

14 March 2024

REvision2024 Session 2

「 Urban and Regional Sustainability and Renewables 」



Tokyo Warm  
Home & Biz

# Achieving “Carbon Half” by 2030

Mandatory Installation of “Photovoltaic Power Systems” etc.  
in new Residential and Other Buildings

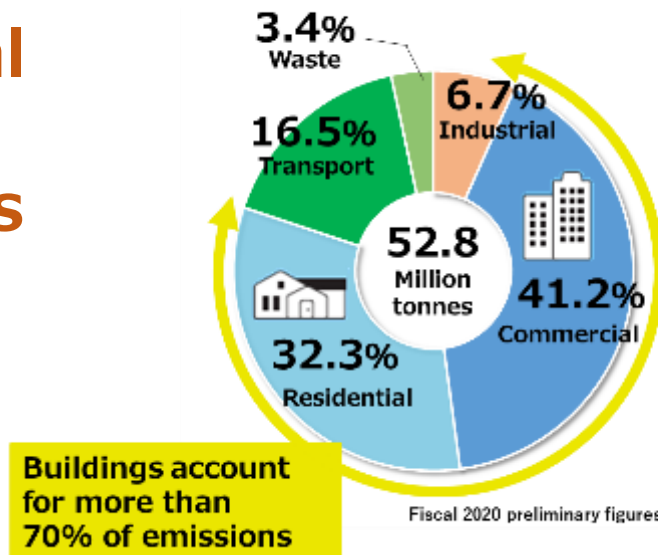


Bureau of Environment, Tokyo Metropolitan Government (TMG)

# Shaping Future Tokyo through Building-related Policies and Measures

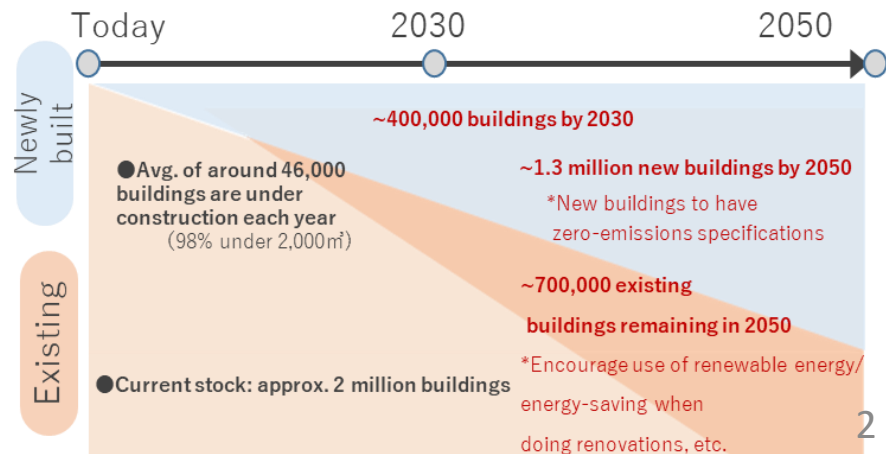
✓ Commercial and residential sectors constitute a large share of the CO2 emissions in Tokyo.

