**Priorities of the Requests for Realization of Carbon Neutrality**
**(Year 2025 Edition)**
**(Key Points)**

**[Overall Approach]**
Steady and prompt implementation of the initiatives set out in priority support sectors in the GX (Green Transformation) Promotion Strategy
(Implementation of the various initiatives proposed by the Study Group on Roadmap Formulation for the Widespread Use of GX Construction Equipment)

**[Specific Approach]**
Chapter 1: Electric Construction Equipment

1. Enhancement of support measures (support for facility development, technological development, and related areas through budgetary and tax incentives)

[Items to be implemented in the short term (within 1 to 2 years)]
Top Priorities
- ○ Policy and tax support such as substantial subsidies and low-interest loans for electric construction equipment and related equipment
- ○ Support for corporate R&D and implementation
- ○ Support for the GX construction equipment certification system

Priorities
- ○ Support for technological development of large-capacity and portable charging equipment
- ○ Support for component and material manufacturers
- ○ Promotion of the widespread use of three-phase large-capacity (AC400V/63A) power supply

[Items to be implemented in the medium term (within 3 to 5 years)]
Top Priorities
- ○ Support for component and material manufacturers
- ○ Support for corporate R&D and implementation
- ○ Support for technological development of large-capacity and portable charging equipment

Priorities
- ○ Policy and tax support such as substantial subsidies and low-interest loans for electric construction equipment and related facilities
- ○ Consideration for nighttime electricity usage and rates
- ○ Continuation and expansion of government-led related research and technological development

2. Internationally Harmonized Standardization and Review of Regulations

[Items to be implemented in the short term (within 1 to 2 years)]
Top Priorities
- ○ Standardization of charging methods, connection plugs, EMC during charging, electrical safety, etc. (including wired types)
- ○ Clarification of the legal status, dissemination, and assurance of uniform nationwide application regarding the storage, transportation, and management of portable normal and rapid charging equipment
- ○ International harmonization and standardization of power plugs for normal and

rapid charging equipment

Priorities

- ○ Standardization of battery capacity, size, and components
- ○ Clarification of the scope of laws and standards related to the installation and safety of charging equipment, and formulation of corresponding guidelines
- ○ Institutional design to enable efficient deployment nationwide

[Items to be implemented in the medium term (within 3 to 5 years)]

Top Priorities

- ○ Standardization of charging methods, connection plugs, EMC during charging, electrical safety, etc. (including wired types)
- ○ Establishment of government-led systems to facilitate battery recycling and reuse
- ○ Clarification of the legal status, dissemination, and assurance of uniform nationwide application regarding the storage, transportation, and management of portable normal and rapid charging equipment

Priorities

- ○ Regulatory easing necessary to make rapid charging equipment portable
- ○ Review of regulations related to large-capacity and portable charging equipment
- ○ Regulatory easing to facilitate the widespread use of hydrogen engine generators (including portable types)

## Chapter 2: Hydrogen-Powered Construction Equipment

1. Enhancement of support measures (support for facility development, technological development, and related areas through budgetary and tax incentives)

[Items to be implemented in the short term (within 1 to 2 years)]

Top Priorities

- ○ Continuation and expansion of government-led related research and technological development
- ○ Support for the GX construction equipment certification system

[Items to be implemented in the medium term (within 3 to 5 years)]

Top Priorities

- ○ Support for the GX construction equipment certification system
- ○ Support for technological development and installation related to hydrogen transportation, storage, and use
- ○ Support related to the Electrification Promotion Project for Commercial Vehicles and Other Vehicles (Ministry of the Environment) (related to GX construction equipment)

Priorities

- ○ Maintaining competitively priced hydrogen levels and implementing necessary policy support, as well as ensuring a stable hydrogen supply
- ○ Policy and tax support such as substantial subsidies and low-interest loans for construction equipment

2. Internationally Harmonized Standardization and Review of Regulations

[Items to be implemented in the short term (within 1 to 2 years)]

Top Priorities

- ○ Establishment of systems and regulatory easing related to hydrogen transportation, storage, and use
- ○ Review related to UNR134/GTR13
- ○ Review of the High Pressure Gas Safety Act with hydrogen-powered construction equipment in mind

Priorities

- ○ Standardization of connection plugs between hydrogen refueling equipment and construction equipment
- ○ Establishment of systems and regulatory easing for off-site hydrogen charging at construction sites and other related sites, and for mobile hydrogen refueling

[Items to be implemented in the medium term (within 3 to 5 years)]

Top Priorities

- ○ Review related to UNR134/GTR13
- ○ Establishment of systems and regulatory easing for off-site hydrogen charging at construction sites and other related sites, and for mobile hydrogen refueling
- ○ Review of the High Pressure Gas Safety Act with hydrogen-powered construction equipment in mind

Priorities

- ○ Review of various regulations, standards, and systems based on the premise of diesel engine operation
- ○ Review of Notification Attachment 100, which stipulates detailed provisions of the

