

Ordinance Revision to Halve Carbon Emissions (Carbon Half)

**Overview of the “Environmental Building Reporting”
Program and Its Support Measures**

**December 2022
Tokyo Metropolitan Government**

Responding to the Climate and Energy Crises

"TIME TO ACT"—Now Is the Time to Accelerate Effective Action

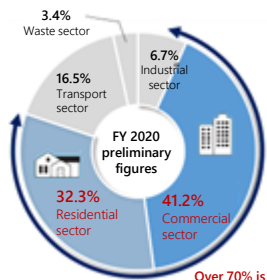
Ongoing climate crisis
Impact of the energy crisis



Significant impact on life and business in Tokyo
Integration of decarbonization and energy security initiatives

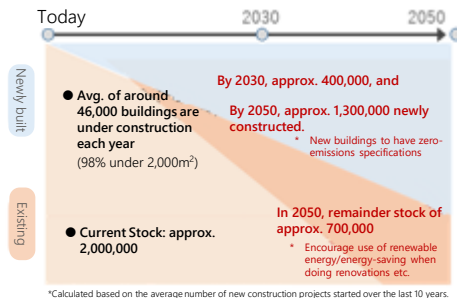
Recognizing our responsibility as a major energy consuming area, and our role to secure the economy, health and welfare, and resilience of our city, the Tokyo Metropolitan Government (TMG) is urgently accelerating efforts to lay the foundations for a carbon-neutral society with an eye on realizing the Carbon Half Plan by 2030.

CO₂ Emissions by Sector



Over 70% is building-related

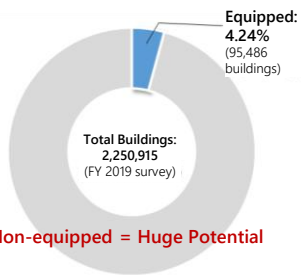
State of Housing in Tokyo (Trends from now to 2050)



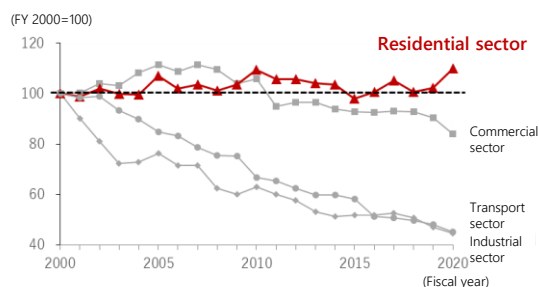
Shaping Future Tokyo through Building-Related Policies and Measures

- Buildings account for 70% of CO₂ emissions in Tokyo.
- By 2050, it's expected that about half of the existing buildings (70% of which are homes) will be replaced by newly-constructed buildings.
- Policies and measures related to new construction standards will be vital in determining the shape of Tokyo in 2050.

