

# Requests for Realization of Carbon Neutrality (Year 2024 Edition)

August 2024  
Japan Construction Equipment  
Manufacturers Association

## Request 1. Further development of infrastructure for electricity and hydrogen

### 1. Common Requests for electricity and hydrogen

#### (1) Support for technological development and facility improvement

- Development of technologies required for rapid, high output, and large-capacity charging and hydrogen refueling, ensuring safety, and facility improvement
- Technological development of mobile means of supply

#### (2) Standards and standardization, as well as review of regulations

- Rapid establishment of standards and regulations in infrastructure development
- Support for development and dissemination of off-site (including public roads) quick charging and refilling systems

#### (3) Government-led roadmap creation

- Creation of roadmaps regarding technological and infrastructure development based on global trends
- The roadmaps shall mention hydrogen and alternative fuels, in addition to electrification

### 2. Requests specifically for electric-powered CE

#### (1) Support for technological development and facility improvement

- Support for technological development and equipment installment (rapid, highly-durable and large-capacity batteries, as well as mobile charging equipment)
- Dissemination of electrical supply in 3 phase and large-capacity, and simplification of application process for installment
- Consideration for nighttime electricity and rates, as well as environmental improvements for further dissemination

#### (2) Standards and standardization, as well as review of regulations

- Establishment and review of related regulations, clarification of security standards (rapid charging and mobile charging equipment)
- Deregulation for dissemination of hydraulic engine power generators (including mobile types)

### 3. Requests specifically for CE that uses hydrogen

#### (1) Support for technological development and facility improvement

- Support for technological development and installment regarding transport, storage, and use of hydrogen
- Maintaining competitive prices and ensuring stable supply
- Realization and dissemination of hydrogen supply equipment with high flow rate filling capacity

#### (2) Standards and standardization, as well as review of regulations

- Realization of the off-site type hydrogen refueling (system development and deregulation)

### 4. Requests specifically for alternative fuels and related technology

#### (1) Support for technological development and implementation

- Enhancement of roadmaps towards commercialization of alternative fuels

#### (2) Specific issues and response directions

[1] Security of low-cost, stable supply, [2] definitions and quality assurance, [3] consistency with international rules and standards, and [4] consistency with the automobile industry

\* For standards and standardization, as well as review of regulations, in each Request, it is essential to consider international consistency.

## Request 2. Support for manufacture and use of CE (vehicle) and parts

### 1. Common requests for electricity and hydrogen

#### (1) Support for technological development and facility improvement, and promotion of industry-government-academia partnerships

- Continuation and expansion of government-led research and development
- Support for technological development/implementation by companies
- Materialization of a simple and fast process for certification and designation of GX CE

#### (2) Standards and standardization, as well as review of regulations

- Review of current systems on the premise of diesel engines (regarding emissions, noise, vibration, safety, certification, and recycling)
- Emphasis on global competition standpoints, harmonization with relevant overseas standards and regulations

### 2. Requests specifically for electric-powered CE

#### (1) Support for technological development and facility improvement

- Support for technological development/implementation to accelerate introduction
- Support to component manufacturers and material manufacturers

#### (2) Standards and standardization, as well as review of regulations

- Standardization of battery capacity, size and parts
- Establishment of regulations and standards regarding charging methods, connecting plugs, and conditions for battery charging
- Review of the system for low-noise and low-vibration CE

### 3. Requests specifically for CE that uses hydrogen

#### (1) Support for technological development and facility improvement

- Support for technological development/implementation to accelerate introduction
- Support to component manufacturers and material manufacturers

#### (2) Standards and standardization, as well as review of regulations

- Creation and institutionalization of standards for, as well as standardization of, fuel cells and hydraulic engines
- Standardization of hydrogen refueling facilities and connecting plugs of machines
- Review of laws and standards necessary for use of hydrogen-powered CE

