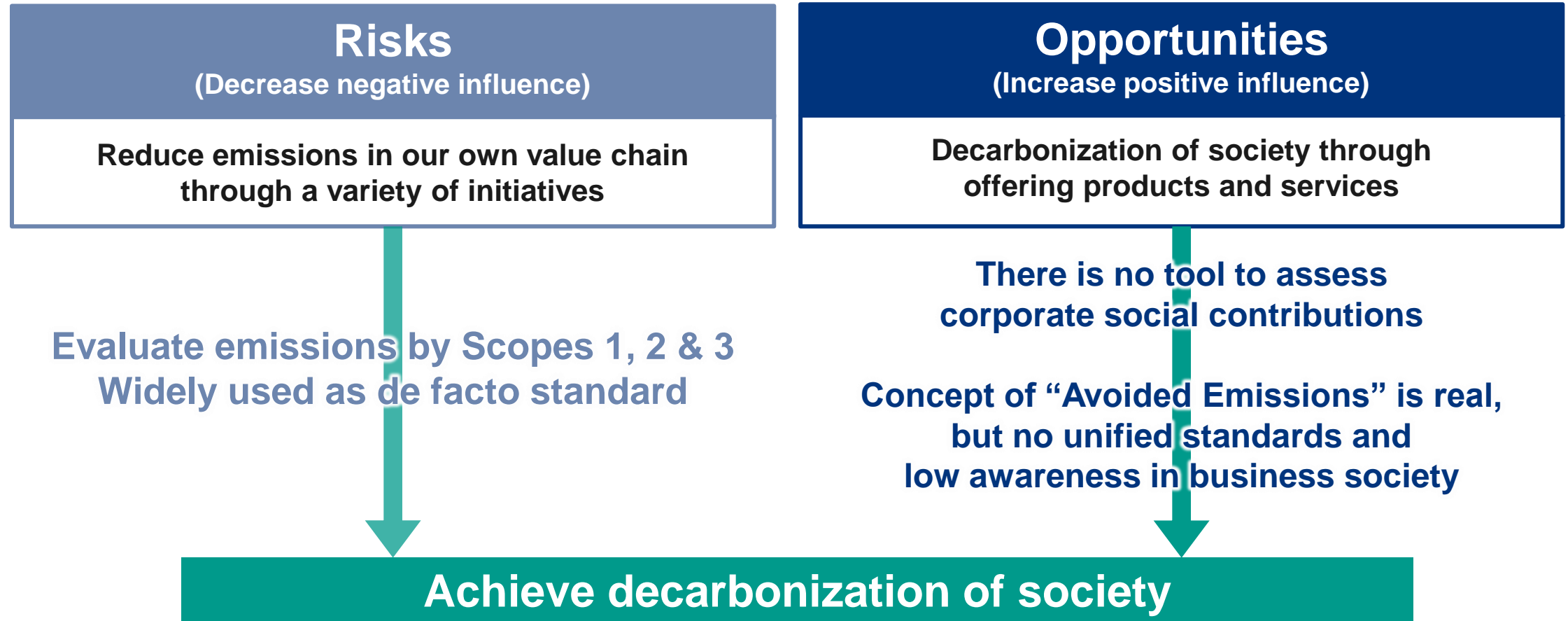


Promotion of 「Avoided Emissions」

July 23, 2024

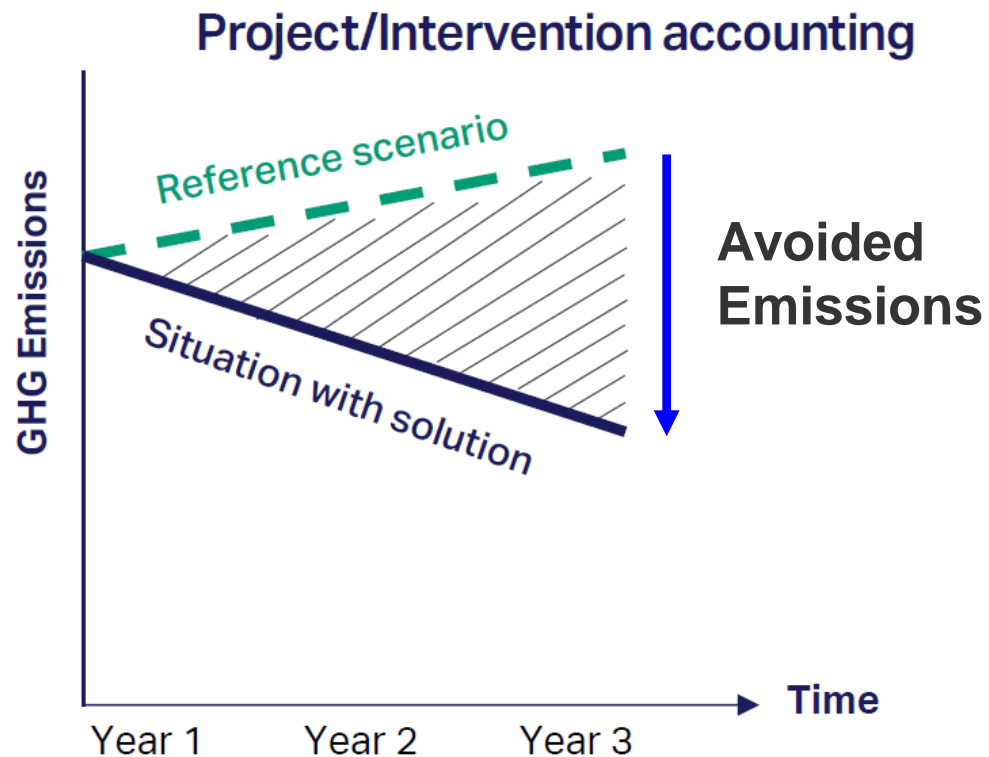
Panasonic Holdings Corporation

Toward decarbonization of society