Sector Breakdown of CO2 emissions in Tokyo



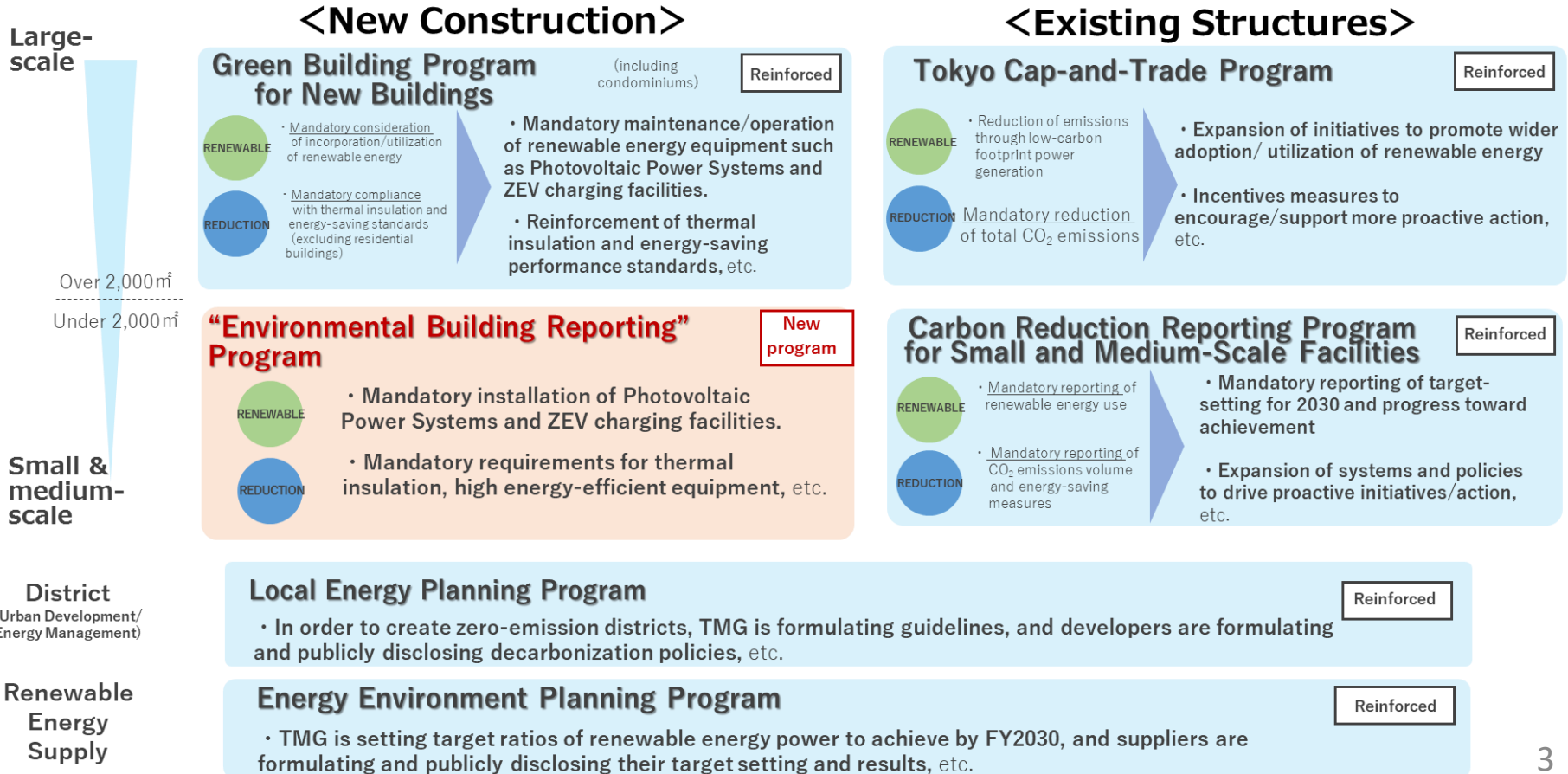
✓ By 2050, about half of the existing buildings (of which 70% is homes) will be replaced by newly-constructed buildings.

Tokyo Housing Situation (Heading into 2050)



# Reinforcing TMG Programs

Promote the reduction of energy consumption in the residential sector and the construction of standardized “healthy homes”



# Introducing ” Mandatory PV installation programs ” for New Buildings

## Environmental Building Reporting Program

### □ Target Buildings

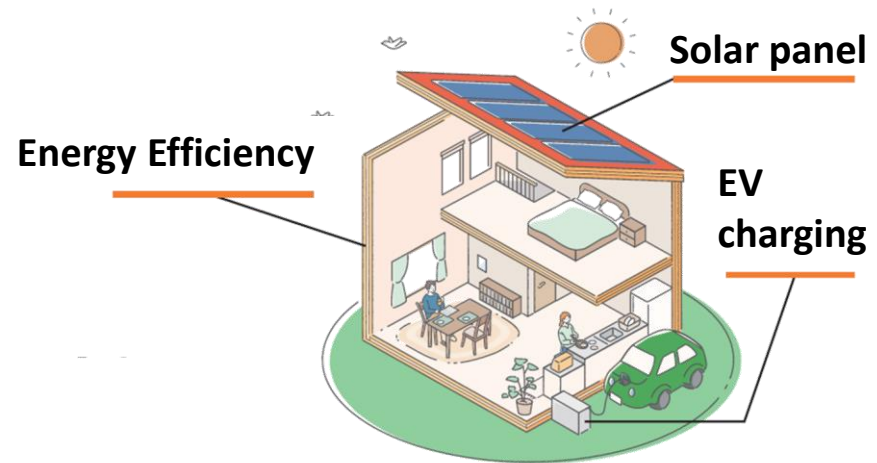
**Small and medium-sized new buildings and homes** with total floor space of less than 2,000m<sup>2</sup>.

