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RENEWABLE ENERGY INSTITUTE

Policies for Decarbonizing Japan's Steel Industry

Current Status and
Future Outlook

October 2026



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1. Introduction

- The iron and steel industry is the largest source of GHG emissions in Japan's industrial sector. Making steady progress in the sector's decarbonization is therefore essential for achieving carbon neutrality by 2050.
- The iron and steel industry has long been regarded as a "hard-to-abate" sector because conventional steelmaking methods, which rely heavily on coal, need to be fundamentally transformed. Nevertheless, demonstration projects and commercial-scale investments are advancing around the world, accelerating the shift toward new steelmaking processes.
- Strong government support will be critical to this transformation. This includes funding for capital investment, technology development, and commercialization, as well as policies to build markets and demand for low-carbon steel.
- The Japanese government has supported R&D to decarbonize the steel industry for many years. The GX Promotion Strategy launched in 2023 has accelerated and expanded policy support for both the supply and demand sides. This includes large-scale support for converting existing production facilities, as well as measures to stimulate demand for low-carbon steel linked to subsidies for clean-energy vehicles.
- This Info Pack provides a comprehensive review of the policies introduced to date. It also examines how each policy advances the decarbonization of the steel industry, including from a fiscal perspective.

Decarbonization of Japan's Steel Industry: Current Status and Targets



◆ Current Status of Decarbonization in Japan's Steel Industry

Largest Source of Emissions in the Industrial Sector

38% of Japan's industrial CO₂ emissions come from the steel industry, accounting for 14% of Japan's total CO₂ emissions.

Continued Dependence on Coal-Intensive BF Production

74% of Japan's crude steel production is produced through the BF-BOF route.*

◆ Emissions Reduction Targets and Progress

- JISF has set a target of reducing total energy-related CO₂ emissions by 30% by FY2030 compared with FY2013, while also aiming to achieve carbon neutrality by 2050.
- Total CO₂ emissions from the steel industry have already fallen below the FY2030 target. However, lower production volumes have been the primary driver of the decline in emissions. In fact, CO₂ emissions intensity has not improved.
- Targets and plans for FY2035 and FY2040 will be needed to achieve carbon neutrality by 2050.

*Source: JISF(1)

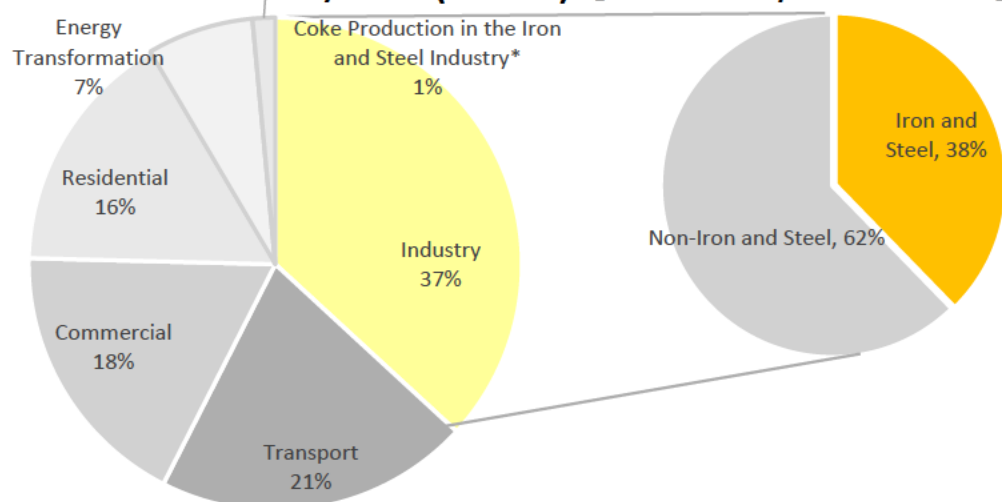
► Decarbonization Target

Reduction Target (Compared with FY2013)	FY 2030	FY 2035	FY 2040	2050
Japan's NDC	-46%	-60%	-73%	Carbon Neutrality
Japan Iron and Steel Federation	-30%	?	?	Take on the challenge to realize CN
NIPPON STEEL (Japan)	-30%			Strive to achieve CN by 2050
JFE Steel (Group)	-30%≈			Aim to achieve CN by 2050
Kobe Steel, Ltd.	-30%			Take on the challenge of realizing CN
TOKYO STEEL	Emissions Intensity 60%			Aim for CN by FY2050

Source: Created by REI based on JISF(2), MOE(1), NIPPON STEEL(1), JFE Steel(1), Kobe Steel(1), TOKYO STEEL(1)

► Steel: The Largest Industrial Emissions Source

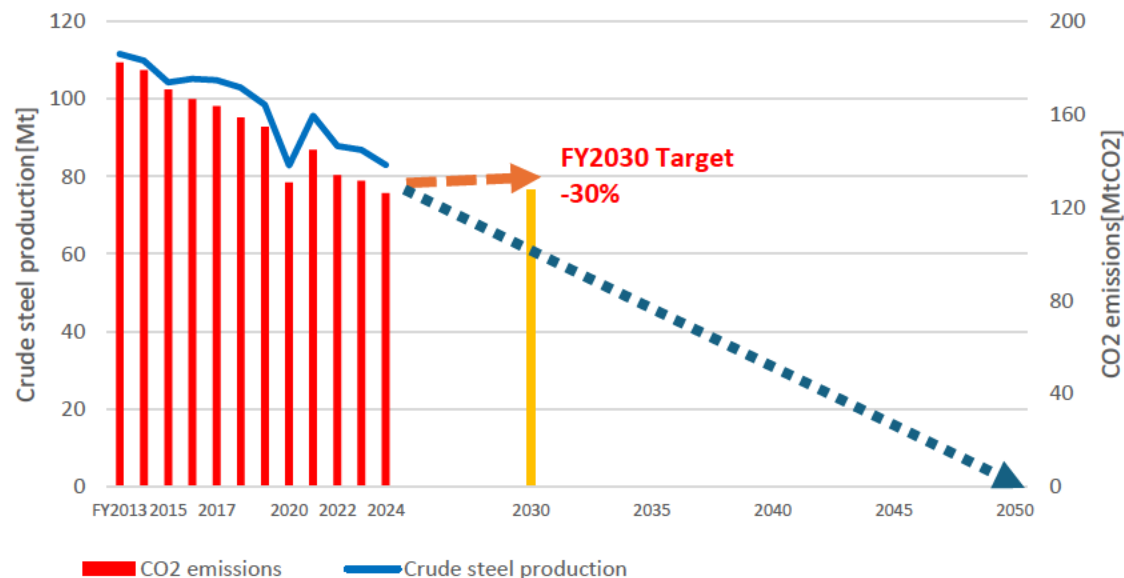
CO₂ Emissions by Sector (FY2024) 【After electricity & heat allocation】



Source: Created by REI based on NIES, METI(1)

*Note: Estimate emissions from coke production attributable to the steel industry

► Emission reductions are driven by lower production



Source: Created by REI based on NIES, JISF(1)

Technological Pathways for Steel Decarbonization (1)



- Japan's steel industry pursues three main decarbonization pathways: (1) Hydrogen Reduction in BF_s, (2) Hydrogen-Based Direct Reduction, and (3) EAF using steel scrap.
- (3) EAF using steel scrap is currently the most viable option and can deliver significant emissions reductions. However, its wider use is constrained by limitations in producing certain steel grades from scrap alone, and by the quantity and quality of scrap.
- (1) Hydrogen Reduction in BF_s has limited emissions reduction potential. CCS also faces major challenges, including securing suitable CO₂ storage sites. For (2) Hydrogen-Based Direct Reduction, natural gas can be used until hydrogen becomes sufficiently available. However, given the potentially high cost of procuring hydrogen and natural gas in Japan, the option of importing DRI from overseas also needs to be considered.
- The Japanese government includes these technologies in its roadmap* and supports them through GX policy and transition finance.

*Source: METI(2)

	BF-BOF&CC(U)S ①Hydrogen Reduction in BF _s	②Hydrogen-Based Direct Reduction & EAF/ Electric Melting Furnace	③EAF Mainly Using Steel Scrap (DRI)
Technology/ Approach	• Replace part of the coal used in BF_s with hydrogen to reduce CO₂ emissions, combined with CO₂ capture. • The COURSE50 Project, which utilizes hydrogen contained in BF by-product gases, and the Super COURSE50 Project, which uses externally supplied hydrogen, are underway. • Coke cannot be fully replaced by hydrogen, but further emissions reductions can be achieved through CCS, methanation, and other technologies.	• Reduce iron ore with hydrogen instead of coal to produce DRI, then melt it in an EAF/electric melting furnace and remove impurities to produce steel. • Conventional DRI technology generally requires high-grade iron ore; R&D is underway to enable the use of lower-grade iron ore. • Technologies have already been developed that initially use natural gas and gradually increase the share of hydrogen.	• Melt steel scrap and DRI in an EAF/electric melting furnace and remove impurities to produce steel. • Innovative EAF projects are being developed to produce high-quality steel in large EAFs as an alternative to BF-based production. • Emissions can be reduced by around 90% if the electricity supply is decarbonized, although further reductions in residual fossil-fuel use are still required.
Expected Deployment	• COURSE50 (commercial-scale): 2026 onwards • Super COURSE50: 2040s	• 2040s (preceded by natural gas-based operation)	• Late 2020s (from 2028)
Potential Emissions Reduction* vs. conventional BF- BOF route	• Use of on-site hydrogen: -10% (CO₂ separation and capture: -20%) • Use of externally supplied hydrogen: -50%	• -95% or more • -70% when using natural gas <i>near-zero-emission technology</i>	• -95% or more <i>near-zero-emission technology</i>

*Source: METI(2), Agora

Technological Pathways for Steel Decarbonization (2)



	①Hydrogen Reduction in BF _s	②Hydrogen-Based Direct Reduction	③EAF
Conditions for Achieving Emissions Reductions	- Overcoming technical challenges associated with CCS, including capture from multiple emission sources, transport, and storage. - The -50% case assumes the use of synthetic methane produced through methanation.	- Secure supply of low-carbon hydrogen. - Secure decarbonized electricity, including renewable electricity. - Secure high-grade iron ore.	Secure decarbonized electricity, including renewable electricity.
Challenges in Japan	- Suitable domestic CO₂ storage sites are limited and primarily offshore. Overseas transport (export of CO₂) also presents challenges. - High cost of CCS. - Super COURSE50 requires a stable hydrogen supply and faces high hydrogen costs.	- Difficulty and high cost of securing a stable hydrogen supply. - Need to develop technologies capable of using lower-grade iron ore. - Need to secure decarbonized electricity, including renewable electricity.	- Need to secure decarbonized electricity. - Need to secure sufficient scrap, particularly high-quality scrap. - Some steel products cannot currently be produced using scrap-based routes.
Near-Term Measures	Commercial-scale implementation utilizing BF by-product gases (including hydrogen) at integrated steelworks.	Import DRI produced overseas (transitioning from natural gas-based to hydrogen-based production). - Initially use natural gas and gradually increase the share of hydrogen.	- Convert production from BF_s to EAFs. - Maximize the use of steel scrap in producing high-grade steel sheets. - Procure renewable electricity through PPAs, certificates, etc.

Policy Framework for Steel Decarbonization



▶ A broad range of policy instruments is in place, but direct mandatory measures remain limited on both the supply and demand sides, with policy relying mainly on support and incentive-based measures.

Main Policy Types		Policy Instruments	Policies Adopted in Japan	Pages
Cross-Sectoral Policies	Plans and strategies	Plans, Targets, Roadmaps, and Guidelines	GX2040 Vision; Sectoral Investment Strategy; Steel Transition Finance Roadmap, etc.	10-11
	Carbon pricing / Border Adjustment	Emissions Trading / Carbon Tax, CBAM	Green Transformation Emissions Trading System (GX-ETS)	12-13
	Green Product Evaluation Systems Market-Based Information Incentives	Labelling, Certification and Eligibility Criteria	No Labelling / Certification System (Except GX Steel)	28
	Finance Criteria	Eligibility Criteria: Taxonomy / Roadmap	Basic Guidelines on Climate Transition Finance	11
Supply-side Policies	Regulation of High-Emitting Facilities etc.	Emission Caps and Moratoria	No Policies	
	CAPEX support Subsidies, Tax Incentives and Guarantees	Subsidies	Subsidy for Energy / Manufacturing Process Conversion for Hard-to-Abate Industries	15
		Loans	Subsidy for Promoting Energy Efficiency Investment and Demand Structure Transformation	17
		Guarantees	Debt guarantees by the GX Acceleration Agency	17
		Tax Incentives	Investment Promotion Tax System toward Carbon Neutrality	18
	Operating Support: CfDs and Tax Incentives	CfD	CfD support for hydrogen; CCS support (under development)	35-36
		Tax Incentives	Tax Concessions for Promoting Domestic Production in Strategic Areas	18
	R&D Support	Subsidies / Commissioning	Green Innovation (GI) Fund Projects	30-31
Demand-side Policies	Non-Financial Incentives	Performance Evaluation / Disclosure	The Act on Rationalizing Energy Use and Shifting to Non-fossil Energy: Non-Fossil Energy Transition Targets, Planning, Reporting, and Evaluation	19-20
	Infrastructure Development / Support	Financial Support, Standard-Setting, Regulation	CfD support for hydrogen; CCS support (under development) Metal Recycling Promotion Strategy to Secure High-Grade Steel Scrap	35-36 34
	End-Use Embodied-Carbon Regulation	Embodied Carbon Regulations for Buildings and Vehicles Low-Carbon Steel Use Requirements	Building LCA: mandatory calculation from FY2028 Automotive LCA Regulations: No policies Minimum Use Requirements: No policies	25
	Green Public Procurement	Government-Led Initiatives (Standard-Setting)	Green Public Procurement under Green Purchasing Act	22
	Green Private Procurement	Subsidies Non-Financial Incentives	Subsidies to Promote the Introduction of Clean Energy Vehicles (CEV Subsidies) Zero Energy Building Subsidy Programs GX Future League / GX Acceleration Declaration Framework / Building LCA	23-24 25 26/25
	Corporate Disclosure / Assessment (Scope 3)	Mandatory Disclosure (& Incentives)	Mandatory Scope 3 disclosure under SSBJ standards for Prime Market companies	



2. Plans, Strategies, and Cross-Cutting Measures

Timeline of Steel Decarbonization Policies



▶ With the launch of GX policy in 2023, policy support expanded beyond R&D to measures targeting both the supply and demand sides.