Not only reducing risks through business activities but also pursuing positive opportunities will accelerate decarbonization of society

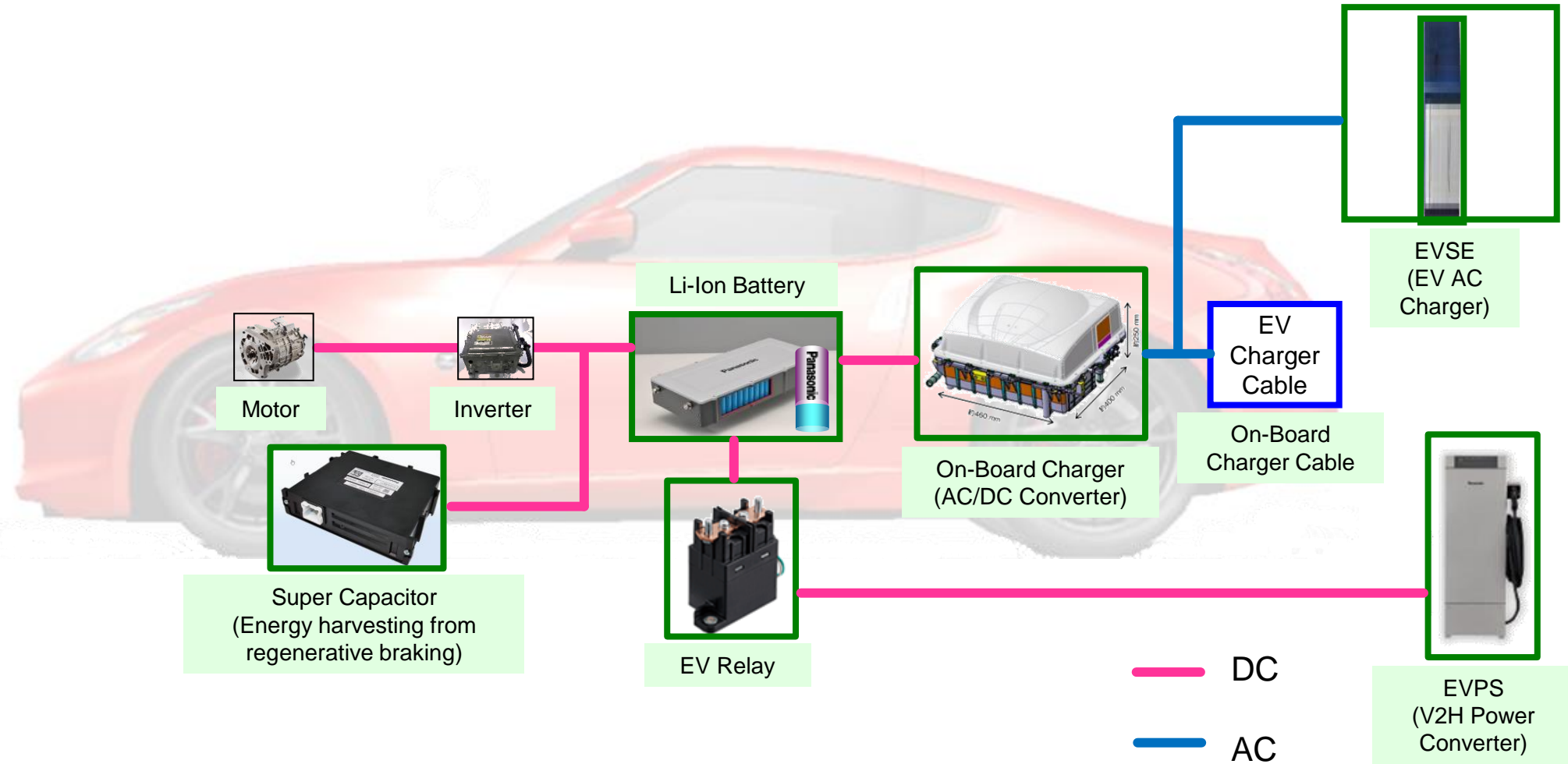
What is “Avoided Emissions” ?