Percentage of solar power generation equipment installed in Tokyo



Energy Consumption Trends by Sector



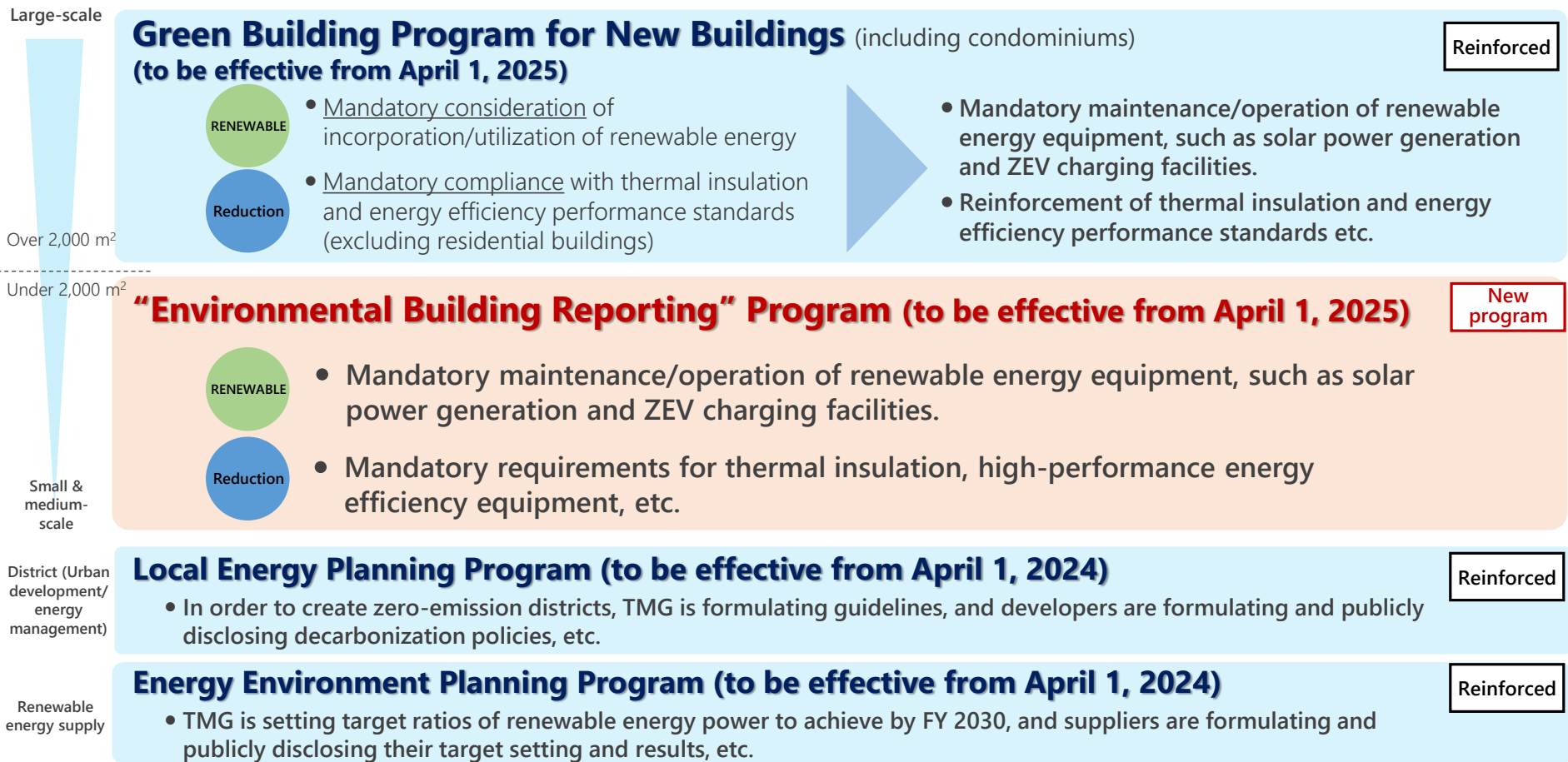
Tapping the Huge Potential of Tokyo's "Rooftops"

- Installation of solar power generation equipment on residential roofs in Tokyo has been limited. Rooftops present Tokyo a unique advantage as a metropolis and should be utilized to the maximum extent.
- The residential sector was the only sector to record an increase in energy consumption since 2000 (compared by sector). Further strengthening of measures is needed.

Reinforcing, accelerating, and thoroughly implementing sweeping climate change countermeasures in line with the characteristics of Tokyo, We will realize our vision of Tokyo as a more resilient, prosperous, and livable city.

Outline of Revisions to the Tokyo Metropolitan Environmental Security Ordinance

- Establish a **Program That Requires Certain Small and Medium-Sized New Buildings, Including Houses, to Ensure Environmental Performance** and reinforce the **Green Building Program for New Buildings, Local Energy Planning Program, and Energy Environment Planning Program** to strengthen effective efforts to realize a decarbonized society.
- These programs will start coming into effect from **April 1, 2025 etc.**, and related rules and regulations will be developed at the same time.



Program summary

- The program mandates or encourages housing suppliers that provide a total of 20,000 m² or more floor area a year in Tokyo, and other businesses that have made application and been approved by the governor (both are called designated housing suppliers) to ensure thermal insulation and energy efficiency performance and install renewable energy equipment (solar power generation equipment) at small and medium-sized new buildings, including houses, with a total floor area of less than 2,000 m².

Concept of formulating the new program

- Further promote decarbonization and improve resilience by encouraging measures for small and medium-sized new buildings, which account for 98% (90% of which are houses) of all annual construction starts and are not covered by existing programs.

Key points of the newly established program

Thermal insulation and energy efficiency performance standards

- Standards are set based on a national housing “best-in-class” (Top Runner) system.

