*For Eurogas Let's Meet!*

THE JAPAN GAS ASSOCIATION

# GHG Protocol standards and guidance updates encouraging further challenge of Japan's city gas industry

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# About JGA and Current Japan's City Gas Industry

- The Japan Gas Association (JGA) is a non-profit organization established in 1947, consisting of about 200 companies.
- Our members cover about 27 million customers, or about half of the total number of households in Japan, total volume of annual gas supply is about 40 billion $m^3$, total pipeline length is over 260 thousand km.

- Japan's city gas industry was the "first mover" in the world to introduce and commercialize LNG for city gas supply in 1969. Now, there are 37 LNG terminals.

LNG tanker
In 1969

Photos:
Tokyo Gas

**About 50 years have passed since the introduction of LNG**

Prime Minister Y.Suga announced national target in 2050 in October,2020

**In October 2020, the Japanese government announced its goal of becoming carbon neutral (net zero carbon emissions) by 2050. In April 2021, it also set a new target of reducing GHG emissions in 2030 by 46% from 2013.**

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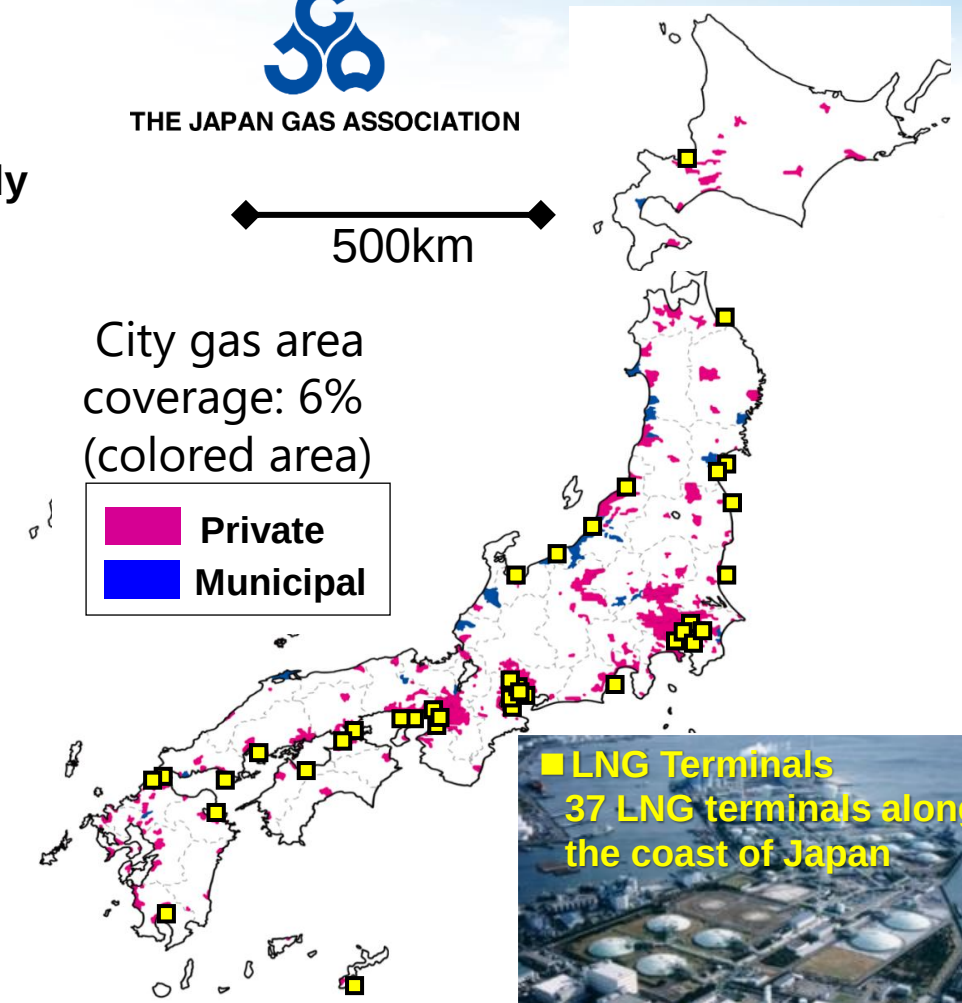