		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Plan for Global Warming Countermeasures		1st	2nd				3rd						
Strategic Energy Plan		5th	6th				7th						
GX Policy Package		Carbon Neutrality Declaration	Green Growth Strategy for Achieving Carbon Neutrality	Strategy for Carbon Neutrality	GX Promotion Strategy	Enforcement of GX Promotion Act	GX2040 Vision Sector-Specific Investment Strategies	Japan Growth Strategy Public-Private Investment Roadmap					
Carbon Pricing					Pilot-Phase Voluntary ETS			Green Transformation Emissions Trading System (GX-ETS)					
Supply side	CAPEX Support					Subsidy for Energy / Manufacturing Process Conversion for Hard-to-Abate Industries (FY2024-28, FY2025-29)							
						Debt Guarantees by the GX Acceleration Agency							
				Subsidy for Promoting Energy Efficiency Investment and Demand Structure Transformation									
			Investment Promotion Tax System toward Carbon Neutrality										
	Operating Support					Tax Concessions for Promoting Domestic Production in Strategic Areas							
	Non-Financial Incentives	Energy Conservation Act: Planning, Reporting and Evaluation (since 1979) & Electricity Demand Optimization Targets and Evaluation											
						Amended Energy Conservation Act: Non-Fossil Energy Transition Targets and Planning, Reporting and Evaluation Framework							
	R&D Support	Green Innovation (GI) Fund Projects (2020-2032)											
		R&D (e.g., hydrogen utilization) (2008-2022)											
		Assessment of Key Challenges for Promising Carbon-Neutral Steelmaking Technologies											
		Support for Demonstration Projects to Decarbonize Basic Materials Industries											
Demand side	End-Use Embodied -Carbon Regulation									Building LCA			
	Green Public Procurement						Green Public Procurement under Green Purchasing Act (Introduction of Standards for Steel)						
	Green Private Procurement						CEV Subsidies (Additional Subsidy for Vehicles Using Low-Carbon Steel Launched)						
						GX League	GX Acceleration Declaration Framework			GX Future League			

Strategies and Plans for Steel Decarbonization (1)



- Since 2023, Japan's GX policy has integrated climate goals with industrial and investment policy. It provides large-scale support to strengthen industrial competitiveness and economic growth.
- The steel sector is a major target of public support. Transition Finance roadmaps are intended to improve investment predictability and attract private investment, alongside public support for hydrogen reduction in BF's and "innovative EAFs."
- Large-scale upfront GX support is financed through GX Economy Transition Bonds, which are expected to be repaid with future revenues from fossil fuel surcharges and GX-ETS allowance auctions.
- More recently, "green steel" has been designated as one of the key products and technologies under Japan's growth strategy, with the aim of strengthening its competitiveness and expanding markets in Japan and abroad.

	Key GX Strategies and Plans		Steel Sector Policy Measures
2023 February	The Basic Policy for the Realization of GX	Key pillars: GX acceleration, industrial competitiveness, and energy security Over JPY 150 trillion in public and private GX investment needed over the next decade; establishment of GX Economy Transition Bonds to finance around JPY 20 trillion in upfront government support. Pro-Growth Carbon Pricing Concept: upfront GX investment financed through GX Economy Transition Bonds; carbon pricing introduced at a low level and gradually increased to incentivize early GX action; greater use of private-sector financing alongside public support.	• Steel was one of the 22 sectors with a sectoral roadmap. • Key directions included hydrogen reduction, direct reduction, and advanced EAF technologies.
May	Enactment of the GX Promotion Act	Issuance of GX Economy Transition Bonds; fossil fuel surcharge from FY2028; paid allowance auctions for power generators from FY2033. May 2025 amendment: mandatory participation in the GX-ETS.	
July	GX Promotion Strategy	Strategy under the GX Promotion Act; integrates climate targets with industrial and investment policy; focuses on energy security and industrial competitiveness; sets out support for GX investment.	• Upfront support for integrated supply- and demand-side industrial transformation; R&D and deployment of hydrogen-reduced iron; BF-to-EAF transition; establishment of assessment methods for green products.
December	Sector-Specific Investment Strategies	The 22 sectoral roadmaps under the Basic Policy for the Realization of GX were reorganized into 16 sectors, including steel. Further specification of investment support through GX Economy Transition Bonds and other measures.	• Targeting around 10 Mt of green steel supply by around 2030. • Over JPY 3 trillion in public and private investment over 10 years; promotion of BF-to-large-EAF conversion, hydrogen reduction, and public and private procurement.

Strategies and Plans for Steel Decarbonization (2)



2025 February	GX 2040 Vision Revised Version of GX Promotion Strategy	Focus on achieving climate targets through GX-oriented industrial restructuring, industrial location, and market creation; greater emphasis on a realistic transition; presentation of the Pro-Growth Carbon Pricing Concept.	- Steel designated as a Hard-to-Abate industry, with support for production-process and energy transitions. - R&D support through the GI Fund; promotion of public and private procurement.
	7th Strategic Energy Plan	Toward FY2040, the policy aims to balance energy security and decarbonization while strengthening industrial competitiveness. The FY2040 power mix: 40–50% renewables, 20% nuclear, and 30–40% thermal power.	R&D on hydrogen reduction in BFs and hydrogen-based direct reduction; investment support for innovative EAFs; expansion of green steel use; strengthened supply of affordable low-carbon electricity and hydrogen, as well as CCUS and transmission infrastructure.
	3rd Plan for Global Warming Countermeasures	NDC targets: 60% GHG emissions reduction by FY2035 and 73% by FY2040 from FY2013 levels, toward net zero by 2050; measures set out to achieve these targets.	Promotion of R&D on hydrogen reduction in BFs and hydrogen-based direct reduction; investment in innovative EAFs; and wider adoption of green steel.
	Sector-Specific Investment Strategies v.3	Updates across 16 sectors covering technology development, capital investment, tax incentives, demand creation, and other measures.	Strengthened coordination across production and sales support, public procurement, scrap, hydrogen, and CCS.
2026 February	Technology Roadmap for “Transition Finance” in Iron and Steel Sector Revised Version	Complements the Basic Guidelines on Climate Transition Finance (revised in 2025). Outlines technology options and indicative timelines for achieving carbon-neutral steelmaking by 2050. Serves as a reference for financial institutions when assessing eligibility. (First issued in October 2021.)	R&D support is being advanced toward technology deployment and commercialization, alongside energy conservation and efficiency improvements. The three main pathways are: - Hydrogen reduction in BFs & CO₂ capture: use of internally generated hydrogen from 2026; external hydrogen from 2040 - EAFs & decarbonized electricity: innovative EAFs from 2028; impurity removal, larger-scale furnaces, and higher efficiency from 2030 - Direct reduction & CCUS: direct reduction using hydrogen and/or natural gas; 100% hydrogen-based direct reduction from 2040
July	Japan Growth Strategy	Public-private investment roadmaps for 17 strategic sectors, with over JPY 370 trillion in domestic investment expected through FY2040. For each of 62 products and technologies: targets, investment needs, bottlenecks, domestic investment support, demand creation, industrial location, and international cooperation. “Green steel” designated as a priority area.	For “green steel”: JPY 4.2 trillion in public and private investment and JPY 10.4 trillion in economic impact expected through FY2040. - Target to capture global markets with around 3 Mt/year of high-quality green steel in the early 2030s. - Target to add around 2 Mt/year of capacity to process steel scrap into higher-quality scrap by 2030.

Green Transformation Emissions Trading System (GX-ETS)



- ETS can be a powerful tool to drive decarbonization in high-emitting industries such as steel if emissions caps are set appropriately and carbon prices are sufficiently strong. However, the current GX-ETS does not set sector-specific emissions caps, making it unclear how much emissions reduction the system will deliver.
- Under the “Pro-Growth” framework, large-scale investment support is provided upfront through GX Economy Transition Bonds. The bonds are to be repaid by FY2050 using future revenues from the fossil fuel surcharge (from FY2028) and paid allowance auctions for power generators (from FY2033).
- In the steel sector, the three BF operators account for most emissions, so the GX-ETS is expected to cover a large share of the sector’s direct emissions.
- For BF and EAF production (ordinary and special steel), allowances are allocated free of charge based on benchmarks and related methods. The system also limits compliance costs through measures such as additional allocations for carbon leakage risks and R&D investment. Paid allocation has not been set for the steel sector yet.

Program Overview^{*1} administered by METI

The government allocates allowances free of charge based on specified criteria. Each entity must report its annual emissions and, by the end of January of the following year, hold allowances equal to its verified emissions. If emissions exceed the allocation, entities must buy additional allowances or use J-Credits / JCM credits (up to 10% of their emissions). Surplus allowances may be sold or carried forward.

Legal Basis: GX Promotion Act^{*2}

Program Period: From FY2026 *Note: Paid allowance auctions will be introduced gradually for electricity suppliers from FY2033.*

Coverage: Entities with average annual CO₂ emissions from energy use (Scope 1) of at least **100,000 t CO₂** over the latest three fiscal years.
*Note: Approximately 300–400 entities are expected to be covered, representing around 60% of Japan’s GHG emissions.*3*

Allowance Allocation: Free allocation based on notifications submitted by covered entities.
In the steel sector, a benchmark-based approach applies to major production processes. (See next page)

Allowance Price Stabilization: METI sets the upper and lower price limits each fiscal year.→

FY2026 Trading Price Floor and Ceiling 【JPY/t-CO₂】^{*4}

Price Ceiling	4,300	Price Floor	1,700
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Reporting / Notification Requirements:^{*5}

●Before Allocation:^{*5} Notification of the **emissions target** & adjustments based on relevant factors → **Basis for free allocation**
Relevant factors: (1) risk of production relocation overseas; (2) status of R&D investment in GX-related fields

●After Allocation:^{*6} Actual emissions = Direct CO₂ emissions & emission reductions transferred to third parties (e.g., transferred J-Credits)
Note: Maximum deduction is 10% of actual emissions in each fiscal year

◆ Is the GX-ETS Benchmark Effective for the Steel Sector?



- Reducing emissions from the upstream BF process is critical, as it accounts for over 80% * of steel-sector emissions.
- Benchmark-based allocation is unlikely to provide a strong incentive for further emissions reductions in the steel sector. At present, emissions intensity varies little among upstream BF producers (*see distribution below*), suggesting that most operators can relatively easily keep emissions within their free allocation. Moreover, the benchmark is tightened by only around 1.0% from FY2026 to FY2030 (*see table below*).

**Note: Based on METI's Comprehensive Energy Statistics. The share of direct emissions from upstream BF processes in total steel-sector direct emissions is estimated as the combined emissions reported for BF pig iron production, BOFs, sinter, and pellets, which are assumed to broadly represent emissions from BF-based steelmakers.*

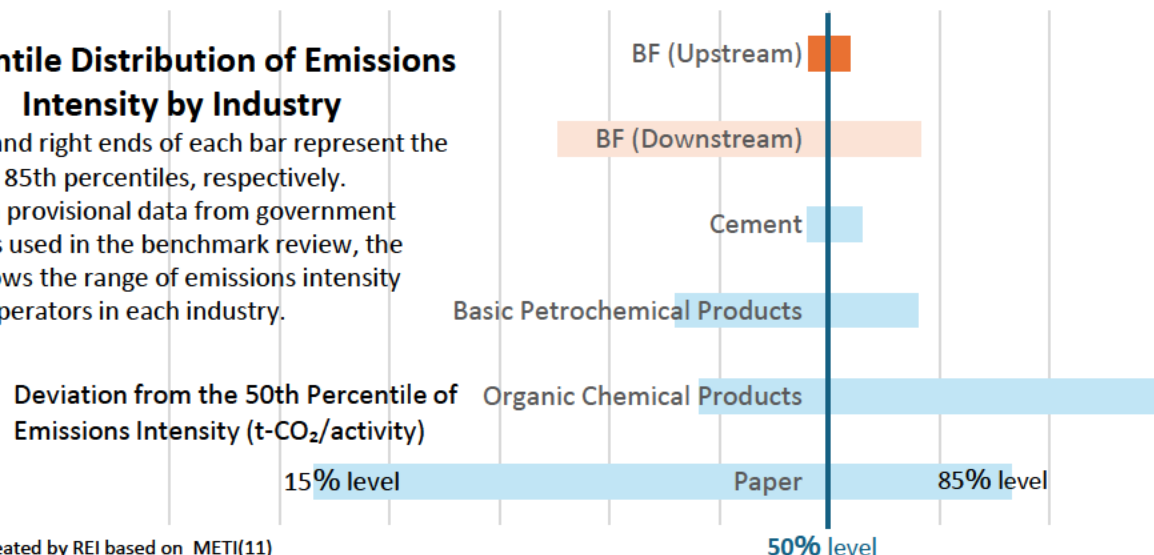
● Benchmark-Based Approach

- A benchmark-based approach is used to calculate the emissions target for free allocation in major steelmaking processes. The benchmark is set at the emissions intensity achieved by a specified share of top-performing operators in each sector.
- The benchmark level is set annually for each sector. For FY2030, it is set at the level achieved by the **top 32.5%*** of operators within the sector.
- Emissions Target = Target Emissions Intensity × Baseline Activity Level
The baseline activity level varies by category; for upstream BF production, it is pig iron output in the baseline year.