“Avoided emissions” are defined as the **positive impact** on society when comparing the GHG impact of a solution to an alternative reference scenario where the solution would not be used.

Major key components for EV

- There are many key devices other than Li-Ion batteries that build up EV.
- To realize real CN for EV, efforts to reduce emissions throughout the **entire supply chain** are necessary



Activities to raise awareness of Avoided Emissions (after the 5th CEFIA in August 2023)

<5th CEFIA Government-Private Forum @Bali Indonesia, August 2023>

Why is "Avoided emissions" not recognized by society?

Doubt Green Wash

- ① Less awareness, ② No global Standards, ③ No global Operational guidance,
④ No use cases, ⑤ No evaluation index for financial institutions

Progress after last CEFIA

① Dissemination at International events

GGX × TCFD Summit, COP28 UAE, Consumer Electronics Show (US)



② IEC (International Electrotechnical Commission) international standardization

Plan to publish in 1Q, 2025 (IEC / ISO)



③ Cooperation between GX League (METI) and WBCSD (World Business Council for Sustainable Development)

Close discussions at GX League Financial Institutions Case Study (published at COP 28 UAE).

Working with GX League in WBCSD Insight



④ Disclosure of Avoided Emissions proactively

GX League (Financial Institution Case Studies, Hypothetical Cases), Working with WBCSD



⑤ Cooperation with Financial Institutions and Rating Agencies

Dialogue with companies and organizations utilizing GX League and its network



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① Dissemination at international events