### □ Target Individuals

**Major housing suppliers that supply over 20,000m<sup>2</sup> of housing etc. on a yearly basis in Tokyo** will be subject to this mandate.

### □ Details of Obligations

The program implements **mandatory requirements for thermal insulation, energy-efficient-equipment, installation of Renewable energy equipment and ZEV charging equipment.**



# Reactions of industry associations and housing suppliers

## 【Acceptance of the new program】

- We expect the spread of ZEH to stimulate insulation, energy conservation, and renewable energy initiatives, so **we would like the TMG to go ahead with the measures.**
- The idea of implementing the TMG program with reference to the national program is **highly favored** because it's **easy to understand how the program works** and it **reduces the burden on companies in managing their operations.**



## 【Industry Requests】

- **The content of performance reports and the method of reporting** should be **simple and reasonable.**
- We would like **the TMG to create a program whereby motivated businesses are properly evaluated**, even if they are not covered by the program.
- The media spreads many negative and misinformed opinions about solar panels. The TMG needs to **improve its public relations** to ensure that its **citizens are getting accurate information about solar panels.**
- While it is **reasonable to specify that the area required to install 2 kW of solar panels is at least 20 m<sup>2</sup>**, there is a **risk of causing light pollution to neighbouring areas if the north face is included in the roof area for the calculation of the obligatory volume.**
- As a mitigating measure in the event that the mandatory volume cannot be met by installation in new houses, **it may be worth considering a calculation method that includes installation in existing dwellings, if requested by the customer, in the mandatory volume.**

# Results of interviews with housing suppliers (50 companies)

- **Around 90% of companies have already taken or are taking steps to prepare for the start of the new program in 2025.**
- The launch of the TMG program has led to a number of companies **working on modeling PV standard houses** through the subsidy project and **further improving the environmental performance of houses** through the zero-emission housing subsidy project.
- The method of PV installation is divided into two types: **self-owned (custom built)** and **zero initial cost scheme (ready-built houses)**.

## Main opinions of the companies.

### <Progress in preparations for the implementation of the new program >

#### 【Companies mainly supplying custom-built houses】

- The mandatory standards have already been achieved as of FY2022 and are expected to remain achievable throughout the program.
- For custom-built houses, PV has been installed as standard equipment since this fiscal year. The same policy will be applied to ready-built-houses in the near future..

#### 【Companies mainly supplying ready-built houses】

- Only a small percentage of houses are equipped with PV. The company aims to introduce a business scheme suitable for PV installation.
- The company plans to start installing PV in ready-built-houses in April of next year and in all buildings by FY2025.
- Trial project will be launched this year, utilizing a scheme that allows PV installation at zero initial cost.

# Award program 「Tokyo Eco Builders Award」

- The Tokyo Eco Builders Award was developed before the Environmental Building Reporting Program launched to acknowledge businesses that demonstrate a strong commitment to promoting buildings with high environmental performance.
- New houses in Tokyo which were issued a certificate of confirmation between August and October 2023 are eligible

26 companies applied for the award, and the TMG selected the following companies:  
2/19 Award Ceremony, 3/4 Award Event



**High Standard Award (Insulation and energy-saving performance category: 21 companies, Renewable energy installation category: 19 companies)**

→ Achieved the insulation, energy conservation, and renewable energy installation standards set forth in the new program ahead of schedule



**Solar Challenge Award (7 companies)**

→ The installation rate of renewable energy equipment has increased by 10 percentage points or more within the target period compared to the previous year.