*Source: METI(7)

Percentile Distribution of Emissions Intensity by Industry

The left and right ends of each bar represent the 15th and 85th percentiles, respectively. Based on provisional data from government materials used in the benchmark review, the chart shows the range of emissions intensity among operators in each industry.



Source: Created by REI based on METI(11)

Target Emissions for the Steel Industry

= Target emission intensity of each year × Baseline activity level

Category	Baseline activity level	Target emission intensity	
a. BF (Upstream)	Pig Iron Production [tCO ₂ /t]	FY2026	2.105
		FY2030	2.084
b. BF (Downstream)	Fuel Consumption [tCO ₂ /GJ]	FY2026	0.06944
		FY2030	0.06464
c. EAF/Ordinary Steel (Upstream)	Crude Steel Production [tCO ₂ /t]	FY2026	0.2618
		FY2030	0.2539
d. EAF/Ordinary Steel (Downstream)	Fuel Consumption [tCO ₂ /GJ]	FY2026	0.05168
		FY2030	0.05142
e. EAF/Special Steel (Upstream)	Crude Steel Production [tCO ₂ /t]	FY2026	0.2910
		FY2030	0.2708
f. EAF/Special Steel (Downstream)	Fuel Consumption [tCO ₂ /GJ]	FY2026	0.05143
		FY2030	0.05129

Source: Created by REI based on METI(12)



3. Supply-Side Policies

Subsidy for Energy / Manufacturing Process Conversion for Hard-to-Abate Industries



- The HtA subsidy provides the **largest financial support** among subsidy programs for steel decarbonization. Steel projects account for **89%** of the total maximum grant amounts approved to date.
- In the steel sector, two projects to convert BF-BOF to “innovative EAFs” have been selected, with a combined maximum grant of JPY 355.9 billion.
- The policy focus of this large-scale support is the shift to “innovative EAFs,” expected to deliver BF-BOF-comparable quality and substantial emissions reductions.

Program Overview^{*1} administered by METI

Supports capital investment for decarbonizing production facilities in high-emitting industries, including steel.

Legal Basis: Articles 4 and 9 of the GX Promotion Act

Program Period: Since FY2024 (third call under preparation ^{*2}). Projects must be completed within five years of the grant award.

Eligible Projects:^{*3} Conversion of BFs or BOFs to **innovative EAFs** with substantial emissions reductions

Eligible Costs: Design, equipment, buildings/facilities, and system development

Eligibility Requirement (excerpt):
*Low-emission “Innovative EAFs”
for high-quality steel production*



≥50% CO₂ emissions reduction



Impurity levels
Comparable to BF-produced steel



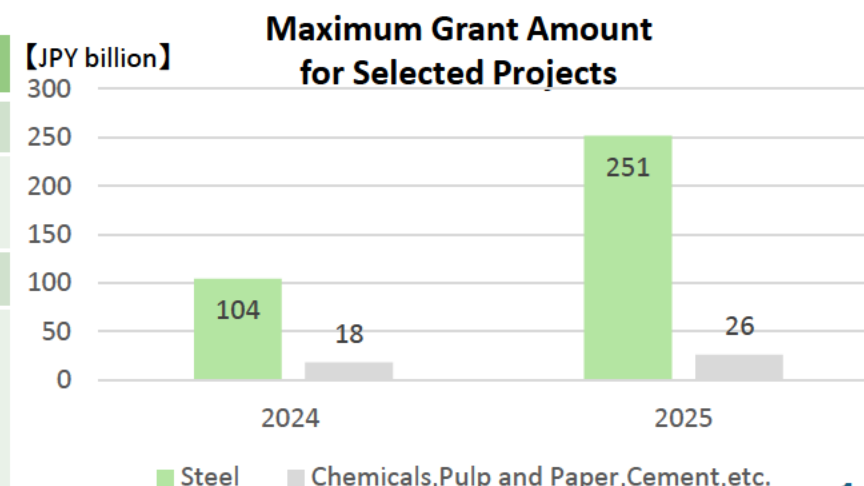
Equipment use
≥5 years after project completion

Subsidy Rate: Up to 1/3 (Paid after project completion and final reporting)

Post-Project Reporting: CO₂ reductions in the first year of commercial operation must be reported in the following fiscal year.

Source: ^{*1} METI(13), ^{*2} FY2026 HtA Subsidy Program Secretariat, ^{*3} FY2025 HtA Subsidy Program Secretariat(1)

Project Selection Status ^{*1}		
Project Period	FY2024 project (by FY2028) ^{*2}	FY2025 project (by FY2029) ^{*3}
Company/Project Location	JFE Steel/Kurashiki	NIPPON STEEL (1)Hirohata Area (2)Yawata Area
Max. Grant Amount	JPY 104.5 billion	JPY 251.4 billion
Project Description	Conversion of No. 2 BF at the Kurashiki site (3 Mt/year) to an innovative EAF (2 Mt/year) • Production to start in FY2028 • CO₂ emissions reduction: 2.6 Mt/year^{*4}	Conversion of BFs etc. at the Yawata site (3.6 Mt/year) to innovative EAFs (total 2.9 Mt/year across three sites) • Production scheduled to start in FY2029 • CO₂ emissions reduction: 3.7 Mt/year^{*5}



Source: ^{*1} METI(2), ^{*2} FY2024 HtA Subsidy Program Secretariat(1), ^{*3} FY2025 HtA Subsidy Program Secretariat(2), ^{*4} JFE GROUP, ^{*5} NIPPON STEEL(2)

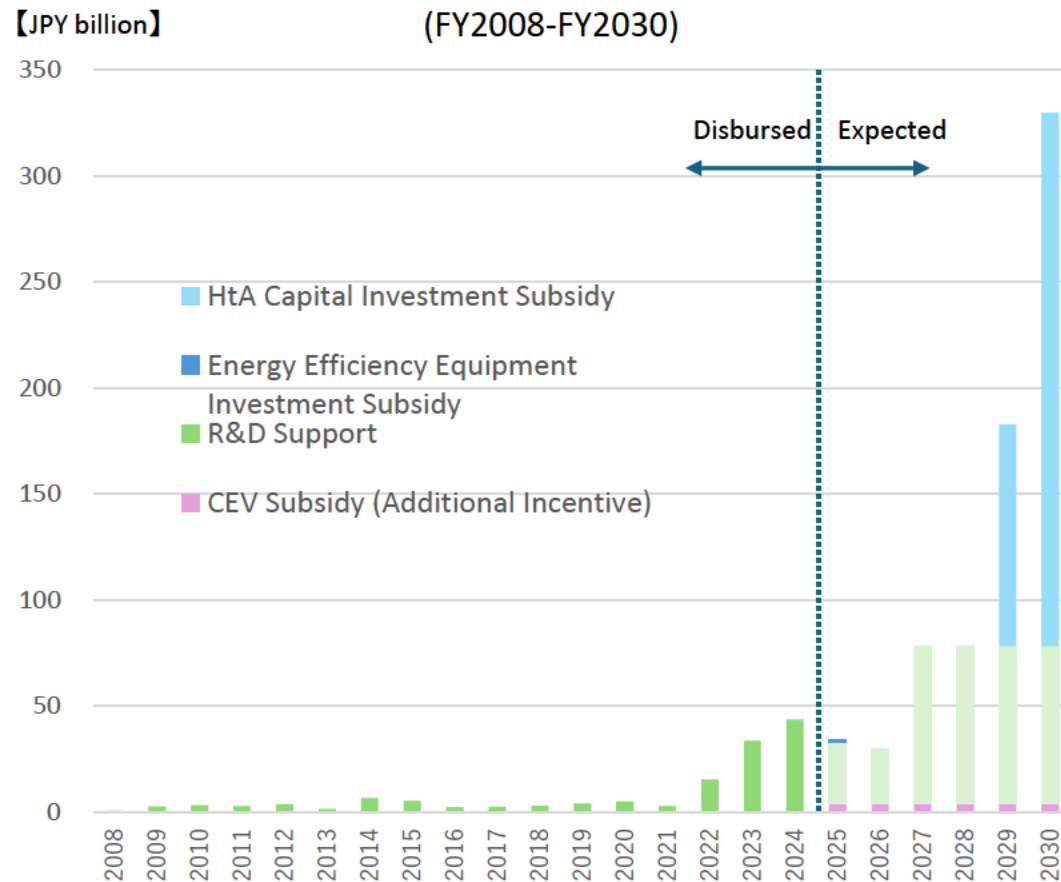
Source: Created by REI based on FY2024 HtA Subsidy Program Secretariat(1)・(2), FY2025 HtA Subsidy Program Secretariat(2)・(3)

◆ Large-Scale Subsidies Financed by GX Economy Transition Bonds



- The HtA subsidy was introduced to support large-scale, multi-year capital investment, while R&D programs such as the GI Fund have also reached a substantial scale on a cumulative basis.
- Economy Transition Bonds provide upfront financing for programs such as the HtA subsidy, CEV subsidy, and GI Fund. The bonds are expected to be repaid with future revenues from the fossil fuel surcharge and paid GX-ETS allowance auctions.

Disbursement Status and Outlook for Steel Decarbonization Measures* (FY2008-FY2030)



Source: Created by REI based on FY2024 HtA Subsidy Program Secretariat (1)-(3), FY2025 HtA Subsidy Program Secretariat (1)-(3), METI (13)-(28), Sii (1)-(2), NEDO (1)-(8), NeV (1)-(2)

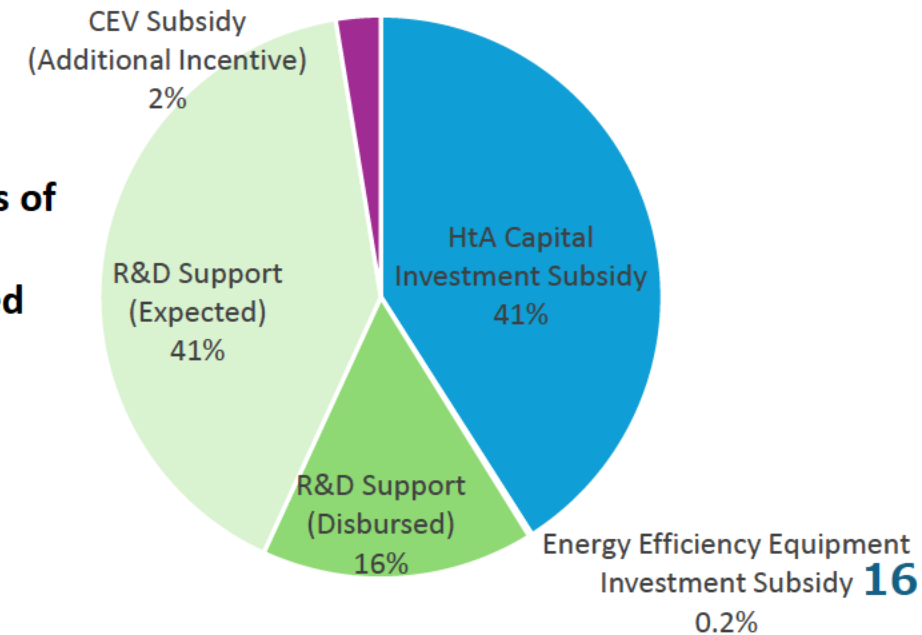
*Note: See p. 38 for the methodology used to estimate projected disbursements and related amounts.