### 4. Requests specifically for alternative fuels and related technology (Refer to Request 1 – 4.)

### 5. Support for carbon neutrality in production/manufacturing of CE

#### (1) Enhanced support in CO2 emissions reduction in manufacturing processes

#### (2) Introduction of support measures for installing existing solar power generators and review of regulations

- Improving systems and support measures for perovskite solar cells

## Request 3 Support to CE Users

### 1. Enhanced policy support such as subsidy, taxation and low-interest financing

#### (1) Support for initial cost

- Support through bold subsidies, low-interest loans and tax incentives for CE (vehicle)
- Support for installment of a large-capacity power source, as well as continuation and expansion of subsidy programs for GX CE introduction
- Security of compatibility with international schemes

#### (2) Support for running cost

- Subsidies, tax incentives and awards of evaluation points based on the amount of CO2 reduced
- Support for finished vehicles as well as repair parts
- Support for the gap with diesel fuel charges

#### (3) Support for promoting the distribution of used CE and battery recycling

- Establishment of a system to promote the recycling and reuse of batteries
- Support for promoting the distribution of used construction equipment overseas

#### (4) Support in taxation

- Extension and enhancement of small- and medium-sized enterprise taxation (business enhancement taxation and investment promoting taxation)
- Application to other special tax schemes (including tax incentives to promote investments for carbon-neutrality)
- Shortening or standardization of depreciation periods, and establishment of an immediate depreciation system
- Tax incentives for an installed power source (property tax breaks and shortened depreciation periods)

### 2. Development of systems for mechanics and maintenance shops that provide after-sales services and support for personnel development

#### (1) Coordination with EV car mechanics and existing CE mechanics, system design, recruitment and personnel development

- Clarification of required qualifications and subsidies for acquisition of the qualification.
- Expansion of the scope of voltage that can be handled by qualified low-voltage electricians, international views, and introduction of CE mechanic qualifications
- Safety training for workers who handle high voltage and high pressure equipment

## Request 4. Creation of demand in and outside Japan and general discussion

### [Items apply mainly to the domestic market]

#### 1. Implementation and expansion of domestic promotion measures

- (1) **Improvement and expansion of the GX CE certification scheme, as well as a simple and swift certification**
  - Expansion of target models and technologies (to include hydrogen and alternative fuels), and budget increases
  - Simple and fast procedures and screening, as well as harmonization with relevant international systems and regulations
- (2) **Preferential treatment in bids for public works projects**
  - Grant of incentives such as review of unit prices of labor
  - Evaluation and eligibility for receiving an order to be made based on the amount of CO2 reductions as well as ownership/utilization record of GX CE, as well as implementation of model projects
  - Introduction of a similar system in private construction projects
- (3) **Creation of concrete roadmaps in civil engineering and infrastructure areas**

#### 2. Collaboration with related fields and expansion of support

- (1) **Promoting realization of CN through enhanced association with other technologies**
  - Promotion of i-Construction (improving operational efficiency through use of automation, autonomy and remote control technologies)
- (2) **Support for CO2 reduction efforts in the electric power and steel sectors**
- (3) **Expansion of government funds (GX bonds) and private financing/investment**

### [Items apply mainly to overseas/international markets]

#### 1. Response to international regulations, certification and standards

- (1) **Promotion of international harmonization on regulations and standards**
  - Responses to manufacture, transport, and use of electric CE and hydrogen fuels
- (2) **International cooperation on grant of subsidies and other incentives**
- (3) **Conducting government negotiations to prevent any disadvantageous treatment against the Japan-made CE**
  - Government-level responses to regulations and rules introduced by foreign governments and organizations

#### 2. Support in overseas expansion

- (1) **Promoting discussions on the Cape Town Treaty and the MAC Protocol**
  - Information-gathering and rapid sharing with industry by the government
  - Formulating a policy to maintain and strengthen international competitiveness
- (2) **Implementation and expansion of assistance through ODA and public financing**
  - Support for overseas infrastructure development and grants in GX
- (3) **Addition of CE and civil engineering areas into the Infrastructure System Overseas Promotion Strategy**
  - Addition of the areas and consideration of specific measures