Tokyo, 2023



Executive Officer
Hirotoshi Uehara



COP28 Japan Pavilion



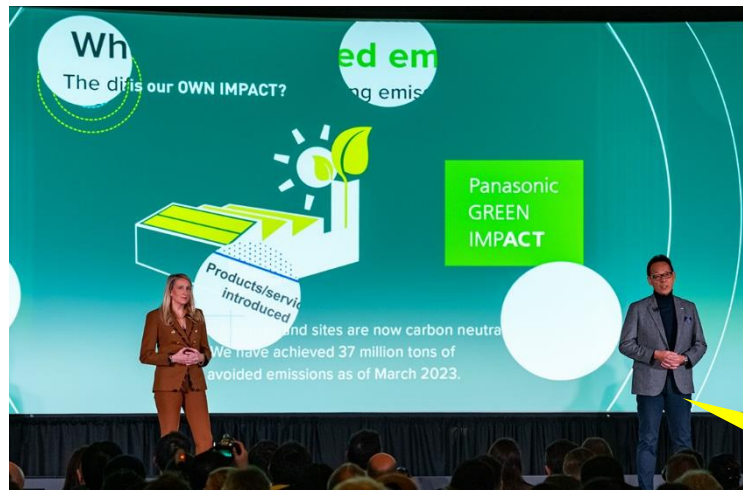
Tech for Transition

Group CEO
Yuki Kusumi



Appropriate Evaluation
of Avoided Emissions
toward a Net-Zero Society

Executive Officer
Hirotoshi Uehara



Press Conference
Panasonic GREEN IMPACT
Avoided Emissions

Executive Officer
Hirotoshi Uehara



COP28 China Pavilion

Digitalization for Carbon
Neutrality Standards and
Accounting

Director
Shoji Kusumoto

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② IEC (International Electrotechnical Commission) international standardization

◆ International standardization : IEC International Electrotechnical Commission

- Work to expand the scope of influence and influence by promoting **ISO standardization**
- Strengthen **case studies and operational rules** through collaboration among global companies to complement the effectiveness of international standards

◆ IEC TC111 WG17, **Japanese proposal**

- Project Leader : Mrs. Takako HIRUTA, Schneider Electric, Japan
- **Avoided Emissions** from electric and electronic products and systems
→ **Principles, methodologies, requirements and guidance**
- **Aim to issue in fiscal 2024**

◆ Cooperate with **GX League (METI)** and **ISO standardization**

		111/714A/CD	
COMMITTEE DRAFT (CD)			
PROJECT NUMBER: IEC 63372 ED1			
DATE OF CIRCULATION: 2023-07-21		CLOSING DATE FOR COMMENTS: 2023-09-08	
SUPERSEDES DOCUMENTS: 111/668/CD, 111/712/CC			
IEC TC 111 : ENVIRONMENTAL STANDARDIZATION FOR ELECTRICAL AND ELECTRONIC PRODUCTS AND SYSTEMS			
SECRETARIAT: Italy		SECRETARY: Mr Alfonso Sturchio	
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 17, SC 21A, SC 22H, TC 105, TC 120, TC 121		PROPOSED HORIZONTAL STANDARD: <input checked="" type="checkbox"/> Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.	
FUNCTIONS CONCERNED: <input type="checkbox"/> EMC <input checked="" type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input type="checkbox"/> SAFETY			
This document is still under study and subject to change. It should not be used for reference purposes.			
Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.			
Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE AC/22/2007 OR NEW GUIDANCE DOC).			
TITLE: Quantification and communication of Carbon FootPRINT and GHG emission reductions/avoided emissions from electric and electronic products and systems – Principles, methodologies, requirements and guidance			

Activities to raise awareness of Avoided Emissions (after the 5th CEFIA in August 2023)

<5th CEFIA Government-Private Forum @Bali Indonesia, August 2023>

Why is "Avoided emissions" not recognized by society?

Doubt Green Wash

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Progress after last CEFIA

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④ Disclosure of Avoided Emissions proactively

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⑤ Cooperation with Financial Institutions and Rating Agencies

Dialogue with companies and organizations utilizing GX League and its network



③ Cooperation between GX League (METI) and WBCSD

◆ Close discussions at GX League Financial Institutions Case Study (published at COP 28 UAE)

December 3, 2023, METI and WBCSD cosponsored an event "Appropriate Evaluation of Avoided Emissions toward a Net-Zero Society" at the Japan Pavilion, COP28 UAE, "Leveraging Avoided Emissions : Financial Institutions Case Studies"



These case studies was published in cooperation with WBCSD through continuous discussions and collaboration.