**Leading Company Award (Insulation and energy-saving performance category: 9 companies, Renewable energy installation category: 8 companies)**

→ Implement more advanced initiatives to promote environmentally friendly housing, etc.

< **Awarded in the thermal insulation and energy-saving performance category** >

Ai Corporation, Takasago Corporation, Fukuyasu-home Corporation, Mitsui Fudosan Residential Co.

< **Awarded in the category of Installed Amount of Renewable Energy Facilities** >

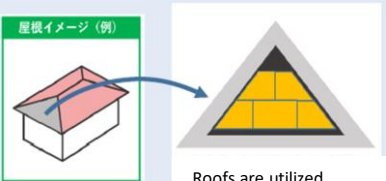
Asahi Kasei Homes Corporation, Sekisui House, Ltd. Yahata-home Corporation

< **Awarded in both categories** >

Ichijo Corporation, Seiryō Construction, Sweden House, Says Corporation, Yamato jyuken Corporation



# Support measures to increase the effectiveness of the new program

Target	Project
<p><b>Housing Supplier</b></p>	<ul style="list-style-type: none"> <li>▶ <b>Support projects to help major housing suppliers improve the environmental performance of their housing product lineup</b> <ul style="list-style-type: none"> <li>• Subsidies for the development and improvement of housing models with high environmental performance that comply with the Environmental Building Reporting Program.</li> <li>• Subsidy rate: 1/2 (up to 200 million yen) or 2/3 (up to 30 million yen)</li> </ul> </li> <li>▶ <b>Projects to support the improvement of design and construction technologies (for local construction companies, etc.)</b> <ul style="list-style-type: none"> <li>• Subsidies for efforts to improve housing design and construction techniques in response to the Environmental Building Reporting Program.</li> <li>• Subsidy rate : 2/3 (maximum amount: 2 million yen)</li> </ul> </li> <li>▶ <b>Support project for specific housing suppliers to install renewable energy equipments</b> <p style="text-align: right;"><b>Proposed 2024 budget: 5.3 billion yen</b></p> <ul style="list-style-type: none"> <li>• Subsidy program that provides a lump sum to businesses participating in the Environmental Building Reporting Program that install of renewable energy equipment .</li> </ul> </li> </ul>
<p><b>Housing Supplier &amp; Owner/ Buyer</b></p>	<ul style="list-style-type: none"> <li>▶ <b>Support for photovoltaic systems with superior functionality</b> <ul style="list-style-type: none"> <li>• Certification of PV systems with superior functionality that responds to city-specific issues, and additional subsidies (up to 50,000 yen/kW) for some projects</li> <li>• Certification categories... Compact, building material integrated, anti-glare, lightweight, and PV output optimization</li> </ul> </li> </ul> <div style="text-align: right;">  <p>屋根イメージ (例) Roofs are utilized without wasting space</p> </div>



# [Reference] Support measures for improving the environmental performance of housing, etc.

Target	Project
<b>Owner/ Buyer</b>	<ul style="list-style-type: none"><li data-bbox="349 391 1881 658"><p>▶ <b>Tokyo Zero Emission Housing Subsidy Project</b> Proposed 2024 budget: 25.1 billion yen</p><ul style="list-style-type: none"><li data-bbox="394 491 1649 572">• Subsidies are provided to home owners who have newly constructed homes that comply with the Tokyo Zero Emission Housing standard.</li><li data-bbox="394 582 1649 658">• Subsidies will be provided in accordance to the new, strengthened standards which will take effect in Oct of FY2024.</li></ul></li> <li data-bbox="349 822 1856 1039"><p>▶ <b>Subsidy project to promote the introduction of residential PV system at zero initial cost</b> Proposed 2024 budget: 3.7 billion yen</p><ul style="list-style-type: none"><li data-bbox="394 958 1605 1039">• Subsidy to businesses that install solar power generation equipment with zero initial cost through leasing, electricity sales, rooftop rental, etc.</li></ul></li></ul>