● Japan Climate Transition Bonds (CTB) (FY2023-FY2033)

- One issuance method for GX Economy Transition Bonds, designed to finance large-scale GX investment.
- JPY 5.3 trillion issued to date under the CTB Framework, which sets out the use of proceeds and related requirements.
- To be repaid by FY2050 using revenues from the fossil fuel surcharge and paid GX-ETS allowance auctions.
- Programs financed through the Bonds: HtA capital investment subsidies, Energy-efficiency investment subsidies, GI Fund(part), Debt guarantees, and CEV subsidies

Source: MOF(1)-(6)

Cumulative Amounts of Each Subsidy (Including Projected Amounts, etc.)* (FY2008-FY2030)





Other Financial Support for Capital Investment

Energy Efficiency Subsidy

- Maximum support: JPY 4 billion per project. Eligible projects include the installation and upgrading of energy-efficiency equipment.
- The program is open across industries, including steelmakers.
- To date, one steel-sector project has received support. ^{*2}

Source: ^{*1}Sii(3)・METI(29), ^{*2}Sii(3)

Subsidy for Promoting Energy Efficiency Investment and Demand Structure Transformation ^{*1}

Program Overview administered by METI

All corporations and sole proprietors in Japan that install **high-efficiency equipment** are eligible for support covering part of the equipment and installation costs. Subsidy rates range from roughly 1/3 to 2/3, depending on the category and company size.

Program Period: FY2022-FY2030

Application Requirements: Depending on the category, requirements include:

- Energy savings & increase in non-fossil energy share: ≥5-30%
- Energy savings & non-fossil energy use: ≥500-1,000 kL
- Improvement in energy intensity: ≥5-15%

Steel Sector Support Project^{*2}

Company	Announcement Date	Amount	Location
JFE Steel	30 August 2024	JPY 1.6 billion	Chiba city
BF process improvement using reduced iron; replacement of water-cooling towers at the oxygen refining facility			

Debt Guarantees

- A new support measure introduced with the establishment of the GX Acceleration Agency.
- The program is open across industries, including steelmakers.
- Of five projects approved to date, one is in the steel sector.

Source: ^{*1}GXA(1), ^{*2}METI(30), ^{*3}GXA(2), ^{*4}GXA(3), ^{*5}GX Acceleration Agency(4), ^{*6}GXA(5), ^{*7}GX Acceleration Agency(6)

Debt Guarantees by the GX Acceleration Agency ^{*1}

Program Overview administered by GX Acceleration Agency (under METI's supervision) ^{*2,3}

Financial support (Debt Guarantees and Equity Investment) is provided to private companies undertaking projects in sectors identified under the CTB Framework, GX2040 Vision, and Sector-Specific Investment Strategies. Debt guarantees cover **50–90%** of the loan amount, depending on the category. ^{*5}

Program Period: Launched on 1 July 2024

Review Criteria:^{*4} Applications are assessed based on the Financial Support Standards governing GXA's financial support operations.

Note: Current guarantee capacity: JPY 1.95 trillion (equity investment cap: JPY 40 billion). ^{*7}

Steel Sector Support Project^{*6}

Company	Announcement Date	Amount	Category
JFE Holdings	23 March 2026	JPY 8 billion	Category 3 of the Debt Guarantee Program
Debt guarantee for loans to finance investment in large-scale innovative EAFs (around 2 Mt/year capacity)			



Tax Concessions for Promoting Domestic Production in Strategic Areas

- The tax incentive designates “green steel” as a strategic product for strengthening production capacity and competitiveness, providing JPY 20,000 per ton produced and sold.
- It provides comprehensive support, including operating costs.
- Eligible products: Steel produced using EAFs following conversion from BF or BOF-based production processes. Steel produced by EAFs supported under the HtA subsidy is expected to qualify.

Program Overview ^{*1} administered by METI^{*2}

Five products with high capital and production costs in sectors designated by law as strategically important to Japan’s economic growth—green steel, EVs, green chemicals, SAF, and semiconductors—are eligible for tax credits based on **production and sales volumes**. GX-related products are supported using funding from GX Economy Transition Bonds.^{*1}

Note: This tax incentive has also been strongly influenced by the U.S. IRA and the EU Green Deal.

Legal Basis:^{*3} Act on Special Measures Concerning Taxation, Art. 42-12-6

Program Period: Support Period: 10 years from project certification, plus up to 4 years of carryforward (Project plans must be certified by the end of FY2026).

Project Plan: Certification is required for a business plan covering the **production and sale** of eligible products.

Certification Requirements (excerpt):

◆ Eligible Steel^{*4}

Steel produced using an EAF following conversion from a BF- or BOF-based production process.

● Project Plan Certification Requirements

New investment : ≥JPY 12B	Capacity: ≥200,000 t/year	CO ₂ reduction: ≥50%	Value added: ≥10%	Supply-chain value creation	Sales strategy	Stable raw material supply	BF-comparable impurity levels	Further lifecycle CO ₂ reductions

Tax Credit Amount: the lower of (a) and (b)

- Unit credit × production and sales volume(JPY) ◆ Unit credit of Green steel: JPY 20,000 per ton
- Investment in new equipment & other depreciable assets used to produce eligible products

Note: The credit is phased down in later years: 75% in Year 8, 50% in Year 9, and 25% in Year 10.

Source: ^{*1} METI(31), ^{*2} METI(32), ^{*3} NTA(1), ^{*4} e-GOV(2), ^{*5} METI(33)

Status of Project Plan Certifications ^{*5}

- **Tax concessions for promoting domestic production in strategic areas** : No Certified Projects
- **Investment Promotion Tax System toward Carbon Neutrality**
Certified Projects: 198; none involve steel-related companies.

Other Tax Incentives

Investment Promotion Tax System toward Carbon Neutrality^{*1,2}

Program Overview administered by METI

Investment in equipment that decarbonizes production processes while increasing value added is eligible for either a 5–14% tax credit on the investment cost or 50% special depreciation.

Program Period:

Equipment must begin operation within three years of project certification (FY2021-FY2025), and the tax credit applies only in the first year of operation.

Certification Requirements(excerpt):^{*3}

Carbon productivity must increase by at least 15% within three years (10% for SMEs).

Source: ^{*1} METI(34), ^{*2} NTA(2), ^{*3} METI(35)

Note: Tax credit is capped at 40% of the corporate tax liability before adjustments.

When the two tax incentives are used in combination, the total tax credit is capped at 40% of the corporate tax liability before adjustments.

The Act on Rationalizing Energy Use and Shifting to Non-fossil Energy:

Non-Fossil Energy Transition Targets, Planning, Reporting, and Evaluation



- The Energy Conservation Act, enacted in the 1970s, has promoted energy efficiency through energy management, planning, reporting, and improvement targets. It later introduced sectoral benchmarks and business operator classification. Since FY2023, its scope has expanded to all forms of energy, adding non-fossil energy transition and electricity demand optimization as key pillars.
- As the framework has evolved, reporting and evaluation metrics have become more complex, making energy-saving effects harder to assess, particularly in BF-based steelmaking (see next page).
- The non-fossil energy transition target for BF steelmaking is a positive step, as it uses coal consumption per ton of crude steel as the metric. However, the FY2030 target is modest, requiring only a 2% reduction^{*1} from FY2013 levels. Discussions on post-2030 targets should begin early, given the long lead times for production-process transformation.

Program Overview

Mainly relevant to the steel sector -administered by METI

Covered energy users must report energy use and electricity demand optimization and submit non-fossil energy transition plans. The Act promotes improvement through efficiency targets, sectoral benchmarks, and an S-A-B-C operator rating system.

Legal Basis: Act on Rationalizing Energy Use and Shifting to Non-fossil Energy (2022 amendment; “Energy Conservation and Non-Fossil Energy Transition Act”)^{*2}

Coverage: Energy users,^{*3} factories, and workplaces consuming ≥1,500 kL/year of crude-oil equivalent

Main Obligations:

Energy Conservation (Business Operator / Factory Level) ^{*4}	Non-Fossil Energy Transition (Business Operator Level) ^{*5}	Other
• Submit a medium- to long-term energy conservation plan (3–5 years) • Annual reporting: energy consumption and intensity, electricity demand optimization intensity, DR performance, equipment installation/retirement, energy-saving measures, and benchmark performance • Promote energy management	• Set FY2030 non-fossil energy transition targets For five sectors, including steel, target of each operator is set in line with government sectoral guidelines (see next page)¹ • Submit a medium- to long-term plan for achieving non-fossil energy transition targets • Annual reporting: performance and progress on non-fossil energy use (e.g., non-fossil electricity and fuels), purchased electricity, and self-generation	• Set rooftop solar PV targets (from FY2026) • Annual reporting on rooftop solar PV (from FY2027)

Disclosure: Voluntary; 129 of 320 steel companies (40%) participate.^{*6}

Measures to expand participation: linkage with subsidy programs², outreach activities, and optional non-disclosure for certain items.

Evaluation: For energy conservation, operators are assessed against (1) Effort-based targets and (2) Benchmark targets, with performance classified into S, A, B, or C based on the results.^{*7}

Benchmark → next page

- (1) **Effort-based targets:** Reduce Energy intensity³ / Electricity demand optimization intensity by at least 1% per year on average over five years.
- (2) **Benchmark targets:** Medium- to Long-Term Target: Level achieved by approximately 10-20% of operators in each covered sector

¹ Five sectors: steel, cement manufacturing, paper manufacturing, chemicals, and automobile manufacturing.

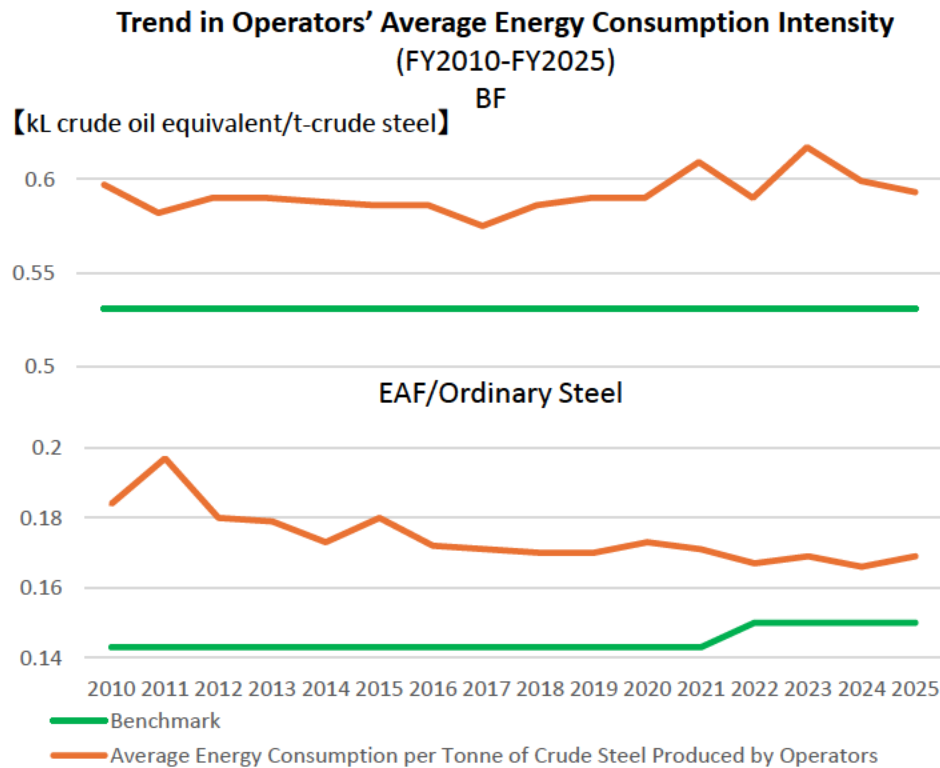
² For large companies, an S or A rating is required to qualify for energy-efficiency investment subsidies.

³ Operators may choose a denominator closely linked to energy use for intensity calculations.

◆ Is the Energy Conservation Act's Evaluation Framework Effective?



- S-Class is based on one of three different indicators, and over 90% of S-Class ratings are awarded for meeting effort-based targets. ^{*1} As a result, the rating alone does not indicate what was actually achieved.
- Since the operators can choose the denominator for effort-based intensity targets, ^{*2} the impact of meeting these targets is unclear.
- Only S-Class operators are publicly disclosed, and disclosure of certain items is voluntary, making cross-operator comparisons difficult.
- In BF steelmaking, energy intensity has remained above the benchmark for 15 years, raising questions about its effectiveness.



Source: Created by REI based on [METI\(43\)](#)

Note1: FY2025: weighted average

Note2: From FY2022 reporting, the benchmark for EAF ordinary steel was revised to better reflect actual operating conditions. ^{*3}

Energy Conservation Benchmark target ^{*4}	BF	EAF/Ordinary steel	EAF/Special steel
	≤ 0.531 kL/t	≤0.150 kL/t	≤0.360 kL/t
	Energy Use / Crude Steel Production	Energy Intensity (Upstream & Downstream): Adjusted for product and process differences	Energy Intensity (Upstream & Downstream): Adjusted for capacity and process differences
Energy Conservation Business Operator Classification ^{*4}	S-Class	A-Class	B-Class
	Meets One Effort-Based Target or the Benchmark Target	Between S-Class and B-Class	Effort target not met & energy intensity rises Year-on-Year for 2 consecutive years or 5-year average rises by >5%
			C-Class Particularly poor performance among B-class operators

Non-Fossil Energy Transition Guidelines for Quantitative and Qualitative Targets in the Steel Industry ^{*5}		BF	EAF
	Quantitative	FY2030 Target: ≥2% reduction from FY2013 in coal use per ton of crude steel	FY2030 Target: ≥59% non-fossil energy share in electricity use
	Qualitative	Fuel •Promote R&D on BF hydrogen reduction and hydrogen-based direct reduction •Increase the use of non-fossil fuels, including fuels produced using CO₂ from steelmaking processes Electricity •Commercialize large-scale EAFs capable of producing high-grade steel •Increase the share of non-fossil electricity	Fuel •Increase the use of non-fossil fuels, such as biocoke, in EAFs •Promote the use of burners fueled by non-fossil fuels, such as hydrogen, in reheating furnaces Electricity •Introduce electric heating equipment in reheating furnaces •Increase the share of non-fossil electricity

Source: ^{*1} [METI\(44\)](#)・[\(45\)](#), ^{*2} [METI\(46\)](#), ^{*3} [METI\(47\)](#), ^{*4} [METI\(42\)](#), ^{*5} [METI\(36\)](#)



4. Demand-Side Policies

Green Public Procurement under Green Purchasing Act



- For public procurement of goods, the policy promotes the procurement of “GX Steel (p28),” as defined by the JISF guidelines, wherever practicable.
- For public works, “Green steel” has not yet been designated as a “Designated Procurement Item,” but pilot projects will begin in FY2026 with a view to expanding demand.

