 4,300

■ Floating Solar : about 385kW



▶ Using surface of reservoir

Average power generated in 1 year : about 470,000kWh

Number of panels : about 1,230

Electricity is used by public facilities at normal times



Contributes to reduction in CO₂

Equip facilities with portable storage batteries



Used by community groups as an emergency power source

② Promoting Renewable Energy (Setting up Solar Power Facilities)

■ Installing on public facilities



- elementary and junior high school
Total of about 1,000kW
- Water and Sewage Office 23kW
- ▶ Reinforcing resilience
(floods, weather events, etc.)

■ Using farmland



Kita Iwaoka Solar Power Plant (private)

Solar Sharing 989kW

- ▶ making use of unused agricultural land
- ▶ Collaborating with the private sector

② Promoting Renewable Energy (Introducing Biomass and Hydro Electric Plants)

▼ Using biomass and hydro electric power

■ Biomass and heat recovery ■ Water pressure



Thermal power from waste incineration 5,000kW



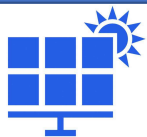
Small hydroelectric power generation at water purification plants 233kW

② Using Revenue from Electricity Sales



Funds for subsidies for Smart Houses

**Household
use**



Business Use

**Neighbourhood
Association
Management
Association**

Municipal Energy Conservation, support for Renewable Energy

② Introducing and Using Electric Vehicles and Fuel Cell Vehicles

Official Vehicles



Electric Cars



Fuel Cell Vehicles (MIRAI)



Electric Rubbish Trucks



Hydrogen Stations



Rapid Chargers

In case of
disasters



Evacuation Shelters

Today we will discuss:

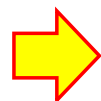


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③ Establishing a New Regional Electric Power Company (Tokorozawa Mirai Denryoku)

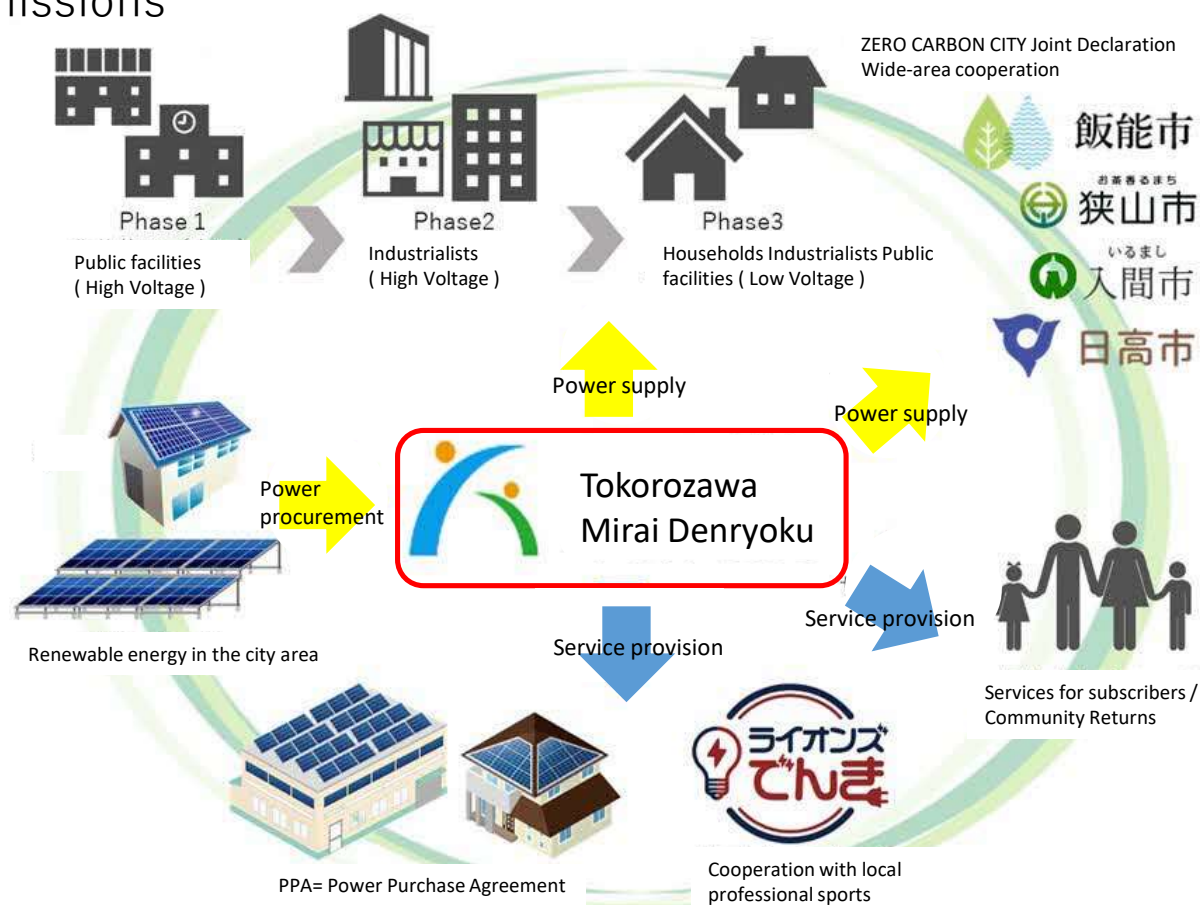
- Promoting Renewable Energy
- Local production for local consumption of renewable energy
- Switching to electricity with lower CO2 emissions
- Giving back to local areas