Safety Standards of the Road Transportation Vehicles (technical standards for fuel systems of vehicles using compressed hydrogen gas as fuel)

- Formulation and institutionalization of internationally harmonized standards for fuel cells and hydrogen engines
- Support for component and material manufacturers

## Chapter 3: Use of Next-Generation Fuels

1. Enhancement of support measures (support for facility development, technological development, and related areas through budgetary and tax incentives)

[Items to be implemented in the short term (within 1 to 2 years)]

Top Priorities

- ○ Maintaining low prices comparable to diesel fuel and ensuring a stable supply volume
- ○ Support for the GX construction equipment certification system

[Items to be implemented in the medium term (within 3 to 5 years)]

Top Priorities

- ○ Maintaining low prices comparable to diesel fuel and ensuring a stable supply volume
- ○ Support related to the Electrification Promotion Project for Commercial Vehicles and Other Vehicles (Ministry of the Environment) (related to GX construction equipment)

2. Internationally Harmonized Standardization and Review of Regulations

[Items to be implemented in the short term (within 1 to 2 years)]

Top Priorities

- ○ Clarification of the definitions and legal status of biofuels, e-fuels, etc.
- ○ Formulation and assurance of quality standards that allow trouble-free use in existing engines and construction equipment, along with support for necessary testing and other related activities
- ○ Ensuring consistency with the automobile industry

[Items to be implemented in the medium term (within 3 to 5 years)]

Top Priorities

- ○ Clarification of the definitions and legal status of biofuels, e-fuels, etc.
- ○ Formulation of global quality standards and specifications, and ensuring international harmonization in evaluation methods for $CO_2$ reduction effects
- ○ Formulation and assurance of quality standards that allow trouble-free use in existing engines and construction equipment, along with support for necessary testing and other related activities

## Chapter 4: Creation of Domestic and International Demand, Overall Approach

### 1. Support for carbon neutrality in CE production and manufacturing

[Items to be implemented in the short term (within 1 to 2 years)]

Top Priorities

- ○ Review of regulations on storage methods for onboard lithium-ion batteries (electric construction equipment manufacturing)
- ○ Development of various laws and regulations, standards, etc., necessary for installation, operation, and disposal while considering the characteristics of perovskite
- ○ Introduction of support measures for procurement of green power derived from renewable energy

Priorities

- ○ Continuation of the extension of the period from public solicitation for solar power generation subsidies to the installation deadline (multi-year support)
- ○ Government support for the establishment of technology and production systems for perovskite solar cells
- ○ Setting $CO_2$ reduction targets that take into account regional differences in climate and sunlight hours

[Items to be implemented in the medium term (within 3 to 5 years)]

Top Priorities

- ○ Subsidies for capital investment necessary for the manufacture of hydrogen-powered construction equipment (including hydrogen tanks, supply systems, etc.) — hydrogen-powered construction equipment manufacturing
- ○ Support for $CO_2$ reduction efforts in the power, steel, and other sectors
- ○ Introduction of subsidies for building reinforcement work and maintenance for solar panel installation

Priorities

- ○ Government support and subsidies for technological development aimed at promoting the widespread use of synthetic methane (e-methane)

### 2. Creation of demand in Japan and overseas

(1) Growth of domestic demand

[Items to be implemented in the short term (within 1 to 2 years)]

Top Priorities

- ○ Preferential treatment in public and private works projects
- ○ Development of concrete roadmaps in the civil engineering (infrastructure) sector
- ○ Tax support

Priorities

- ○ Promotion of i-Construction, improvement of operational efficiency through the use of automation, autonomy, and remote control technologies in construction work, and $CO_2$ reduction

[Items to be implemented in the medium term (within 3 to 5 years)]

Top Priorities

- ○ Preferential treatment in public and private works projects
- ○ Development of concrete roadmaps in the civil engineering (infrastructure) sector

Priorities

- ○ Promotion of the use of telematics technology, including verification of $CO_2$ reduction effects in the implementation of model projects

(2) Support for overseas expansion

[Items to be implemented in the short term (within 1 to 2 years)]

Top Priorities

- ○ Promotion of discussions related to the Cape Town Treaty and the MAC Protocol

Priorities

- ○ Implementation and expansion of infrastructure development and GX construction equipment support through ODA and public financing

[Items to be implemented in the medium term (within 3 to 5 years)]

Top Priorities

- ○ Implementation and expansion of infrastructure development and GX construction equipment support through ODA and public financing
- ○ Implementation of intergovernmental negotiations to prevent any disadvantageous treatment against Japan-made CE due to the introduction of various regulations, rules, and other measures by foreign governments and institutions

Priorities

- ○ Inclusion of the construction equipment and civil engineering sectors in the section on contributions to CN (carbon neutrality) in the Infrastructure System Overseas Promotion Strategy, and consideration of specific measures

— End —