Renewable energy installation standards (solar power generation equipment)

- Renewable energy installation standards = (1) Number of houses annually supplied × (2) Calculation standard rate × (3) Standard generation amount per building
 - (1) Houses annually supplied: Those with less than 20 m² of roof area can be excluded from the formula when calculating the installation standards.
 - (2) Calculation standard rate: Three rate levels (85%, 70%, 30%) are set for each area.
 - (3) Standard generation amount per building: 2 kW/building.
- Other available renewable energy: In addition to sunlight, solar heat and geothermal heat are possible sources of renewable energy.
- Location and method of installing renewable energy equipment: Location should be at the site in principle. Leasing is also available.
- Alternative measures: Installation at existing houses in Tokyo with an upper limit of 20%.

ZEV charging equipment standards

- For each building with a parking space, an electric cable conduit etc. for charging equipment should be supplied. If the parking area has space for 10 or more vehicles, a normal charging facility must be installed.

Others

- Establish a program that mandates covered businesses to explain environmental performance to residents, and is used for reporting to TMG and publication by TMG for the purpose of confirming the status of implementation and ensuring proper implementation.

About Designated Housing Suppliers

- **Designated housing suppliers** include **housing suppliers that provide a total of 20,000 m² or more floor area a year in Tokyo (compliance entities)**, and **other businesses that have made application and been approved by the governor (voluntary participants)**.
- By creating a **mechanism that allows businesses to voluntarily participate in the program** and treating them in the same manner as compliance entities, TMG will **improve their social evaluation, draw attention to them, and increase the effect of its measures**.
- TMG will **provide strong support to designated housing suppliers, which actively supply houses with high environmental performance**, and encourage their efforts.
- TMG will also welcome reporting from relatively small businesses other than designated housing suppliers.

		Covered businesses	Examples of covered businesses	Compliance with criteria	Publication of compliance	Confirmation of entities
Designated housing suppliers	Compliance entities	Annual supply of at least 20,000 m ²	Major housing suppliers	Required	Yes	Entities confirmed after the end of FY
	Voluntary participants	Businesses with an annual supply of 5,000 m ² or more* ¹ that hope to participate (A group of businesses with less than 5,000 m ² is also allowed* ²)	Groups of small and medium-sized housing suppliers and local contractors with supply volume equivalent to that of compliance entities	Required	Yes	Applications approved by TMG
Voluntary submitters		Businesses other than designated housing suppliers that hope to participate	Small and medium-sized housing suppliers and local contractors other than the above	Not required	Yes	Submission allowed after the end of FY

*1 This figure has been determined to ensure supply volume comparable to that of industry-leading major housing suppliers and according to the national government's goal of installing solar power generation equipment to 60% of new detached houses.

*2 If approval is to be obtained for the group, a lead managing underwriter should be designated and a compliance status report will be required for the group as a whole.

2021

- From **March, research** on solar panel prices and technology trends, recycling promotion, trends in each country, new program schemes, etc.
- At the **3rd regular meeting in September**, the governor **announced the consideration of mandatory installation of solar panels on new houses etc.**
- In **October, consultation** on the revision of the Tokyo Metropolitan Environmental Security Ordinance at the **Tokyo Metropolitan Environmental Council.**

2022

- In **May, reporting and deliberation at the second regular meeting** in response to the **interim summary** from the council. **Public comment made to Tokyo residents.**
- **In August, formulation of a draft Basic Policy on Ordinance Revision to Halve Carbon Emissions (Carbon Half).** Publication of Q&A.
- In **September, formulation of the Basic Policy on Ordinance Revision to Halve Carbon Emissions (Carbon Half) based on the report from the Tokyo Metropolitan Environmental Council in August.** Publication of explanatory material for Tokyo residents and businesses and updated Q&A.
- At the **3rd regular meeting in September**, the Basic Policy was presented for **deliberation.**
- At the **4th regular meeting in December, submission of draft revision to the Tokyo Metropolitan Environmental Security Ordinance** and a **supplementary budget** for projects needing prompt action in conjunction with the ordinance revision. **Both proposals were approved and enacted after deliberation.**

Reference: In June 2022, the national government revised the Building Energy Efficiency Act.
(From April 2025, new houses will be required to comply with thermal insulation and energy efficiency performance standards)