Goal of creating a sustainable society



Established: 30th May 2018
 Investment: Tokorozawa City (51%), JFE Engineering (29%) Hanno Shinkin Bank (10%), Tokorozawa Chamber of Commerce and Industry (10%)



③ Tokorozawa Mirai Denki – Power Supply

■ Examples of power sources



Mega Solar Tokorozawa



Float Solar Tokorozawa



Toubu Clean Centre

【Financial Statement】

Accounts settled	End of 2019	End of 2020	End of 2021	End of 2022
Sales (Yen)	Approx. 710 million yen	Approx. 710 million yen	Approx. 890 million yen	Approx. 1260 million yen



③ Benefits and Challenges of the New Local Electricity Industry



Benefits

- Promote local production for local consumption of electricity
- Reduce CO2 emissions from electricity use
- Stable Management
- Supply of electricity at a relatively low cost
- Expand the range of initiatives



ところざわ
未来電力

Challenges for Tokorozawa Mirai Denki

- 1 Person is in charge of business affairs- It's difficult to advance to new projects
- Strengthen further local reward programmes
- Acquiring Customers
- Securing more renewable energy sources

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④ Tokorozawa City Smart House Subsidy



Contents of Business

Subsidies are available for eco renovation involving installing equipment for renewable energy and energy conservation

Subsidy Recipients

Households, businesses, Neighbourhood Council, Management associations

Budget for 2022 FY

Budgeted amount: 70 million yen (£378,000)

Results for 2022 FY

Households	Businesses	Neighbourhood Council
873	2	0



④ Main Subsidies (Subsidy Projects)



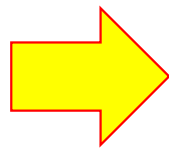
① Eco Renovations

- Insulation of buildings (windows, doors, walls, floors, roofs)
- Installing water-saving toilets and high-insulation bathtubs

② Renewable Energy and Energy Creation

- ZEH and low-carbon buildings, new construction
- Solar Power Equipment and Solar Heat Equipment
- V2H(Eco Car Charging)
- Electric cars and Fuel Cell Vehicles
- Biomass Heater
- ENE-FARM
- Storage Batteries

Results for FY 2022



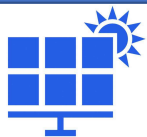
Number of Subsidies	Subsidies Amount
875	Approx. 67.12 million yen

④ Funding for Subsidies



Funds for subsidies for Smart Houses

Household use



Business Use

Neighbourhood Association Management Association

Municipal Energy Conservation, support for Renewable Energy

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⑤ Other Projects

Citizens Climate Council 2022

About 50 citizens were randomly selected to discuss solutions as interested parties in the zero-carbon project.

➡ Will consider introducing the ideas raised into future city policies.



⑤ Other Projects

Zero Carbon Symposium 2023

The 'Tokorozawa City Zero Carbon City Symposium' was held to realise zero carbon cities by 2050 and increase citizen's momentum.



⑤ Other Projects

Decarbonisation Management Network Conference

Declaration of Zero Carbon City (2020)

→Aiming for effectively zero CO₂ emissions in the city by 2050

Enforcement of ordinances to achieve a decarbonized society (2023)



Decarbonisation Management Network Conference 2023

Businesses from Tokorozawa City meet to work together to address decarbonisation



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⑥ Challenges and Future Outlook for Tokorozawa City



- Switching over electricity use (to renewable energy)
 - Promotion of new local electric power
- Limitations on bringing in potential renewable energy sources (Solar)
 - Establishing promotion zones (promotion of roof-mounted solar power), full use of unused land in the city, etc.
- Promoting electric vehicles
 - Expansion of quick chargers, V2H promotion, car sharing, etc.
- Behavioural changes among citizens and businesses
 - Hold symposiums, network meetings, and develop projects for the Climate Citizens Conference.
- Consider how to advance carbon neutral projects.
 - Measures for absorption, purchase of credits, introduction of new technologies, etc.



Thank you