Program Overview^{*1} administered by MOE

The system requires public bodies to procure environmentally preferable goods and services. Priority products are designated as “Designated Procurement Items,” with environmental criteria. Each fiscal year, the government sets procurement targets for these items and procures them accordingly.

New criteria for products containing steel as a raw material were added by Cabinet decision on 28 January 2025.^{*2}

Legal Basis: Green Purchasing Act

Body Responsible for Reviewing Procurement Items:

MOE: drafts revisions for goods; **MLIT:** drafts revisions for public works^{*3}

Finalized by Cabinet decision following committee review.

Responsibilities of Each Entity:

National government: Required to publish an annual green procurement policy, procure in line with it, and disclose procurement results.

Local governments: Expected to take similar measures to national government on a best-efforts basis.



Criteria for Goods Containing Steel as a Raw Material^{*1}

Note: Procurement should be promoted unless there are procurement or supply constraints.

- ① **Verified emission reductions:** Reduction amounts must be assigned in accordance with the GX Steel Guidelines (JISF).^{*2}
- ② **Quantitative environmental disclosure:** Lifecycle GHG emissions must be calculated and disclosed in CO₂-equivalent terms using global warming potentials.

→ Requires the use of GX Steel

Consideration: Use of steel produced with non-fossil electricity that entails additional GHG-reduction costs above a specified level.

→ Excludes the use of non-fossil electricity certificates

Source: ^{*1} MOE (3), ^{*2} METI(48), ^{*3} MLIT(1)

Source: ^{*1} MOE (4), ^{*2} JISF(3)



Use of Green Steel in Public Works

◆ Not Yet Adopted as a “Designated Procurement Item”

- As of the end of FY2025, “Green steel” has not been designated as a “Designated Procurement Item” for public works.
“Green steel (proposed through public solicitation in FY2024)” : Steel products for public works—such as steel sheet piles and steel pipe sheet piles for permanent works, heavy plates for bridges, and steel pipe piles/steel pipe sheet piles for foundations—that are accompanied by certificates documenting additional GHG emission reductions.^{*1}
- Why has green steel not yet been designated as a “Designated Procurement Item,” despite being under consideration since FY2024?^{*1,2,3,4}

◆ Policy for Use in Public Works



Lack of transparency for mass-balance products
(The specific methods for tracking and disclosing actual use are unclear.)



Significantly higher costs, with uncertain prospects
for cost reductions as adoption expands

- **Pilot projects** will begin in MLIT managed public works in FY2026, with the scope gradually expanded toward full-scale use of green steel in public works from FY2030 onward.
→ As of August 2026, pilot use of green steel has been confirmed in six road and river works projects.^{*7}
- Actively share information to encourage similar initiatives by local governments.^{*5,6}

Source: ^{*1} MOE(5), ^{*2} MLIT(2), ^{*3} MOE(6), ^{*4} MOE(7), ^{*5} MLIT(3), ^{*6} CS(5), ^{*7} MLIT(4)

Subsidies to Promote the Introduction of Clean Energy Vehicles (CEV Subsidies)



- Consumers receive an additional CEV subsidy when buying vehicles from automakers with a record or plan to use eligible steel. The top-up may offset the green premium, but its demand-creation effect is indirect.
- The assessment criteria and methodology for evaluating adoption records are unclear, making the policy impact difficult to assess. Once an automaker qualifies, the top-up applies regardless of whether a specific model uses low-carbon steel, weakening incentives to expand its use across models.
- Requirements should more directly ensure the use of low-carbon steel, alongside consumer-facing disclosure such as the share used in each vehicle model.
- The scheme covers not only GX Steel but also “Steel with lower environmental impact,” allowing broader options. However, actual adoption of these materials has not been disclosed.

Project Overview^{*1} administered by METI

CEV buyers, including EV and FCV purchasers, receive subsidies covering part of the vehicle cost. Since April 2025, additional support has been available for vehicles from automakers using steel with lower environmental impact.

Legal Basis: Article 85 of the Act on Special Accounts

Method for Determining Subsidy and Additional Amounts:^{*2}

Note: See table at right for the maximum amounts.

The CEV subsidy is determined through a 200-point assessment of vehicle performance and automakers' initiatives, including CO₂ reduction, supply stability, and charging infrastructure.

For eligible steel, each automaker is assessed on its adoption record, **targets, and plans for future**, with a single additional subsidy amount of up to JPY 50,000 set per automaker and **applied uniformly** across its CEV models. ^{*3}

Eligible Steel:^{*4}

Steel with lower environmental impact: Low CFP steel

Steel for Green Transformation: GX Steel (JISF)

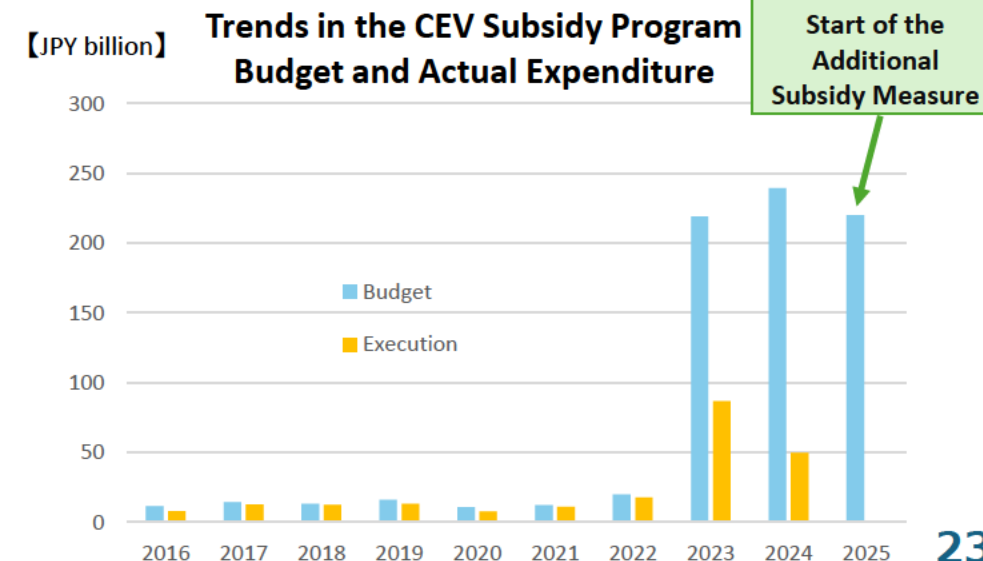
Note: Although “Steel with lower environmental impact” is not clearly defined, it is understood to include EAF steel with a lower CFP achieved using renewable electricity.

Source: ^{*1} METI(49), ^{*2} METI(50), ^{*3} METI(28), ^{*4} METI(51), JISF(3)

【JPY million】 Maximum Subsidy Amount (from 2026)

Type	Base Subsidy Cap	Maximum Additional Subsidy	Maximum Subsidy Amount
EV	1.25	0.05	1.3
Mini EV	0.55	0.03	0.58
PHEV	0.8	0.05	0.85
FCV	1.45	0.05	1.5

Source: Created by REI based on NeV(3)



Source: Created by REI based on METI(49), (52)-(56)

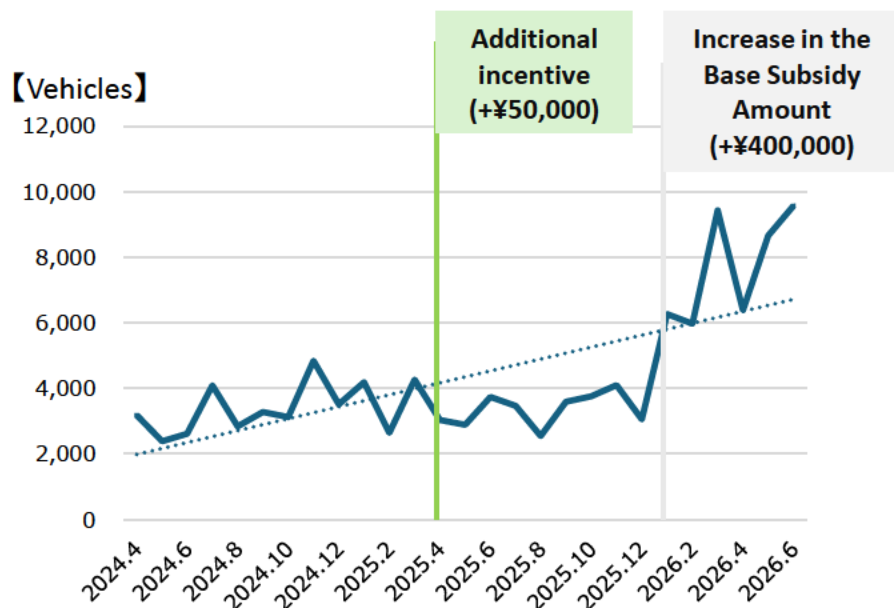
◆ Has the Additional Subsidy for Low-Carbon Steel Been Effective in Creating Demand?



- No clear increase in EV/PHEV demand is evident following the introduction of the additional subsidy for low-carbon steel. However, since the measure was announced on 28 March 2025*, more automakers have announced the use of Steel with lower environmental impact and Steel for GX in mass-market and key production models.
- However, these announcements do not disclose what types of steel are used, in which models, or in what volumes. This makes it difficult to assess actual demand growth for such steel and, in turn, the impact of the subsidy.

*Source: METI(28)

Trend in Total EV/PHEV Sales

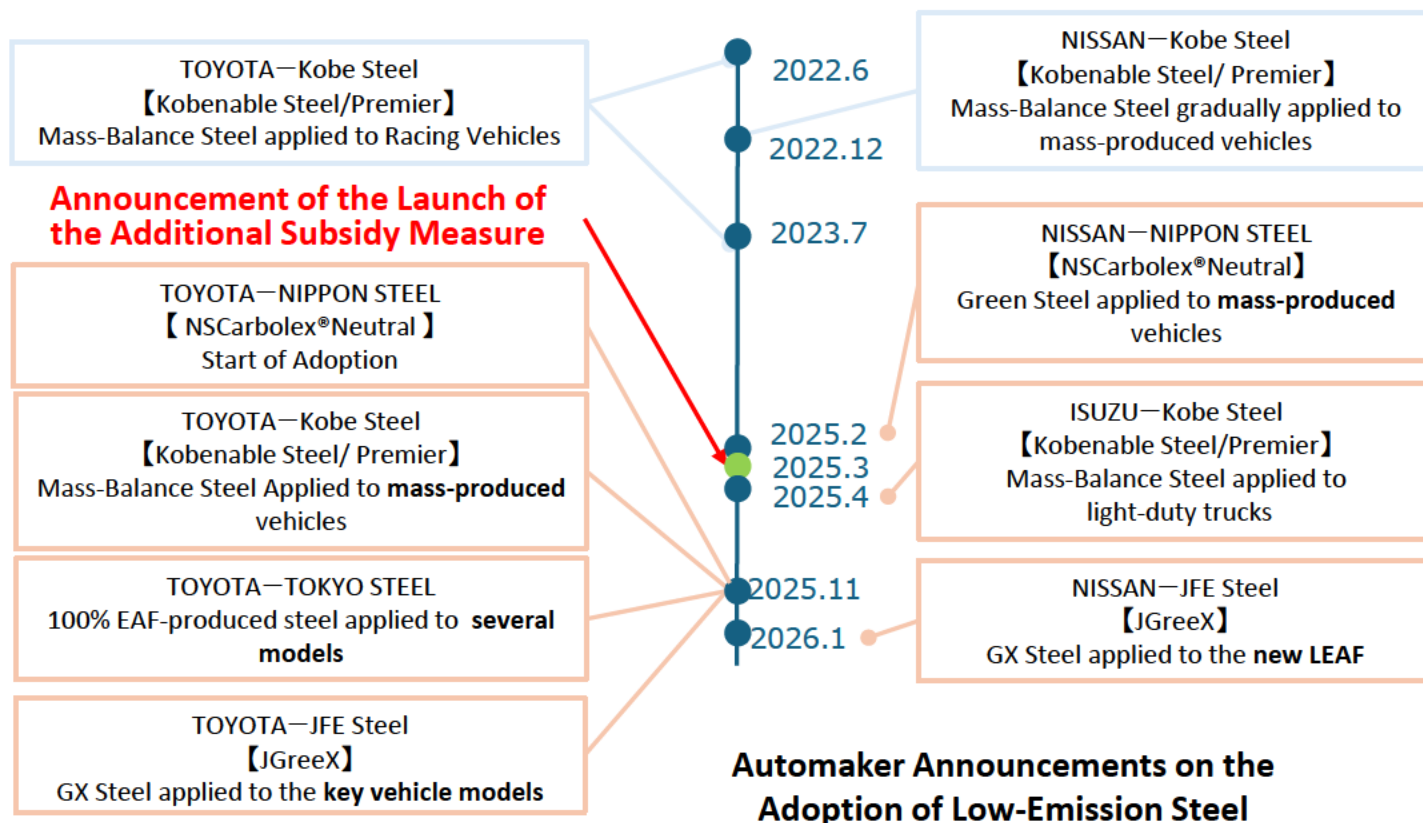


Source: Created by REI based on METI(28), NeV(1)・(3), JADA

Monthly EV & PHEV Sales of Selected Automakers Eligible for the Additional Subsidy

Note: Covers automakers selling models that, as of April 2025, received subsidies above the base cap for the relevant vehicle type and are therefore considered eligible for the additional subsidy.