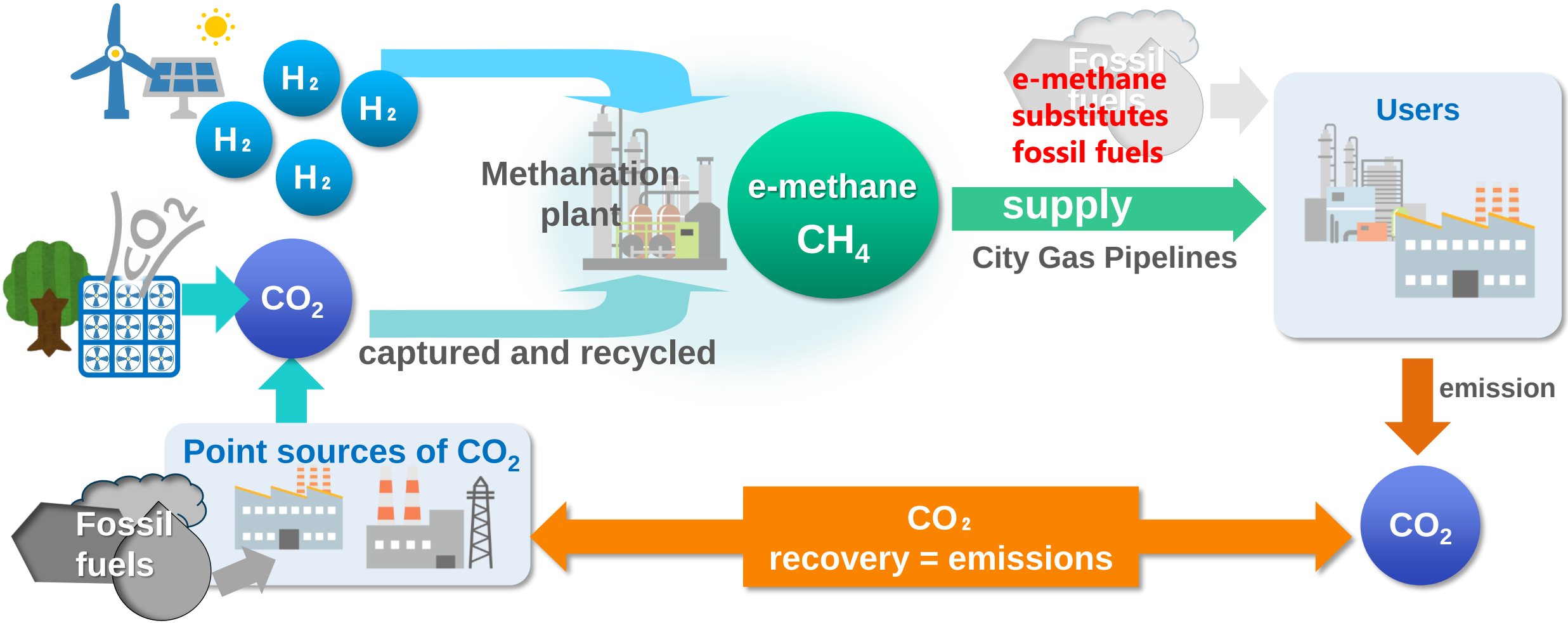




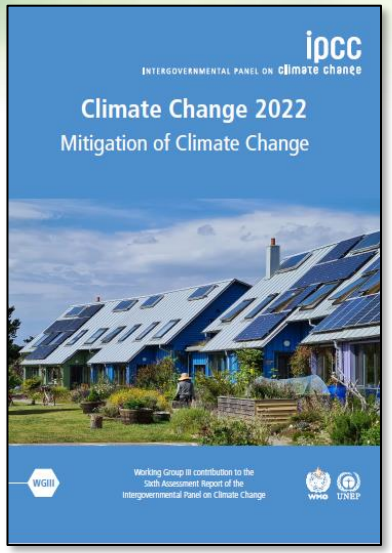
**Japan's city gas industry is now facing a new challenge to meet the target.**

# Methanation and e-methane – Concept of carbon recycling

- Focusing on methanation, as key technology to convert fossil methane, major feedstock of city gas, into non-fossil one.
- Production process combining captured $CO_2$ together with hydrogen. Synthesized methane is called “e-methane”.
- $CO_2$ emitted from e-methane combustion is originally captured $CO_2$ from exhaust flue gases, biogases, and/or atmosphere, it does not increase $CO_2$ in the atmosphere.