- ✓ **Decisively support the spread of buildings with high environmental performance after the ordinance revision.**
- ✓ **Encourage further improvements in environmental performance of houses** through the establishment and expansion of subsidies for solar power generation equipment, expansion of subsidies for the installation of heat utilization equipment, and expansion of subsidies for storage batteries that contribute to improving disaster preparedness.
- ✓ **Provide support to businesses preparing for the implementation** of the “Environmental Building Reporting” Program, and **actively encourage the efforts of businesses that take proactive action** before the program comes into effect.
- ✓ **Include** efforts needing prompt action in conjunction with the ordinance revision in the **FY 2022 supplementary budget.**

1 Promote support for businesses that promptly start preparing for the new program after the ordinance revision, and efforts to encourage understanding of Tokyo residents. **19.9 billion yen**

2 Accelerate the introduction of renewable energy, such as solar power generation, and promote efforts to quickly establish it in society, taking the opportunity of the ordinance revision. **10.2 billion yen**

3 Strengthen HTT* and decarbonization measures for an early breakaway from the unpredictable status of electricity supply and demand. **(7.2 billion yen)
(Repeat)**

Total of support measures in 4th regular meeting supplementary budget **30.1 billion yen**

* “HTT” is a Japanese acronym meaning to save, to generate, and to store electricity.

1 Promote support for businesses that promptly start preparing for the new program after the ordinance revision, and efforts to encourage understanding of Tokyo residents.

➤ **“Environmental Building Reporting” Program Promotion Project** New

Support housing suppliers that start preparing for the implementation of the “Environmental Building Reporting” Program.

Initiatives in FY 2022	Direction for FY 2023
<p>Support improvements in environmental performance until 2024 Subsidize part of the cost of supplying houses with high environmental performance in compliance with the program.</p> <div style="display: flex; align-items: center;"> <div style="background-color: #0070c0; color: white; padding: 5px; margin-right: 10px;">Designated housing suppliers</div> <div> <p>(1) Subsidy rate of 1/2 with an upper limit of 100 million yen (2) Subsidy rate of 2/3 with an upper limit of 30 million yen (Large businesses can use (1), small- and medium-sized businesses can use either (1) or (2)) ((2) is also available for groups of small businesses)</p> </div> </div> <p>Support improvements in design and construction technologies until 2024 Subsidize part of the cost of efforts to improve technologies for the design and construction of houses with high environmental performance in compliance with the program.</p> <div style="display: flex; align-items: center;"> <div style="background-color: #0070c0; color: white; padding: 5px; margin-right: 10px;">Voluntary submitters, including small- and medium-sized businesses (contractors)</div> <div>Subsidy rate of 2/3 with an upper limit of 1 million yen</div> </div> <div style="border: 2px solid #0070c0; padding: 5px; margin-top: 10px; width: fit-content;"> <p>4th regular meeting supplementary budget: 16.3 billion yen continuing until 2024</p> </div>	<p>Considering support measures accessible to designated housing suppliers, which will contribute to accelerating the introduction of renewable energy equipment.</p>

➤ **Project for Further Promoting Residential Solar Power Generation with No Setup Costs** New

Subsidize costs for businesses that install PV etc. without setup costs, through leasing, bundling sale of electricity, roof rental, and their own models, and return subsidies to homeowners through reduction of usage fees etc.

Initiatives in FY 2022	Direction for FY 2023
<p>Open recruitment and registration of businesses</p> <div style="border: 2px solid #0070c0; padding: 5px; margin-top: 10px; width: fit-content;"> <p>4th regular meeting supplementary budget: 3.5 billion yen continuing until 2023</p> </div>	<p>Starting subsidy programs</p>

1 Promote support for businesses that promptly start preparing for the new program after the ordinance revision, and efforts to encourage understanding of Tokyo residents.

➤ **Establishment and operation of a general help desk for the “Environmental Building Reporting” Program** New

Establish and operate a one-stop general telephone help desk that accepts inquiries about the new program and various subsidy programs from Tokyo residents and businesses.

Initiatives in FY 2022	Direction for FY 2023
Establishing a general help desk and starting its operation <div style="border: 1px solid blue; padding: 5px; margin-top: 10px;">4th regular meeting supplementary budget: 10 million yen</div>	Ongoing operation of the help desk

➤ **Awareness Raising Project for the “Environmental Building Reporting” Program** New

Use a variety of content to develop multi-faceted public relations activities for the new program.

Initiatives in FY 2022	Direction for FY 2023
Enhance a dedicated portal site and create promotional videos and awareness raising materials . <div style="border: 1px solid blue; padding: 5px; margin-top: 10px;">4th regular meeting supplementary budget: 60 million yen</div>	Hold awareness raising events in collaboration with businesses and related organizations.