WBCSD Executive VP Mr. Dominic Waughray



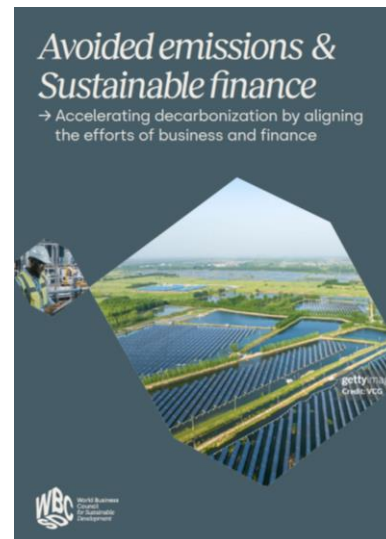
METI Deputy Director-General Mr. Izuru Kobayashi

◆ Working with the GX League in WBCSD Insight Paper

Alignment across business and financial sectors are essential to accelerate decarbonized society

WBCSD teamed up with leading financial actors GFANZ, PCAF, Circularity Capital, and GX League to develop this insight paper and strengthen the links between avoided emissions and transition finance.

Working Group in GX League welcomes this Insight Paper. Avoided Emissions play a pivotal role in assessing corporate contributions to GHG reduction efforts, showcasing a company's prowess in addressing challenges. We are committed to continue collaborating with WBCSD.



Accelerating decarbonization by aligning the efforts of business and finance



Activities to raise awareness of Avoided Emissions (after the 5th CEFIA in August 2023)

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④ Disclosure of Avoided Emissions proactively

GX League (Financial Institution Case Studies, Hypothetical Cases), Working with WBCSD



⑤ Cooperation with Financial Institutions and Rating Agencies

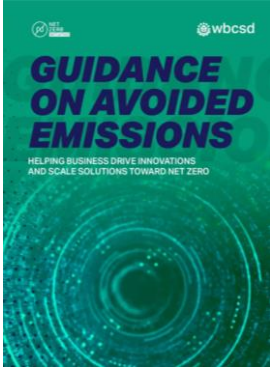
Dialogue with companies and organizations utilizing GX League and its network



④ Disclosure of Avoided Emissions proactively

Utilizing Avoided Emissions in the Financial Institution

WBCSD
Guidance on
Avoided
Emissions



Reflect

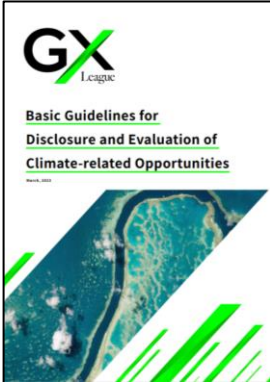
Reflect standardization

Sustainability Data Book 2023, Panasonic Group
Disclose calculation formulas in six business areas as representative examples

Value chain	Business
Products	Heat Pump
	Replacement with energy-saving products
	Home Delivery Communication Box
Parts	Cylindrical rechargeable batteries for electric vehicles (EV)
	Vacuum Insulated Glass
System	Heat Exchange System



Basic of
Evaluation and
Disclosure
Opportunities



Reflect

Annex B
Use cases

IEC
IEC63372
International Standard
(Avoided Emissions)
Plan to publish in 1Q, 2025
Electrical and Electronics

IEC
IEC63372
International Standard
(Avoided Emissions)
Plan to publish in 1Q, 2025
Electrical and Electronics

- Avoided emissions can be identify green enabler and its growth that can contribute to CO2 emissions reduction in the society.
- Panasonic managed to disclose transparently, together with calculation method.

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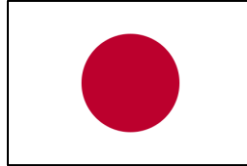
⑤ Cooperation with Financial Institutions and Rating Agencies

We are promoting “Avoided Emissions” to them and discussing



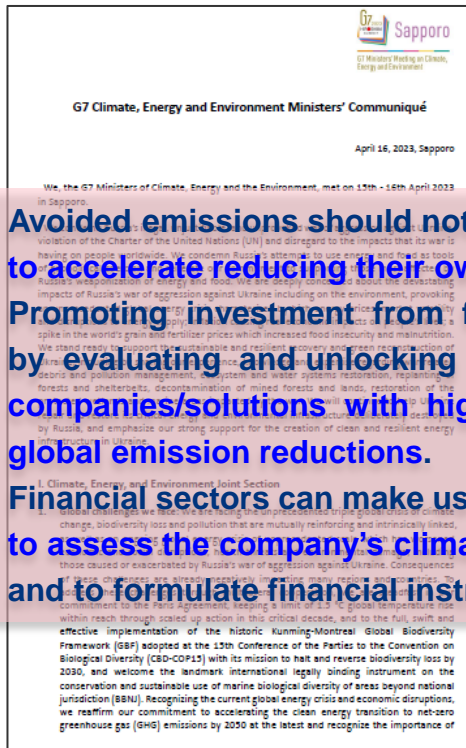
Climate, Energy and Environment Ministers' Meeting Communiqué (Sapporo '23 and Torino '24)