# IPCC and G7, support e-fuels and e-methane, contribute GHG emission reduction as RCFs




## IPCC 6th Assessment Report Mitigation of Climate Change 2022.4　Chapter 6.4.4.1（P.656）

**Power to fuels (PtX)** (see also Section 6.4.3.1).
The process of using electricity to generate a gaseous fuel, such as hydrogen or ammonia, is termed power-to-gas (PtG/P2G) (IEA 2020h). When injected into the existing gas infrastructure (Section 6.4.5), it has the added benefit of decarbonising gas (Brandon et al. 2015). Electricity can be used to generate hydrogen, which is then converted back into electricity using combined-cycle gas turbines that have been converted to run on hydrogen. For greater compatibility with existing gas systems and appliances, the hydrogen can be combined with captured carbon dioxide to form methane and other synthetic fuels (Thema et al. 2019),

https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_FullReport.pdf


Sapporo

G7 Climate, Energy and Environment Ministers' Communiqué

Sapporo, April 16, 2023

We, the G7 Ministers of Climate, Energy and the Environment, met on 15th - 16th April 2023 in Sapporo.

We condemn Russia's illegal, unjustifiable, and unprovoked war of aggression against Ukraine, violation of the Charter of the United Nations (UN) and disregard to the impacts that its war is having on people worldwide. We condemn Russia's attempts to use energy and food as tools of geopolitical coercion and reiterate our commitment to supporting those most affected by Russia's weaponization of energy and food. We are deeply concerned about the devastating impacts of Russia's war of aggression against Ukraine including on the environment, provoking an unprecedented global energy crisis characterized by high-energy prices, market volatility and disruptions to energy supply; inflation causing real economic impacts on people's lives; a spike in the world's grain and fertilizer prices which increased food insecurity and malnutrition. We stand ready to support the sustainable and resilient recovery and green reconstruction of Ukraine, including by sharing our experience, knowledge and expertise regarding war-related debris and pollution management, ecosystem and water systems restoration, replanting of forests and shelterbelts, decontamination of mined forests and lands, restoration of the protected wetlands and marine areas impacted by the war. We will continue to help Ukraine repair and restore its critical energy and environmental infrastructure deliberately destroyed by Russia, and emphasize our strong support for the creation of clean and resilient energy infrastructure in Ukraine.

I. Climate, Energy, and Environment Joint Section

1. **Global challenges we face:** We are facing the unprecedented triple global crisis of climate change, biodiversity loss and pollution that are mutually reinforcing and intrinsically linked, as well as an ongoing global energy crisis of unprecedented scale which has worsened economic and social disruptions, health threats and environmental damage, including those caused or exacerbated by Russia's war of aggression against Ukraine. Consequences of these challenges are already negatively impacting many regions and countries. To address these challenges through multilateral cooperation, we are steadfast in our commitment to the Paris Agreement, keeping a limit of 1.5 °C global temperature rise within reach through scaled up action in this critical decade, and to the full, swift and effective implementation of the historic Kunming-Montreal Global Biodiversity Framework (GBF) adopted at the 15th Conference of the Parties to the Convention on Biological Diversity (CBD-COP15) with its mission to halt and reverse biodiversity loss by 2030, and welcome the landmark international legally binding instrument on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ). Recognizing the current global energy crisis and economic disruptions, we reaffirm our commitment to accelerating the clean energy transition to net-zero greenhouse gas (GHG) emissions by 2050 at the latest and recognize the importance of

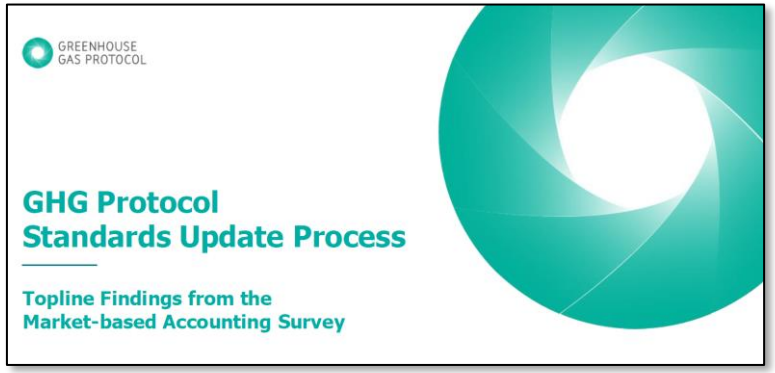
## G7 Climate Energy and Environment Ministers Communiqué 2023　2023.4　（P.26）


