Outline of the Certification System for Decarbonization Efforts at Port Terminals

(Purpose)

Article 1　This outline stipulates the necessary matters to ensure the proper operation and dissemination of the "Certification system for decarbonization efforts at port terminals" (hereinafter referred to as "this certification system"), established by the Ports and Harbours Bureau of the Ministry of Land, Infrastructure, Transport and Tourism.

(Definition of Terms)

Article 2　The definition of terms used in this outline are as follows:

(1) "Certification system for decarbonization efforts at port terminals" refers to a system that objectively evaluates decarbonization efforts at port terminals to promote their implementation.

(2) "CNP Certification (Container Terminal)" refers to the part of the certification system that applies specifically to container terminals.

(Significance of this Certification System)

Article 3　The purposes and significance of this certification system are as follows.

(1) The need to decarbonize port terminals.

With the global trend to incorporate decarbonization into business management, domestic and international companies are working to decarbonize their supply chains, and shipping lines and logistics companies need to respond to these shippers' needs. Port terminals, which are the hubs of the maritime supply chain, are also required to respond to these needs by enhancing port functions in consideration of decarbonization (e.g., decarbonization of port facilities). In light of these circumstances, the Ministry of Land, Infrastructure, Transport and Tourism is promoting the development of Carbon Neutral Port (CNP), whereby port functions are enhanced in consideration of decarbonization, under government targets such as 'carbon neutrality by 2050'.

(2) The purpose of this certification system

This certification system aims to promote decarbonization efforts at terminals for the development of CNP by providing transparency and objective evaluation of such efforts. Through decarbonization efforts at port terminals, the system aims to promote the decarbonization of the supply chain as required by shippers and other stakeholders, support the decarbonization efforts of various businesses using the terminals, and contribute to the reduction of carbon emissions from maritime transport by vessels entering and leaving the terminals, as well as hinterland transport by trucks.

(3) The significance of this certification system

① By providing evaluation items and indicators for terminal decarbonization, the path to terminal decarbonization will become more concrete, making it easier to advance with efforts.

② Advanced decarbonization at port terminals will contribute to decarbonization initiatives

by shippers, shipping lines and logistics companies, including those using terminals in the supply chain, as well as those in the hinterland transport sector.

③ By promoting the objective evaluation results of decarbonization efforts at port terminals to shippers, shipping lines, port users, related businesses, financial institutions, and society as a whole, the system contribute to form competitive ports chosen by shippers and shipping lines.

④ Contribute to the realization of the 'Green Shipping Corridor,' which promotes the decarbonization of ports and shipping at the global level, led by Japan, by disseminating and expanding the decarbonization of port terminals overseas, using this certification system as an evaluation axis.

(Establisher, Certification Targets, and Operation Methods)

Article 4 The establisher, certification targets, applicants, and operational methods of this certification system are as follows:

(1) Establisher: This certification system is established by the Ports and Harbours Bureau of the Ministry of Land, Infrastructure, Transport and Tourism.

(2) Certification Targets: The targets of certification under this certification system are port terminals. Initially, container terminals will be the primary focus.

(3) Applicants: Applications for this certification system will be submitted on a terminal-unit basis. The applicants will be port management bodies for public terminals operated by port management bodies and lessees or terminal operators for public terminals operated by private businesses. If there are terminal operators or owners of facilities subject to evaluation other than the applicant, the application must be made with their consent.

(4) Operation Methods: Applicants wishing to obtain certification under this system must apply to the establisher, which also functions as the certification body in accordance with this outline. The certification body will conduct an evaluation and grant certification if the application meets the certification requirements. The certification validity period is three years.

(Evaluation Items for Certification)

Article 5

(1) This certification system will conduct multi-level evaluations based on the implementation status of the following efforts, with the ultimate goal of achieving decarbonization at the terminals:

① Decarbonization efforts related to cargo handling at terminals.

② Efforts contributing to the decarbonization of vessels and vehicles.

(2) The specific evaluation items and indicators of this certification system are shown in Appendix 1 and Appendix 2. The performance requirements for decarbonization efforts evaluated under this certification system are detailed in Appendix 3.