2023



G7 Climate, Energy and Environment Ministers' Communiqué

Conclusions regarding the Industrial Decarbonization Agenda



- **Avoided emissions should not lead to discouraging companies to accelerate reducing their own SCOPE1-3 emissions**
- **Promoting investment from financial sectors by evaluating and unlocking the value from companies/solutions with high contribution to global emission reductions.**
- **Financial sectors can make use of this information to assess the company's climate-related opportunities and to formulate financial instruments for promoting investment.**

2024



We call upon IEA and the OECD in collaboration with other international organizations such as IRENA to continue their works on industrial decarbonization to advance industrial transitions through improved tracking, benchmarking and potential standards, taking into account the development of new technologies, for the decarbonization of hard to abate sectors.

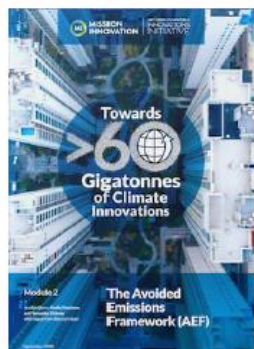
We commit to:

- i. follow up and develop the works of G7 Industrial Decarbonisation Agenda (IDA), including policy toolbox, standards and definitions for industry transition, global data collection framework for steel production and product emissions and appropriate evaluation of avoided emissions. In this sense we actively engage in and contribute to ongoing international work and multilateral initiatives for evaluation mechanisms, certification schemes, international standards, including emission measurement methodologies and common definitions for low and near zero-emissions materials;
- ii. pursuing efforts to accelerate the reduction of emissions with a view of their phasing out in the hard-to-abate sectors inter alia from energy intensive facilities as soon as possible, especially by developing and scaling-up low and near zero technologies such as those in the IEA's net-zero roadmap in line with decarbonization pathways. We call on all advanced economies and G20 members to equally take appropriate steps;
- iii. adopt policy measures to drive demand for low and near zero-emission materials, such as low and near zero-emission steel, cement, concrete, chemicals, aluminium, glass and renewable and low-carbon fuels, also through the work of existing sectorial multilateral initiatives;
- iv. promote the adoption of innovative solutions in regulation, business models and market operations for industries decarbonization;
- v. to advance projects to significantly scale-up carbon management, noting the IEA NZE Scenario. We further commit to striving for best practice in CCUS projects including by ensuring the vast majority of emissions are captured;
- vi. cooperate on promoting a free and fair international economic system and international consistency of methodologies to measure embedded emissions, including measures to address carbon leakage and have due regard to relevant international standards, where they exist, when considering carbon leakage measures;
- vii. promote and facilitate the scale-up of investments in the industrial sector for innovative technologies, smart clean electrification, improved energy efficiency, direct use of renewable heat, sustainable

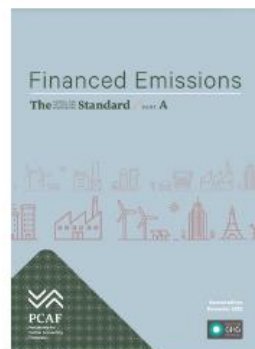
Avoided emissions spread to the Financial Ecosystem

In the past year, the concept of "avoided emission" has been rapidly propagated in the financial institutions as an evaluation metrix.