: Passenger cars only; Kei cars excluded.



Source: Created by REI based on TOYOTA, Kobe Steel(2)-(5), NIPPON STEEL(3), JFE Steel(2), (3), TOKYO STEEL(2)

Note: Mass-Balance Steel, Green Steel, and GX Steel (p. 28): Before the JISF issued its guidelines, the term “mass-balance steel” was used. Afterward, the terminology in the guidelines was adopted and updated as the guidelines were revised.

- To decarbonize the building sector, Japan has decided to introduce a life-cycle carbon (LCC) assessment framework covering buildings from material production through demolition. Beyond reducing carbon emissions from buildings, the framework is also expected to drive demand for lower-carbon materials and equipment.
- The LCC framework is scheduled to begin in FY2028, with embodied-carbon calculation and reporting requirements. To ensure meaningful LCCO₂ reductions and expand demand for low-carbon steel, additional measures such as minimum performance standards and requirements for low-carbon materials will be needed.
- MLIT's current roadmap places stronger reduction measures in the late 2030s. Earlier action will be needed, alongside coordinated measures across related policy areas.

Program Overview^{*1} administered by MLIT

To decarbonize the building sector, which accounts for around 40% of Japan's emissions, a framework was established in 2026 to assess decarbonization efforts across the entire building life cycle.

Legal Basis:^{*2} Act on the Improvement of Energy Consumption Performance and Promotion of Decarbonization of Buildings (enacted by 31 March 2029)

Key Features:

- Clarifies the roles of building owners, architects, contractors, and manufacturers of building materials and equipment.
- The government will establish unified guidelines for building life-cycle carbon (LCC) assessment.
- For new office buildings over 5,000 m² (planned), building owners must submit LCC assessment results to the government before construction begins.
- Third-party certification and labeling by registered bodies.

Roadmap for Reducing Building LCCO₂:^{*3}

The framework will be strengthened gradually as its use expands. Key areas to be advanced in parallel include:

- Accumulation of LCCO₂ assessment data and development of emission factors for building materials and equipment (EPDs/CFPs).
- Changes in design, material procurement, and construction, with the accumulation of relevant expertise.
- Investment and innovation in building materials and equipment.

Other Program for Buildings

Zero Energy Building Subsidy Programs^{*1,2} administered by MOE

Subsidies are provided for new commercial buildings that install energy-efficient and low-carbon systems and high-performance equipment required for ZEBs^{*}, while also calculating and reducing LCC and using low-carbon building materials.

Eligible Buildings: Public and private commercial buildings that plan to achieve ZEB standards and reduce LCC

Requirements: *Note: Related to Low-Carbon Materials*

- Use low-carbon steel and concrete
 - ◆ Steel must be GX Steel with a reduction certificate
- Calculate LCCO₂ at the application and completion stages; Implement reduction measures

Subsidy Amount:

- 50% of the incremental cost compared with conventional materials
- Maximum JPY 500 million in total for ZEB-related equipment and low-carbon materials

^{*}ZEB: a building that achieves net-zero annual primary energy consumption.

GX Future League/ GX Acceleration Declaration Framework



- Strengthen incentives to expand GX demand, including by making GX Future League membership a requirement for certain subsidy applications.
- GX Steel is identified as a priority under the GX Acceleration Declaration Framework.

GX Future League^{*1} administered by GX Acceleration Agency ; Approving Authority: METI^{*2}

The GX Future League aims to expand GX demand by encouraging suppliers and other stakeholders to promote GX. It was launched on 1 April 2026, as a strengthened successor to the GX League, which began in February 2023.

Legal Basis: GX Promotion Act

Requirements: More specific commitments than those required under the GX League^{*3} including actions related to finance.

- Upon Joining
 - ① Report FY2030 direct and indirect CO₂ emissions targets
 - ② Report at least **two commitments to create GX demand**
 - a. GX demand creation: implement the GX Acceleration Declaration, actively procure/sell GX products and services, etc.
 - b. Supplier collaboration: agreements on sharing GX-related costs, setting Scope 3 emissions targets, etc.
 - c. Finance: sustainable finance initiatives, purchases of CTBs, etc.
- Annual Reporting
 - ③ Report actual direct and indirect CO₂ emissions
 - ④ Report **progress** against **commitments**

Member Benefits:

- Participate in public-private and cross-industry rulemaking to promote GX demand, including joining working groups and proposing new thematic WGs
- From FY2026, GX Future League membership is required for applications to certain GX-related subsidy programs
e.g., the FY2025 subsidy for Promoting Energy Efficiency Investment and Demand Structure Transformation^{*4}

Source: ^{*1} GX FUTURE CONSORTIUM(1), ^{*2} METI(57), ^{*3} GX League Secretariat, ^{*4} Sii(4)

GX Acceleration Declaration Framework^{*1} administered by GX Acceleration Agency (by GX League Secretariat until March 2026^{*2})

A framework was established in December 2024^{*3} to assess customers that procure GX products, with a revision planned in autumn 2026.^{*4} Companies are required to make declarations meeting specified criteria (see table at right), and their initiatives are graded and published.

Platinum-grade companies receive incentives such as eligibility for, or additional points in, GX-related subsidy programs (planned).

Eligible Products GX products that reduce users' Scope 1-3 emissions and require large-scale capital investment for production

◆ Steel

- ① Steel produced in EAFs converted from BF
 - ② Steel produced by hydrogen reduction using technologies developed under the GI Fund (p30)
- Among these, **GX Steel** with verified emission reductions is given **priority** under the declaration framework.

◆ **Procurement target for steel: 10%** Basis: 3 Mt green steel supply target / projected domestic crude steel production from BF-based routes in 2030.

Requirements for a "Platinum Grade"

- ✓ Specify eligible products
- ✓ Set quantitative procurement targets above the threshold set by the government or industry.
- ✓ Quantitatively assess contributions to demand creation (with follow-up after the declaration)

◆ Policies for Steel Decarbonization and GX Steel



- Demand-side policies in Japan to expand demand for low-carbon steel products, including the Green Purchasing Act, often focus on GX Steel (p. 28). These policies are intended to encourage and support the transition of primary steelmaking processes from BF to EAF production.
- However, the definition of eligible steel products varies across policies and is not always clear. To further expand demand, it will be important to assess whether GX Steel is the appropriate category for each policy objective and whether the relevant definitions are sufficiently clear.
 - **Tax Concessions for Promoting Domestic Production in Strategic Areas:** At present, eligible steel is defined as “steel produced using an EAF following conversion from a BF- or BOF-based production process.” As this definition was established before the GX Steel guidelines were developed, it may be revised in the future.
 - **CEV Subsidies:** In addition to GX Steel, “steel with lower environmental impact” is also eligible. This is understood to include low-CFP steel produced by EAF steelmakers, although the specific status and extent of its use are unclear.
 - **GX Acceleration Declaration:** The framework initially defined eligible steel as “steel produced in EAFs converted from BFs” and “steel produced through hydrogen reduction using technologies developed under the GI Fund.” The framework is expected to be revised to give priority to GX Steel.

▶ Definitions of Eligible Steel Vary Across Policies

	Supply-Side Policies	Demand-Side Policies			
Policy	Tax Concessions for Promoting Domestic Production in Strategic Areas	Criteria for Goods under Green Purchasing Act	Zero Energy Building Subsidy Programs	GX Acceleration Declaration Framework	CEV Subsidies
Eligibility	Eligible Steel	Criteria for Goods Containing Steel as a Raw Material	Requirements for Low-Carbon Building Materials	Eligible Products	Eligible Steel
Requirements	Steel produced using an EAF following conversion from a BF- or BOF-based production process.	1. Reduction amounts must be assigned in accordance with the GX Steel Guidelines (JISF). 2. Lifecycle GHG emissions must be calculated and disclosed in CO ₂ -equivalent terms using global warming potentials. →Requires the use of GX Steel Consideration: Use of steel produced with non-fossil electricity that entails additional GHG-reduction costs above a specified level. →Excludes the use of non-fossil electricity certificates	Green Steel for GX* :GX Steel with a reduction certificate <i>*Note: Definition of “Green Steel for GX” is provided in METI(51),</i>	Priority: GX Steel with verified emission reductions a. Steel produced in EAFs converted from BFs b. Steel produced by hydrogen reduction using technologies developed under the GI Fund	• Low CFP steel • GX Steel (JISF)

GX Steel: Steel products that reflect GHG emission reductions achieved through projects undertaken within the organization, using either the GX mass-balance method or the GX allocation method, in accordance with JISF guidelines.

- METI's Study Group on Green Steel for Green Transformation (October 2024-January 2025) defined steel associated with additional company-level direct emissions reductions and higher production costs as "Green Steel for GX." It also identified such steel as eligible for demand-side support measures, including preferential government procurement and purchase incentives.^{*1}
- The JISF's "GX Steel Guidelines" ^{*2} set out the requirements for GX Steel. METI regards steel meeting these guidelines as "Green Steel for GX" (p. 27).
- Internationally, discussions are also advancing on the treatment of Environmental Attribute Certificates (EACs), including commodity certificates used to convey the low-GHG attributes of products and materials such as steel. In June 2026, the SBTi Corporate Net-Zero Standard V2.0 indicated that commodity certificates may be recognized subject to certain conditions, while excluding "carbon-banking" models that reallocate environmental attributes independently of physical flows or concentrate those attributes on specific products.

Overview of GX Steel

Operational Guidelines: JISF's "GX Steel Guidelines" set out rules for GHG emissions intensity, emission reductions achieved, allocation and assignment, third-party verification, and disclosure. CFPs are calculated in accordance with the JISF's "Guidelines for Calculating Product Carbon Footprints for Steel Products." ^{*3}

Requirements for Emission Reduction Projects: Projects must involve GX measures such as changes in **production processes, raw materials, or fuels**, for which the organization bears additional costs. They must demonstrate **additionality**, allow emission reductions to be appropriately quantified, and undergo **third-party verification**.

Methods for Reflecting GX Value in Products See illustration at right

- **GX Mass-Balance Method** (Based on ISO 22095:2020, Requires a physical connection between the reduction project and the production chain)
Emission reductions are managed in the organization's account and allocated to steel products within the available balance, which are then supplied with reduction certificates. The General CFP and the reduction certificate are treated separately, and the certificate may be used to support Scope 3 reduction claims.

- **GX Allocation Method** (Based on the allocation principles in ISO 14067:2018 and ISO 14044:2006)

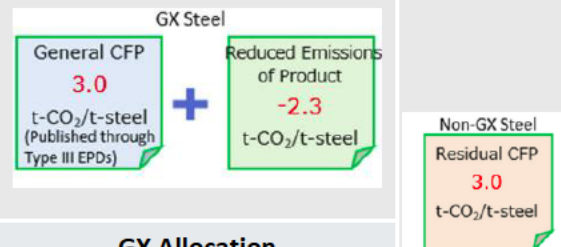
After the reduction project, the General CFP is calculated and emissions are allocated across products up to the amount of emission reductions achieved: (pre-project emissions intensity – post-project emissions intensity) × production volume.

No reduction certificates are issued; the respective CFPs are disclosed instead.

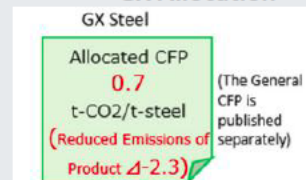
Note: Emission reductions are pooled within the organization and assigned to products under a "carbon-banking" mechanism, with third-party verification under both methods. Customers may claim CFP reductions using a reduction certificate under the GX Mass-Balance Method or the Allocated CFP under the GX Allocation Method.

Illustration of Certificate Issuance

GX Mass Balance



GX Allocation





5. Research and Development Support

Green Innovation (GI) Fund Projects: Hydrogen Utilization in Iron and Steelmaking Processes



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- GI Fund support for R&D in steel decarbonization is comparable in scale to total support for hydrogen and ammonia projects (excluding steelmaking), and to total CCUS-related support.
- To date (p. 32), funding has been concentrated on R&D to reduce emissions while retaining BF-based steelmaking, with more funding than for other pathways.