(3) In Appendix 1 and Appendix 2, evaluation indicators are set for each evaluation item, and the efforts required to obtain certification at each level (from Level 1 to Level 5) are defined as

"requirements." Efforts other than the requirements, which are encouraged under this certification system, are defined as "recommendations."

(Procedures for Applicants)

Article 6　The procedures for applicants under this certification system are as follows:

(1) Application Documents: Applicants must complete the prescribed contents in the application form and submit it to the certification body along with the required attachments.

(2) Other Requirements: Other necessary procedures will be prescribed by certification body.

(Procedures for Certification)

Article 7

(1) The certification body shall accept applications from applicants unless there are legitimate reasons not to do so.

(2) If deficiencies are found in an application, the certification body may request applicants to review or supplement the application contents.

(3) The certification body shall notify applicants of the examination results principally within 60 days (excluding Saturday, Sunday, and National Holiday) of the final submission of the completed application.

(Publication of Certification Results)

Article 8

(1) The certification body shall publish information about certified applicants.

(2) Applicants may publicly announce their certification after the publication described in the previous paragraph.

(Procedures for the Renewal of Certification)

Article 9　Applicants wishing to renew certification or change the certification level shall apply to the certification body. Renewal of the certification or changes in certification levels may be applied even within the validity period of the current certification.

(Others)

Article 10

(1) In the operation of this certification system, the evaluation items, evaluation indicators, and performance requirements for decarbonization efforts shall be reviewed in response to international deployment and technological advancements in decarbonization.

(2) In addition to the provisions stipulated in this outline, any necessary matters for the operation of this certification system shall be determined by the certification body.

Supplementary Provisions

(Effective Date) This outline shall come into effect on March 21, 2025.

Appendix 1. Evaluation Items (1/2)

✔: Requirement　＋：Recommendation

Category		Evaluation Items			Evaluation Criteria	Certification Level					Remarks
		Major Items	Sub-items			**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	
(1) Decarbonization efforts related to cargo handling at terminals	Common	Commitment	・Plan toward decarbonization of the container terminal ・CO2 emissions per unit of cargo handling at the terminal		・Developing a feasible plan toward decarbonizing the container terminal ・Calculation of CO2 emissions per unit of cargo handling (e.g., TEU) at the terminal	✔	✔	✔	✔	✔	
	At the terminal	Cargo handling equipment	Ship to shore handling	STS	Introduction of STS with inverter system for energy saving, etc.	–	✔ 10% or more	✔ 50% or more	✔ 80% or more	✓ 100%	・If CO2 emissions are reduced through the introduction of renewable energy power or decarbonized fuel, it will also be evaluated. ・The number under "✓" indicates the introduction rate based on the number of units. ・For terminals using both transfer cranes and straddle carriers, the combined number of units will be evaluated. ・For terminal tractors (including AGVs), future evaluation criteria will be considered based on the status of low-carbon and decarbonization. ・For the cargo-handling equipment other than STS cranes, transfer cranes, or straddle carriers, future evaluation criteria will be considered based on the status of low-carbon and decarbonization.
			In the yard	RTG, RMG	Introduce low- or zero-emission equipment, such as hybrid and electric machinery, or fuel savings through the introduction of automation	–	✔ 10% or more	✔ 50% or more	✔ 80% or more	✓ 100%	
				Straddle carrier	Introduce low- or zero-emission equipment, such as hybrid and electric machinery	–	✔ 10% or more	✔ 50% or more	✔ 80% or more	✓ 100%	
				Yard truck, AGV, and other cargo-handling equipment	Introduce low- or zero-emission equipment, such as hybrid and electric machinery, or fuel savings through the introduction of automation	＋	＋	＋	＋	＋	
		Facilities in the yard	Yard lighting		Introduce LED lighting	–	✔ 10% or more	✔ 50% or more	✔ 80% or more	✓ 100%	
			Reefer facility and other facilities		Energy saving measures, such as limiting temperature rises through low-reflective heat paving, installing roofs, etc.	＋	＋	＋	＋	＋	