Example of a Report Citing, "Avoided Emissions"



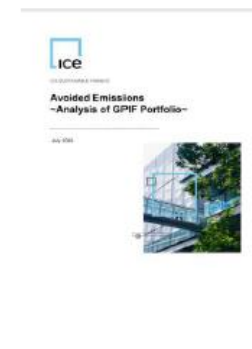
Mission Innovation
Clean energy public-private coalition



PCAF
Financial carbon accounting standards



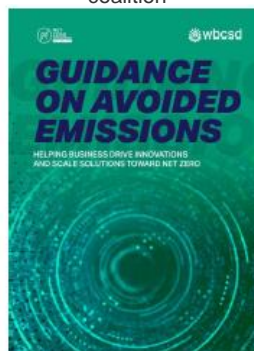
MSCI
Stock index company



GPIF/ICE (NYSE)
Pension funds and stock markets



IIGCC
Climate finance coalition



WBCSD
GHG protocol developer



GFANZ
Net-zero financial Union



Goldman Sachs
Investment bank



BCG
Management consulting



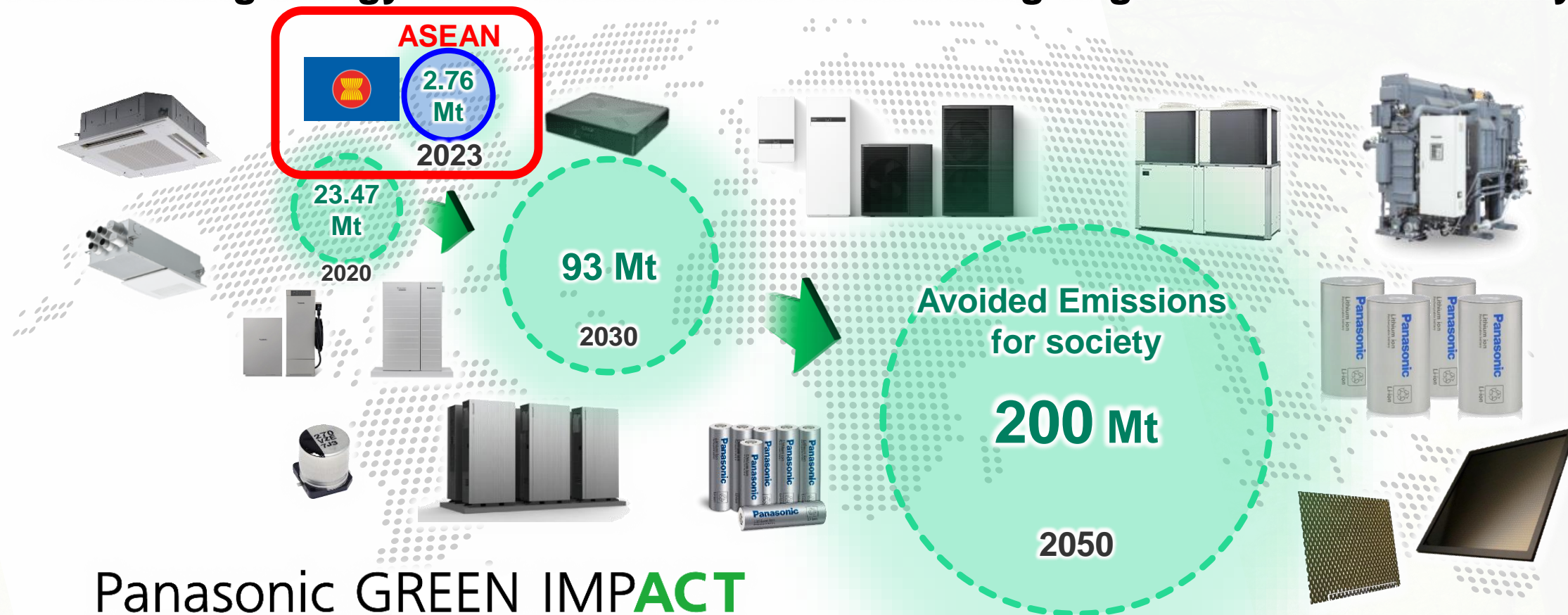
Verra
Carbon credits

PGI* is introduced as an example of goal setting using "Avoided Emissions".
*Panasonic GREEN IMPACT

<https://www.misolutionframework.net/history-of-avoided-emissions>

Expand volume of Avoided Emissions

Increasing Avoided Emissions in all business areas
Accelerating energy transformation and contributing to global carbon neutrality