Project Overview* ¹ Implementing Entity: NEDO ; administered by METI

To support the 2050 carbon neutrality target, a JPY 2 trillion GI Fund was established at NEDO under the FY2020 third supplementary budget. A further JPY 756.4 billion*² was added through the FY2022 supplementary and FY2023 initial budgets, financed by **GX Economy Transition Bonds**.

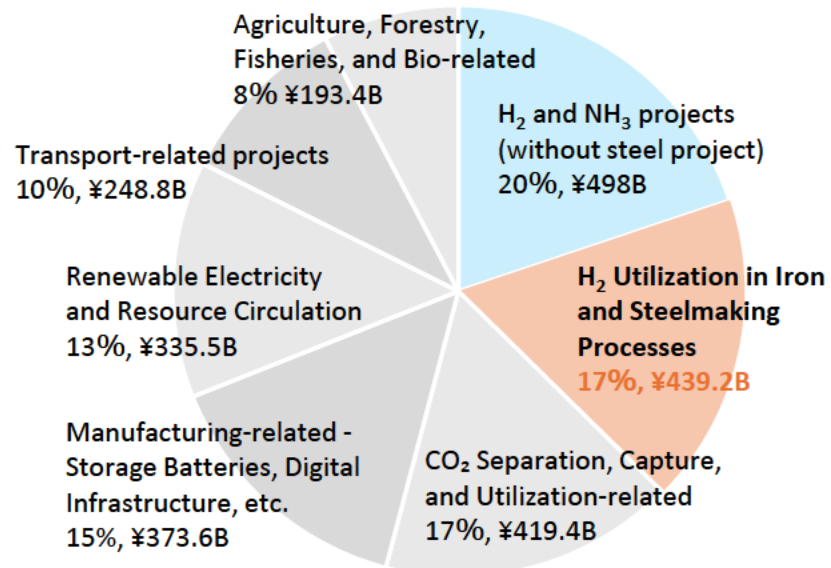
The Fund provides **up to 10 years** of support from R&D and demonstration through commercialization for projects in priority GX areas with **high policy impact** and **long lead times**, targeting companies committed to specific goals.

Legal Basis: Article 15 of the Act on the New Energy and Industrial Technology Development Organization

Project Period:*³ FY2020-FY2032

Source:*¹ METI(59), *² MOF(5), *³ METI(24)

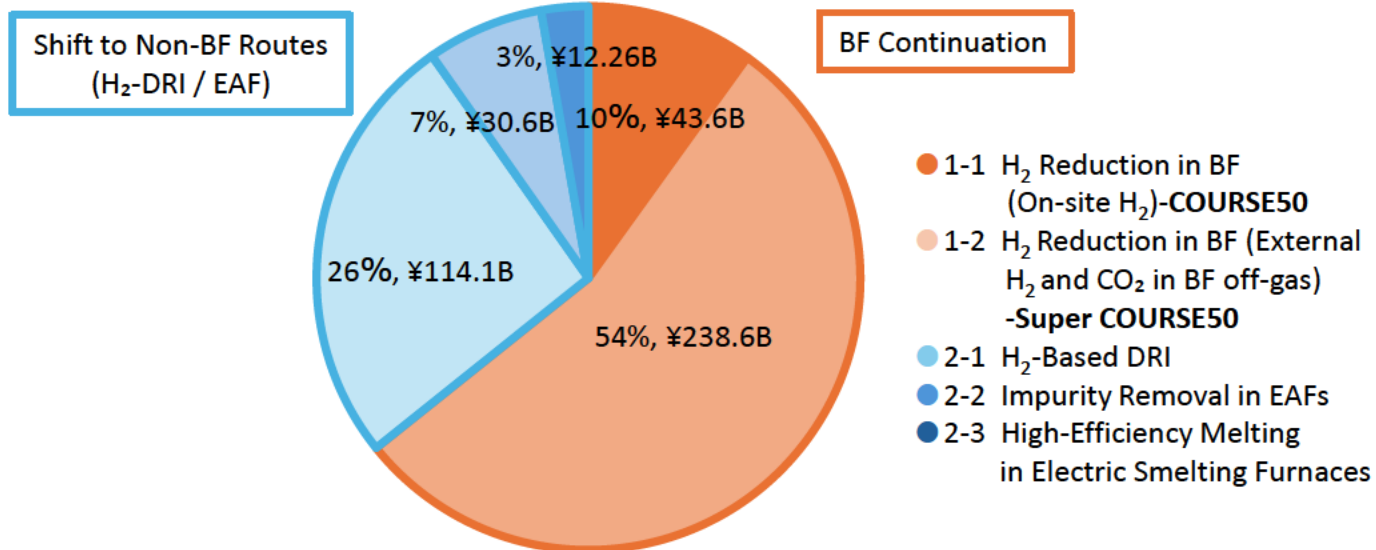
Breakdown of the GI Fund Budget Ceiling (Total Amount for FY2021-FY2032)



Source: Created by REI based on [NEDO\(9\)](#)

Note: Steelmakers are also involved in developing technologies to capture CO₂ from low-concentration gas streams.

Hydrogen Utilization in Iron and Steelmaking Processes Budget Share by Category (Total Amount for FY2021-2030)



Source: Created by REI based on [METI\(60\)](#)

Green Innovation (GI) Fund Projects: Hydrogen Utilization in Iron and Steelmaking Processes



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- 1-1 H₂ Reduction in BF (On-site H₂)-COURSE50
- 1-2 H₂ Reduction in BF (External H₂ and CO₂ in BF off-Gas)-Super COURSE50
- 2-1 H₂-Based DRI
- 2-2 Impurity Removal in EAFs
- 2-3 High-Efficiency Melting in Electric Smelting Furnaces

【Kobe Steel】 Takasago Works

- 2-2
 - Testing in a 20t EAF began in January 2023.
 - **Stable operation** with up to 80% reduced iron was demonstrated in FY2024.
 - Development of impurity-control technologies is planned from FY2025.

【JFE Steel】 East Japan Works (Chiba)

- 1-2
 - Testing using a carbon-recycling test BF (150 m³) began in 2025.
 - Medium-scale demonstration is planned from 2029, followed by full-scale demonstration and consideration of implementation from 2031.

- 2-1
 - Testing using a **bench-scale furnace** began in **December 2024**.
 - Scale-up testing is planned from 2027.
 - Full-scale demonstration and consideration of implementation are planned from 2031.

- 2-2
 - Testing using a **10t-scale test furnace** began in **February 2025**.

● 2-3

- NIPPON STEEL and JRCM were selected for the project in March 2024.
- Specifications and other details of the test furnace are under consideration.

【NIPPON STEEL】 Hasaki R&D Center

- 2-1
 - Testing using a **pilot-scale shaft furnace** (1 t/hour) began in **2025**.
 - Scale-up verification studies will begin in FY2027.
 - Establish full-scale hydrogen-based reduced iron production technology around 2040.
- 2-2
 - Development and validation of high-efficiency dephosphorization and denitrification technologies using a **pilot-scale EAF (10 t/charge)** began in **December 2024**.
 - Full-scale implementation targeted by 2030.

【NIPPON STEEL】 East Nippon Works, Kimitsu Area

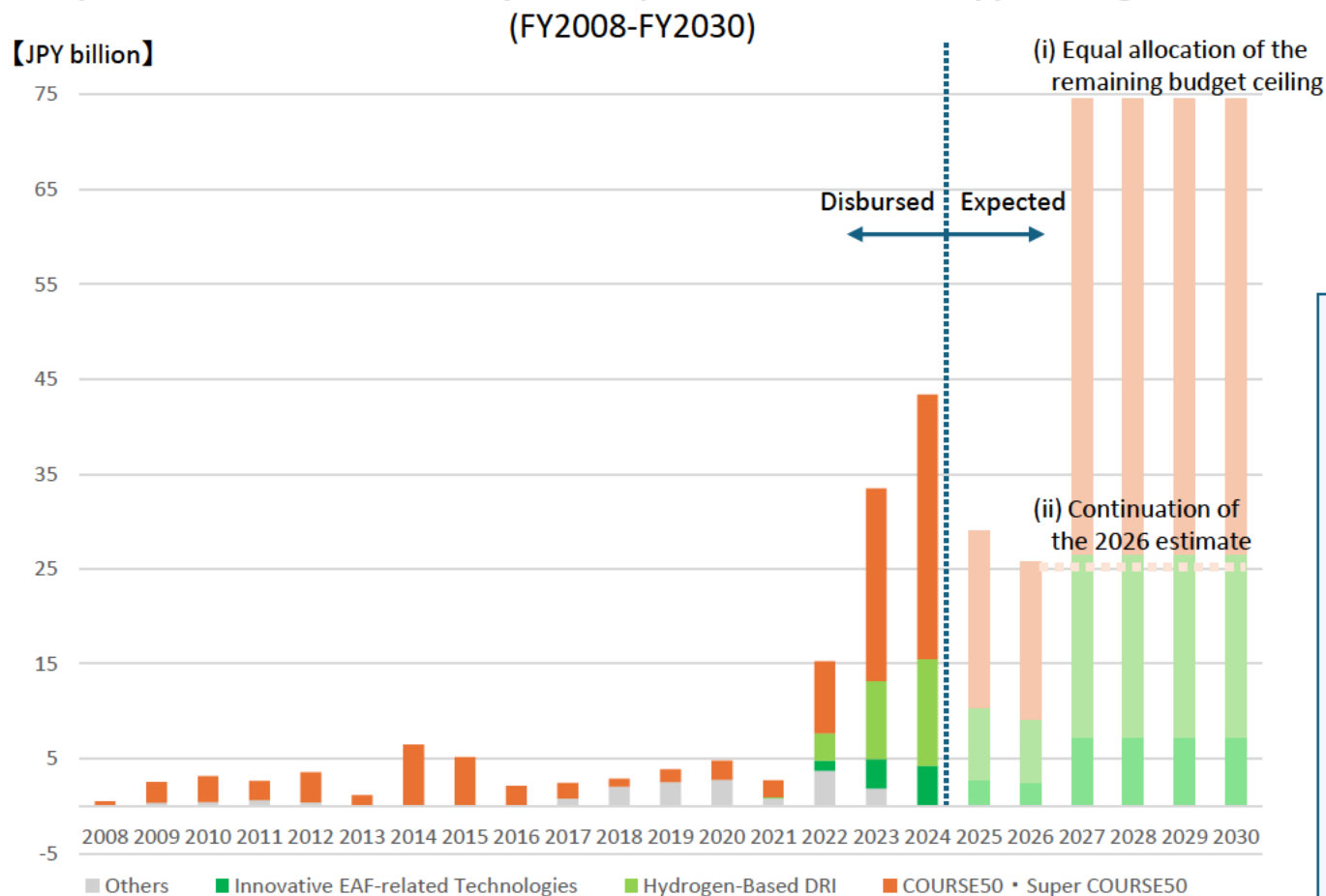
- 1-1
 - COURSE50 **demonstration testing** at No. 2 BF to begin in **January 2026**.
 - COURSE50 to be installed by 2030 [CO₂ reduction ≥10%].
- 1-2
 - In 2026, a **45% CO₂ reduction** was demonstrated in the Super COURSE50 pilot-scale furnace through direct injection of high-temperature hydrogen.
 - Establish Super COURSE50 implementation technology by 2040 [CO₂ reduction ≥50%].

◆ R&D Support: Expansion of Policy Support for the Steel Sector



- R&D support for steel decarbonization has been provided since FY2008, with cumulative funding reaching approximately JPY 130 billion by FY2024.
- Funding increased significantly following the launch of the GI Fund in FY2020.
- Funding for hydrogen reduction in blast furnaces (COURSE50 and Super COURSE50) has been substantially larger than for other technology pathways, such as hydrogen-based direct reduction and scrap-based EAF steelmaking.

Implementation Status and Projected Expenditures for R&D Support Programs*



Other R&D Support

1. Support for Demonstration Projects to Decarbonize Basic Materials Industries (FY2021-FY2023)*¹

Target: Basic Materials Industries (steel, chemicals, stone products, pulp, paper and paper products manufacturing)

For the steel sector, subsidies were provided for feasibility studies on low-carbon retrofits of steelmaking facilities.

- Around 80% of the program's budget was allocated to studies on decarbonizing BF-based steelmaking, despite the program covering multiple industries.

2. R&D (e.g., hydrogen utilization) (FY2008-2022)*² →GI Fund Project

3. Assessment of Key Challenges for Promising Carbon-Neutral Steelmaking Technologies (FY2020-2021)*³

Identify key development challenges and the technologies needed for promising pathways toward carbon-neutral steelmaking.



6. Other Measures and Developments



Developments Related to Steel Scrap

- Scrap-based EAF steelmaking is an important near-zero-emissions pathway for steel decarbonization. Scrap demand is expected to increase as production shifts from BF to EAFs.
- During the transition, BF-BOF producers are also likely to increase scrap use in BOFs as an emissions-reduction measure.
- As EAF production expands, it will also need to produce steel grades that have traditionally been difficult to manufacture using scrap-based EAFs, increasing the need for a stable supply of high-quality scrap.
- Policies are needed to improve both the quantity and quality of available steel scrap.