Appendix 1. Evaluation Items (2/2)

✔: Requirement　＋：Recommendation

Category		Evaluation Items		Evaluation Criteria	Certification Level					Remarks
		Major Items	Sub-items		Level 1	Level 2	Level 3	Level 4	Level 5	
(2) Efforts contributing to the decarbonization of vessels and vehicles	Vessels	Decarbonizing fuel or power of vessels	Vessels at berth	Reduce CO2 emissions by onshore power supply, etc.	＋	＋	＋	＋	＋	・If onboard power generation using low-carbon and decarbonized fuel becomes widespread, the evaluation criteria will be reconsidered.
			Low- or zero-emission fuel bunkering	Introduce low- or zero-emission fuel bunkering for vessels moored at the terminal, such as LNG, etc.	＋	＋	＋	＋	＋	・If bunkering services from other ports can be received at the terminal, they will also be evaluated.
		Promote low- or zero-emission fuel vessels	Port incentives for environmentally friendly ships	Introduce port incentives for low- or zero-emission vessels or impose penalties for fossil fuel vessels	－	－	－	✔	✔	・Initiatives at the terminal or port where the terminal is located will be evaluated.
	Vehicle	Efficiency	Trailer congestion in front of the gate, stagnation in the yard	Introduce gate reservation system for the efficient collection and delivery of cargo, alleviate traffic congestion by extending gate operating hours, etc.	－	－	－	✔	✔	
		Promote low- or zero-emission fuel/power vehicles	Incentives for large commercial EVs, FCVs, etc.	Introduce incentives for EVs or FCVs, such as preferential gate lanes, or impose penalties for vehicles powered by fossil fuels	＋	＋	＋	＋	＋	・Future evaluation criteria will be considered based on the commercialization status of low-carbon and decarbonized fuel trucks.
（3）Others		Decarbonization efforts other than (1) and (2) above		Introduce low-carbon and decarbonized fuels and electricity, introduce environmental friendly tugboats, such as LNG or EV tugboats, implement technologies to reduce emissions, such as urea, eliminat the offshore waiting, utilize inland ports, promote the blue carbon and carbon offsetting measures	＋	＋	＋	＋	＋	・Recommended items for all certification levels. ・Specific initiatives not included in the evaluation items of categories (1) and (2) should be detailed in the application.

Appendix 3. Setting Performance Requirements for Decarbonization Efforts in This Certification System

○ Initiatives for decarbonization of cargo handling equipment and facilities are diverse, and the CO2 reduction effects vary. However, this certification system evaluates efforts that lead to ports decarbonization; therefore, the performance requirements will be evaluated based on the type of equipment and facilities introduced.

○ Examples of low-carbon or decarbonization types of equipment to be evaluated are as follows. Types not listed will also be considered if they contribute to decarbonization of ports.

Target Equipment/Facilities	Conventional Approach	Examples of Low-carbon or Decarbonization Approaches
STS Crane	Thyristor Control System	Inverter Control System
Transfer Crane	Diesel-electric System	Hybrid System
		Hydrogen Fuel Cell System
		Hydrogen Engine System
		Electric System
Straddle Carrier	Diesel-electric System	Hybrid System
		Fuel Cell System
		Electric (Battery) System
Yard Track	Diesel Engine System	Hybrid System
		Fuel Cell System
		Electric (Battery) System
Forklift	Diesel Engine System	Hybrid System
		Fuel Cell System
		Electric (Battery) System
Reach Stacker	Diesel Engine System	Hybrid System
		Fuel Cell System
		Electric (Battery) System
Top Lifter	Diesel Engine System	Hybrid System
		Fuel Cell System
		Electric (Battery) System
AGV	Diesel-electric System	Electric (Battery) System
Yard Lighting	High-pressure Sodium Lamp	LED Lamp
Tugboat	Heavy Fuel Oil System	LNG Fuel System
		Ammonia Fuel System
		Hydrogen Fuel System
		Electric Propulsion System