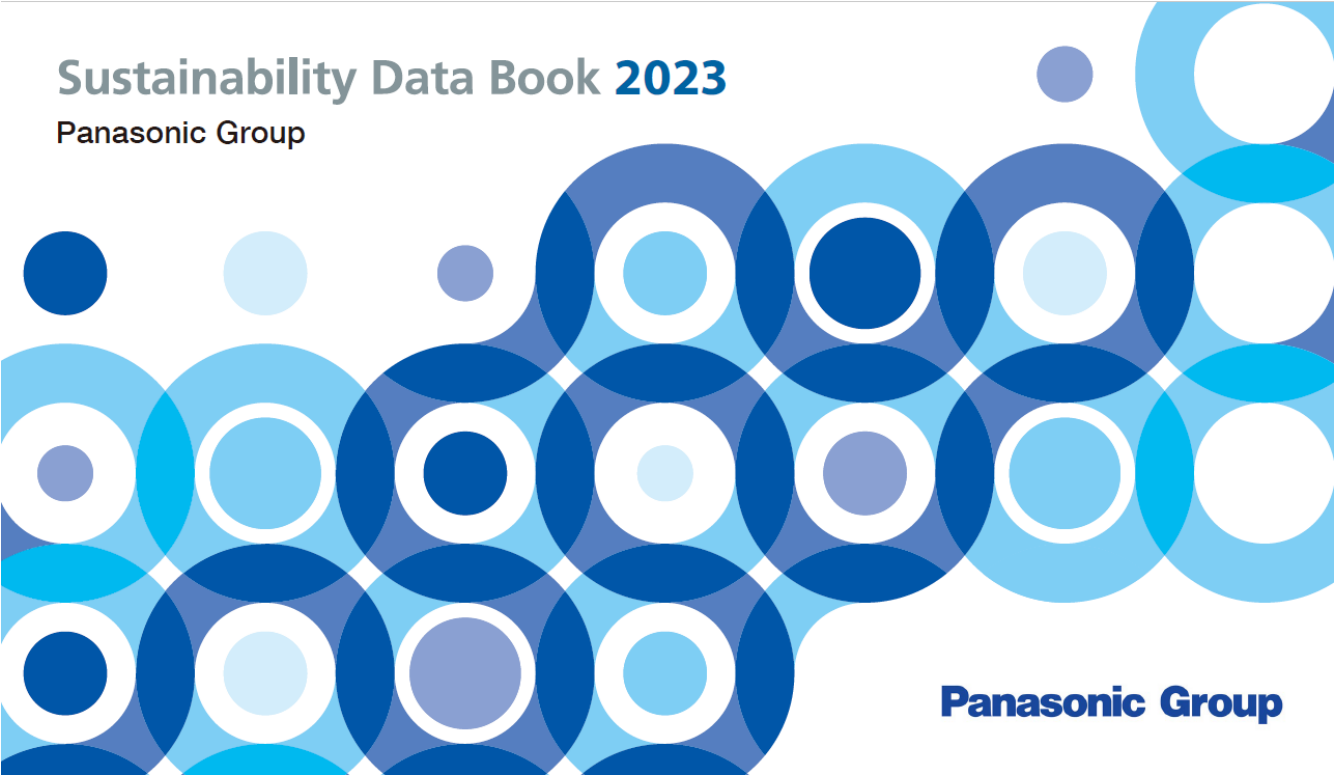
Panasonic GREEN IMPACT

Expand volume of Avoided Emissions and pursue “ideal society”
by addressing social problems through business

Sustainability Data Book 2023

Please look slide 14-22 with 6 examples of “Avoided Emissions”

Published as a communication tool to report on social and environmental initiatives and annual activities



↓ Download



Panasonic Group

以下、ご参考

Key Components for ZEH / ZEB (examples of Panasonic contributing to ZEH)

- Panasonic products contribute to “Create renewable energy“, “Air conditioning“, “Electrification“, “Energy conservation“ and “Energy management“, essential to ZEH.
- We calculate and disclose “Avoided Emissions“ → Contributing to spread of ZEH