Current

- Scrap-based EAF CO₂ emissions: around 1/3 of BF-BOF^{*1}
- Share of scrap in metallic inputs: **36.6%** (FY2024), **increasing**^{*2}
- Scrap exports: **16.3%** of domestic scrap (FY2024) ^{*3}

CO ₂ Emissions (tCO ₂ /t crude steel) World average*	
BF/BOF	2.34
EAF&Scrap	0.69

*2024, worldsteel

Target: Processing capacity to upgrade post-consumer scrap: around 2 Mt/year by 2030

Roadmap/plan

- ✓ **Circular Economy Action Plan/Metal Recycling Promotion Strategy**^{*4}
 - High-quality steel can be produced in innovative large-scale EAFs under construction by using high-grade steel scrap.
 - As large volumes of high-grade scrap will be needed, securing capacity to sort and upgrade lower-grade scrap is strategically important.
 - Measures are also needed to address non-compliant scrap yards and improper exports that undermine fair competition.
- ✓ **Japan Growth Strategy (FY2026)/Public-private investment roadmaps “Green steel”**^{*5}
 - Secure a competitive edge by rapidly producing high-quality steel with GX value, using scrap and reduced iron as the main metallic inputs.
 - Promote technology development and capital investment to secure a stable supply of high-grade scrap for green steel and casting production.
- ✓ **Roadmap to Expand Domestic Scrap Demand**^{*6}

In September 2025, a working group under the Public-Private-Academic Partnership for the Circular Economy (“Circular Partners,” CPs), jointly convened by METI and MOE, developed a roadmap for the Japanese steel industry to expand the generation, circulation, and use of high-grade steel scrap.

Act on Waste Management and Public Cleansing*

Amended on 19 June 2026

Key Amendments

- Introduce a **permit system** for businesses storing and recycling end-of-life metal and plastic products, strengthening regulation of scrap yards.
- Establish standards for recycling and storage methods according to the type of material, with improvement orders, remedial orders, and penalties for violations.
- Introduce a system requiring confirmation by the Minister of the Environment before the export of materials that may pose environmental pollution risks.

*Source: MOE(8)

R&D Support

- Mitigate the impact of tramp elements in scrap on high-grade EAF steel production (FY2023–FY2025)^{*1}
- Demonstrate precision dismantling, advanced sorting of steel-containing scrap, and recycled-feedstock evaluation through collaboration between the steel and scrap industries (FY2026–FY2028).^{*2}
- Develop AI-based scrap identification for size, steel grade, and composition (from FY2023)^{*3,4}

- Hydrogen is essential for decarbonizing steel production, but at Japan's target procurement prices, it is expected to remain too costly for steelmaking.
- Hydrogen use in Japan is currently concentrated in power generation co-firing and fuel cells. In steelmaking, the only project currently using hydrogen involves injecting on-site by-product hydrogen into a BF.
- Of 27 applications, ^{*1} nine projects have been selected for support to date. Only one involves hydrogen use in steelmaking, accounting for 0.5% of the total supported volume.

Hydrogen Hub Support and CfD Support under the Hydrogen Society Promotion Act

administered by METI

Legal Basis/Plan: Hydrogen Society Promotion Act, Basic Hydrogen Strategy (2017), Revised Basic Hydrogen Strategy (2023)

Program Period:^{*2} 2024-2046

Overview:^{*3,4} Support for approved plans submitted by companies engaged in hydrogen supply and related hydrogen use.

● Hydrogen Hub Support:

Grants are provided for **infrastructure development**, such as new tanks and pipelines needed to transport and store low-carbon hydrogen and related fuels.

● Price-Difference Support (CfD-type support)

- Pays the difference between the **Strike Price** (the level needed for the project operator to recover project costs) and the **Reference Price** (the market price of substitute fuels, such as fossil fuels, plus environmental value).
- Support period: **15** years, subject to continued supply for a further **10** years after support ends.

Source:^{*1} METI(71) ^{*2}METI(72), ^{*3} METI(73), ^{*4} METI(74), ^{*5} METI(75)

Projects Selected for Support ^{*5} 9 in total (6 ammonia and 3 hydrogen projects)		
Steel Sector Support Project		
Plan Approval Date	Project Overview	Annual Hydrogen Supply
30 September 2025	Hydrogen produced using electricity from onshore wind power is used to produce special steel.	1,600 t/y

- Japan has relatively few suitable CO₂ storage sites, such as depleted oil and gas fields commonly used overseas. Overseas transport of captured CO₂ is therefore also being considered, which is expected to increase costs.
- BF steelmakers participate in 4 of the 9 projects currently selected for support.
- BF-based steelmaking has high total emissions and multiple emission sources. Since capturing more than 90% of CO₂ through CCS is considered technically and economically difficult, applying CCS would not by itself make BF-based steelmaking a near-zero-emissions pathway.

Support for Advanced CCS Projects and Domestic and Overseas Geological Surveys for CCS Potential^{*1} administered by: METI

Support for projects aiming to launch CCS operations by **2030**, covering implementation across the full CCS value chain from CO₂ separation and capture to transport and storage (since FY2023).

Legal Basis/ Plan: CCS Business Act, CCS Long-term Roadmap, GX2040 Vision

Target: Launch CCS projects totaling **6-12 Mt CO₂/year** around 2030.

Current Status:

- To reduce uncertainty in CCS costs and subsurface storage, full-chain design work and storage potential assessments have been conducted since FY2024. ^{*2}
→ **9 projects**
- To improve process efficiency and reduce costs, regional clusters aggregating multiple CO₂ sources have been selected for feasibility studies and design work since FY2026. ^{*3}
→ **6 projects**

CCS Cost-Difference Support Scheme^{*4}

Note: Support for projects involving CO₂ transport by ship is still under consideration.

Support covers the key components needed to establish the **CCS value chain**.

Costs Covered by Support: Costs for CO₂ capture, transport, and storage

Support Method (15 years)

- Support is provided to CO₂ capture operators based on the amount of CO₂ stored, covering the **difference between the Strike Price** (①capture cost & ② transport and storage fees per ton of CO₂)—and the **Reference Price**, defined as the average trading price under the emissions trading system.
- **Upfront support** is also provided for construction costs of capture, transport, and storage facilities, covering up to 75%.

Source: ^{*1} METI(76), ^{*2} JOGMEC(1), ^{*3} JOGMEC(2), ^{*4} METI(77)

Term	Description
BF	Blast Furnace
BF-BOF	Blast Furnace-Basic Oxygen Furnace
CEV	Clean Energy Vehicle
CCS	Carbon Capture and Storage
CCUS	Carbon Capture, Utilization and/or Storage
CfD	Contracts for Difference
CFP	Carbon Footprint of Product The amount of GHG emissions from a product system, minus removals and uptake, based on a life cycle assessment (LCA) of its climate-change impact and expressed in CO ₂ -equivalent terms. ^{*1}
CN	Carbon Neutral Achieving a balance between greenhouse gas (GHG) emissions and removals. ^{*2}
CO ₂	Carbon dioxide
CS	Cabinet Secretariat
CTB Framework	Japan Climate Transition Bond Framework
DR	Demand Response An approach to balancing electricity supply and demand by encouraging consumers to actively reduce electricity use during periods of peak demand.
EAF	Electric Arc Furnace
EPD	Environmental Product Declaration Environmental information on products and services is quantified using LCA methods to assess multiple environmental impacts, including the carbon footprint. ^{*3}
EU	European Union
EV	Electric Vehicle
FCV	Fuel Cell Vehicle
GHG	Greenhouse Gas
GI Fund	Green Innovation Fund Projects
GX	Green Transformation
GXA	GX Acceleration Agency
H ₂	Hydrogen
HtA	Hard-to-Abate
JISF	Japan Iron and Steel Federation
JRCM	The Japan Research and Development Center for Metals
LCA	Life Cycle Assessment

Term	Description
LCC /LCCO ₂	Life Cycle Carbon Dioxide
NDC	Nationally Determined Contribution
PHEV	Plug-in Hybrid Electric Vehicle
PPA	Power Purchase Agreement An agreement to purchase electricity from renewable energy generation facilities under a long-term contract.
R&D	Research and Development
RE	Renewable Energy
SBTi	Science Based Targets Initiative An initiative that requires participating companies to set GHG emissions reduction targets (SBTs) aligned with the level of ambition called for by the Paris Agreement.
SME	Small and Medium-Sized Enterprise
SSBJ	The Sustainability Standards Board of Japan
TF	Transition Finance A financing approach designed to support companies that pursue steady GHG emissions reductions in line with a long-term strategy toward a decarbonized society. ^{*4}
METI	Ministry of Economy, Trade and Industry
MLIT	Ministry of Land, Infrastructure, Transport and Tourism
MOE	Ministry of the Environment
MOF	Ministry of Finance
Near-zero-emission technology	Technologies for producing near-zero emission steel In 2022, the IEA defined near-zero-emission thresholds for steel aligned with a net-zero energy system at 50–400 kgCO ₂ e per ton of crude steel, depending on the share of scrap used. ^{*5}
NIES	National Institute for Environmental Studies
NTA	National Tax Agency
ZEB	Net Zero Energy Building A building that achieves net-zero annual primary energy consumption

Source: ^{*1} METI(51), ^{*2} MOE(10), ^{*3} MOE(11), ^{*4} METI(78), ^{*5} IEA



► Methodology for Estimating Disbursements and Projected Amounts by Item in the Bar and Pie Charts on p. 16

■ HtA Capital Investment Subsidy:^{*1}

- ①Disbursed: Total program disbursements × steel projects' share of the total maximum grant amount
- ②Expected: Assumes the full maximum grant amount is disbursed in the final year of each project

■ Energy-efficiency investment subsidies:^{*2} Assumes the full approved grant amount is disbursed in the final year of each project

■ R&D Support:^{*3}

- GI Fund: Total GI Fund disbursements and government projections (from FY2025) × Steelmaking projects' share of the total project budget caps
Note: For FY2027–FY2030, the remaining budget cap after deducting amounts already disbursed or projected by the government is allocated evenly over four years.
- R&D (e.g., hydrogen utilization): Estimated based on actual disbursements and other available data
- Assessment of Key Challenges for Promising Carbon-Neutral Steelmaking Technologies: Estimated based on actual disbursements and other available data
- Support for Demonstration Projects to Decarbonize Basic Materials Industries: Total disbursements for steelmaking projects

■ CEV Subsidy(Additional Incentive):^{*4}

Average difference, as of April 2025, between the subsidy amount for models exceeding their vehicle category's base subsidy cap and the applicable base cap× FY2025 EV and PHEV sales, assuming sales remain at the FY2024 level.

Note: Where multiple models from the same automaker qualify, the largest difference is used.

► Breakdown of Items in the Bar Chart on p. 32

■ COURSE50, Super COURSE50: COURSE50 portion of R&D (e.g., hydrogen utilization) &GI Fund1-1, 1-2

■ Hydrogen-Based DRI: GI Fund 2-1

■ Innovative EAF-related Technologies: GI Fund 2-2, 2-3

■ Others: Including "Support for Demonstration Projects to Decarbonize Basic Materials Industries", "Development of process technologies using ferro-coke under R&D (e.g., hydrogen utilization)", "Assessment of Key Challenges for Promising Carbon-Neutral Steelmaking Technologies"

Note: For GI Fund projects, steel-sector disbursements are first estimated using the methodology described above. Disbursements by project component are then estimated based on each component's share of the project budget cap. For FY2027-FY2030:(i)assumes the remaining GI Fund budget cap, after deducting actual and government-projected disbursements, is allocated evenly over four years;(ii)assumes the FY2026 projected GI Fund disbursement continues at the same level in subsequent years.

The sources used to calculate each amount are as follows:

^{*1} FY2024 HtA Subsidy Program Secretariat(1)・(2)・(3), FY2025 HtA Subsidy Program Secretariat(1)・(2)・(3), METI(13)

^{*2} Sii(1)・(2)

^{*3} METI(14)-(27), NEDO(1)-(8), METI(60)

^{*4} METI(28), NeV(1)・(2)

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- ・METI(1), “2024FY Comprehensive Energy Statistics”
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- ・CS(1),” The Basic Policy for the Realization of GX-A roadmap for the next 10 years-”,February 2023
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- ・CS(3), 「日本成長戦略」,July 2026
- ・CS(4),「戦略17分野における「主要な製品・技術等」の官民投資ロードマップ」,July 2026
- ・MOE(2),”Plan for Global Warming Countermeasures”,18 February 2025
- ・METI(3),”Strategic Energy Plan”, February 2025
- ・METI(4),「分野別投資戦略」,December 2023
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- ・METI(6),「分野別投資戦略（Ver.3）」,December 2025

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3-1 Subsidy for Energy/Manufacturing Process Conversion for Hard-to-abate Industries

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Note: All web sources were last accessed on August 26, 2026.

*All referenced materials are archived in the National Diet Library's Web Archiving Project (WARP): <https://warp.ndl.go.jp/>



◆ Large-Scale Subsidies Financed by GX Economy Transition Bonds

(1) HtA Capital Investment Subsidy

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