**68. Carbon Management:**
….Utilization(CCU)/carbon recycling technologies, including recycled carbon fuels and gas (RCFs) such as e-fuels and e-methane, also can reduce emissions with existing infrastructure from industrial sources that cannot be avoided otherwise by displacing fossil-derived commodities and by using $CO_2$.

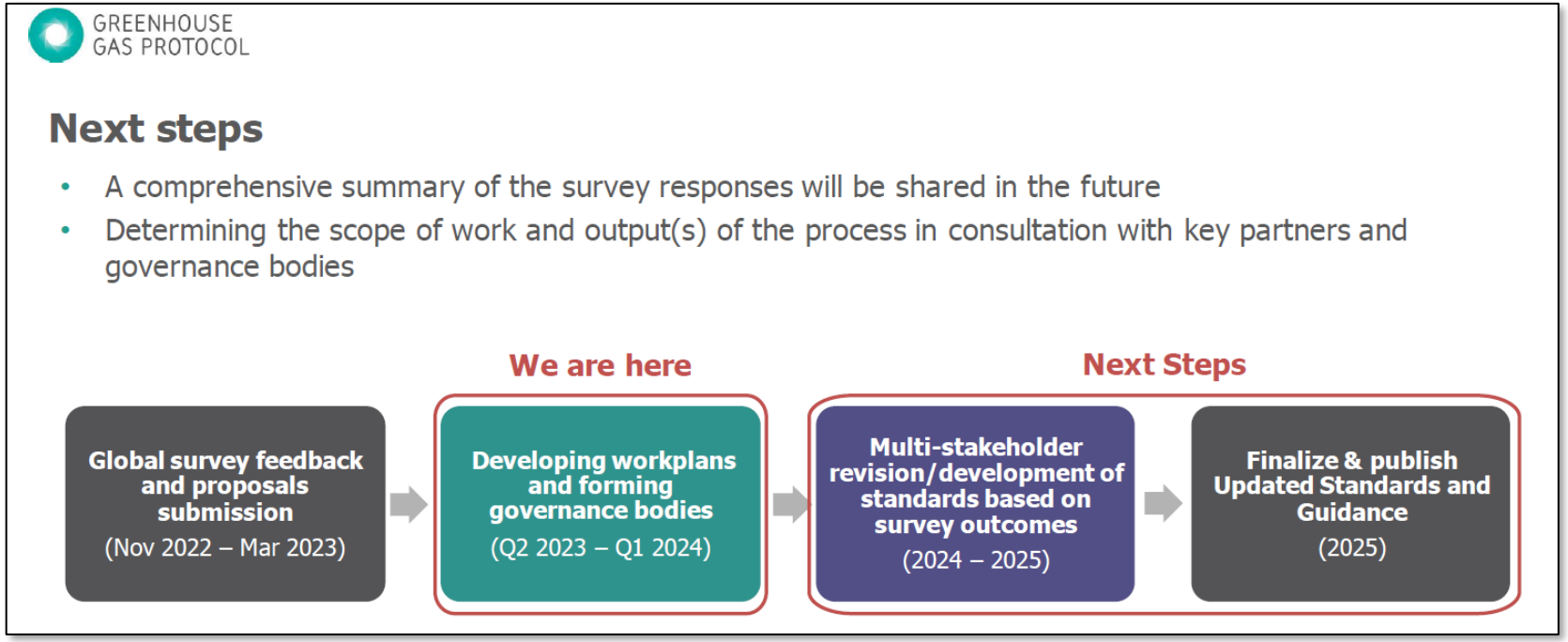
https://www.meti.go.jp/english/press/2023/0417_002.html