➤ **Solar Power Generation Equipment Advisory Support Project** New

Provide technical support for businesses to improve PV-related knowledge, and offer information on maintenance methods for PV systems to Tokyo residents in cooperation with industry groups.

Initiatives in FY 2022	Direction for FY 2023
Holding of seminars for Tokyo residents <div style="border: 1px solid blue; padding: 5px; margin-top: 10px;">4th regular meeting supplementary budget: 20 million yen</div>	Answer technical inquiries about PV installation and management, and dispatch PV instructors in response to requests from local organizations.

2 Accelerate the introduction of renewable energy, such as solar power generation, and promote efforts to quickly establish it in society, taking the opportunity of the ordinance revision.

➤ Tokyo Zero Emission House Promotion Project Expansion

Subsidize PV systems for newly built Tokyo Zero Emission Houses according to their environmental performance to ensure the expansion of houses with high environmental performance.

Initiatives in FY 2022

Increase PV installation subsidies for apartment buildings (base frames).

4th regular meeting supplementary budget: 2.7 billion yen

Direction for FY 2023

Considering expansion of subsidies, including support for PV systems suitable for the regional characteristics in Tokyo.

➤ Project to Expand the Use of Thermal Insulated Solar Homes that Are Resistant to Disasters and Contribute to Health of Residents Expansion

Support high levels of insulation and the introduction of renewable energy equipment in order to promote the conversion of existing houses, including part of newly built houses, to environmentally friendly, resilient, and healthy houses.

Initiatives in FY 2022

Increase PV installation subsidies for apartment buildings (roof waterproofing and base frames).
Start subsidizing the upgrading of PV ancillary equipment (power conditioner).

4th regular meeting supplementary budget: 7.2 billion yen

Direction for FY 2023

Considering expansion of subsidies, including relaxation of subsidy requirements for PV installation and support for PV systems suitable for the regional characteristics in Tokyo.

➤ Project for the Proactive Introduction of Renewable Power to Apartment Buildings New

Support switching to the high voltage power receiving scheme to promote PV installation in apartment buildings and the introduction of 100% renewable electricity.

Initiatives in FY 2022

Open recruitment of contractors

4th regular meeting supplementary budget: 200 million yen continuing until 2023

Direction for FY 2023

Start of application by users (power companies)

➤ Project to Promote Group Buying of Solar Power Generation Equipment and Storage Batteries New

Build a mechanism that allows Tokyo residents to purchase PV systems etc. at lower prices than usual through economies of scale.

Initiatives in FY 2022

Open recruitment of contractors

4th regular meeting supplementary budget: 10 million yen

Direction for FY 2023

Start of recruitment of users (Tokyo residents)

➤ Promotion of the Advanced Circular Use of Solar Panels

New

Promote efforts to encourage recycling when residential solar panels are disposed of to establish a recycling route for the used solar panels.

Initiatives in FY 2022

(Management of a council that promotes the advanced circular use of solar panels)

Direction for FY 2023

Considering measures to reduce the burden of recycling residential solar panels.

3 Strengthen HTT* and decarbonization measures for an early breakaway from the unpredictable status of electricity supply and demand.

➤ Project to Expand the Use of Thermal Insulated Solar Homes that Are Resistant to Disasters and Contribute to Health (Repeat)

Expansion

Increase self-consumption and further improve the disaster preparedness of buildings (with the help of the introduction of solar power generation) by raising subsidy rates for the installation of storage batteries and heat utilization equipment.

Initiatives in FY 2022

Enhance the rates and coverage of subsidies to promote the introduction of renewable energy systems:

- Increase in the subsidy rates for geothermal heat and storage batteries
- Expansion of subsidy coverage for solar thermal systems

(The increased subsidy rate for storage batteries is also applied by the Tokyo Zero Emission House Promotion Project)

Establish subsidies for upgrading equipment related to the maintenance of renewable energy systems at existing houses.

- Upgrading of auxiliary heat source equipment in solar thermal systems

4th regular meeting supplementary budget: 7.2 billion yen (Repeat)

Direction for FY 2023

Considering broader subsidy coverage to improve the thermal insulation of existing houses and encourage the self-consumption of surplus electricity from solar power generation.

* "HTT" is a Japanese acronym meaning to save, to generate, and to store electricity.