# [Reference] Support measures for improving the environmental performance of housing, etc.

対象	事業名等
Home-owner / Purchaser	<ul style="list-style-type: none"><li data-bbox="343 368 1875 472">▶ <b>Project to promote energy conservation and renewable energy use in rental homes</b> <b>Proposed 2024 budget: 250 million yen</b></li><li data-bbox="382 539 1676 665">• The subsidy will be provided to landlords to cover the cost of diagnosing and labeling energy-saving performance of the building in conjunction with improving insulation.</li><li data-bbox="382 689 1553 772">• Additionally, subsidies will be provided for the cost of introducing a low-voltage single-point electricity receiver and a PV system.</li><li data-bbox="330 815 343 829">•</li></ul>

# [Reference] Support measures to increase the use of renewable energy

Target	Project
<b>Private Business</b>	<p>▶ <b>Subsidy project to promote renewable energy aggregators</b> <b>Proposed 2024 budget: 300 million yen</b></p> <ul style="list-style-type: none"><li>• Supporting business operators to establish businesses that control energy supply and demand through remote control of household storage batteries, etc.</li></ul>
	<p>▶ <b>Subsidy project to encourage electricity retailers to proactively develop renewable energy generation facilities</b> <b>Proposed 2024 budget: 800 million yen</b></p> <ul style="list-style-type: none"><li>• Support for electricity retailers to develop renewable energy generation facilities and achieve an energy mix that's 50% renewable. <u>(Electricity retailers that receive the subsidy must comply with certain requirements, such as providing electricity to local residents during emergencies.)</u></li></ul>
	<p>▶ <b>Subsidy project to expand introduction of renewable energy at business sites</b> <b>Proposed 2024 budget: 8.3 billion yen</b></p> <ul style="list-style-type: none"><li>• Procurement Project for Renewable Energy Sources Outside Tokyo (PPA outside Tokyo) : 8 projects</li><li>• Projects to promote the introduction of locally produced and locally consumed renewable energy and energy storage facilities : 713 projects</li></ul>
	<p>▶ <b>Subsidy project to accelerate early Implementation of Perovskite Solar Cells</b> <b>Proposed 2024 budget: 100 million yen</b></p> <ul style="list-style-type: none"><li>• Encouraging companies to develop perovskite solar cells for early commercialization and accelerating their implementation in society</li></ul>

# How to Accelerate PV Installation



1

## **Improve architectural design and construction techniques, secure construction labor force**

- Support for human resource development and securing of construction engineers
- Promote efficient processes for PV installation in new construction to be positioned in process management.



2

## **Assess the progress of companies subject to the program**

- Continuous exchange of opinions and cooperation with companies that may be subject to obligations
- Induce participation in the Program for companies with around 15,000 to 20,000m<sup>2</sup>



3

## **Promote PV installation in existing and multi-family housing**

- Strongly promote PV installation by utilizing various TMG subsidy programs
- New supporting projects budgeted for multi-family housing



4

## **Product development through the ingenuity of domestic manufacturers**

- Promote the introduction of panels with superior functionality that are effective in solving city-specific problems.
- Support corporate initiatives for early implementation of perovskite solar cells
- Measures to ensure a sustainable supply chain



5

## **Strengthen cooperation with other municipalities**

- Aim for further policy influence analogous with Kawasaki City
- Lobbying government ordinance-designated cities, etc., which are in a particularly advantageous position to introduce the new program.

**In addition to the above, strategic PR will foster a movement to install solar panels.**

For more information, please check the following documents

- **PV portal** Various information on solar power generation

[https://www.kankyo.metro.tokyo.lg.jp/climate/solar\\_portal/index.html](https://www.kankyo.metro.tokyo.lg.jp/climate/solar_portal/index.html)



- **PV installation, maintenance, recycle etc. (Q&A)**

<https://www.kankyo.metro.tokyo.lg.jp/documents/d/kankyo/qa-1>



- **Overview of energy conservation and renewable energy support measures for residences, etc. (2024 budget)**

[https://www.kankyo.metro.tokyo.lg.jp/documents/d/kankyo/202401\\_shien\\_gaiyo\\_v3-pdt](https://www.kankyo.metro.tokyo.lg.jp/documents/d/kankyo/202401_shien_gaiyo_v3-pdt)



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<https://www.kankyo.metro.tokyo.lg.jp/english/> 13