# Interest in GHG Protocol Standards and Guidance Update Process

- **The Japan Gas Association is very interested in the GHG Protocol standards and guidance update process that is announced to be done between 2024 and 2025. In March this year, we responded to the GHGP's global survey.**
- **Hoping that the GHG Protocol update and additional standards will ensure transfer of environmental value attributes through certificates and other means, and will be properly included in SCOPE 1 and SCOPE 3 inventory accounting. It would accelerate the recycled carbon fuels such as e-methane as well as biomethane.**



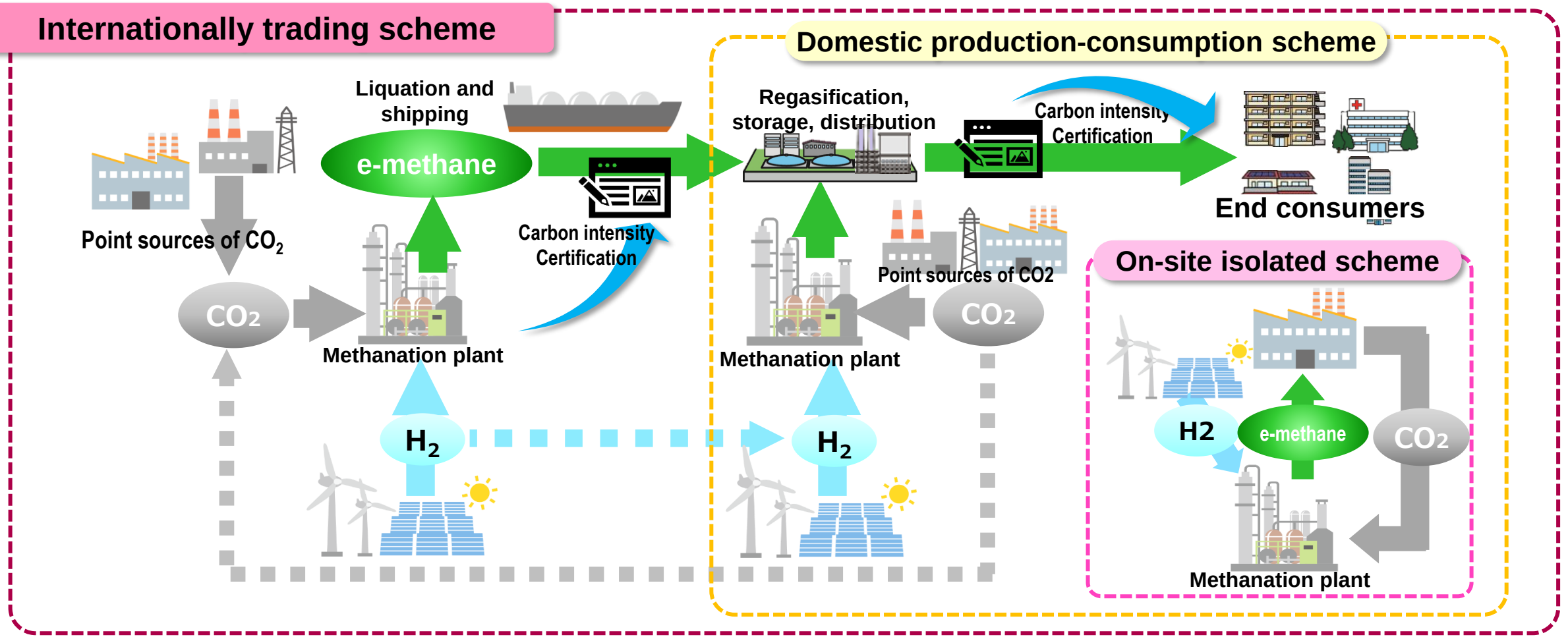

Sourece: GHG Protocol website, Topline Findings from Market-based Accounting Approaches Feedback, Oct 3, 2023




**Learning about GHG Protocol's update process is very important for our next action.**

# Image of environmental attributes transfer in the e-methane supply chain

- JGA is currently preparing for a scheme to certify the environmental attributes of biomethane and e-methane. Currently this is in the middle of a pilot test in Japan.
- Harmonizing internationally accepted methodologies enabling environmental attribute accounting and transferring is needed, which would contribute more introduction of recycled carbon fuels such as e-methane as well as biomethane.



# Thank you very much.