
アジアにおける脱炭素社会形成支援

Support to develop decarbonized society in Asia

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石炭からの卒業 - ネットゼロ排出へ: 日本とドイツの共通課題
“Beyond coal – Towards net-zero emissions:
A common challenge for Japan and Germany”
オンライン会合 / Online meeting
2020年12月18日 / December 18, 2020



Asia-Pacific Integrated Model
<http://www-iam.nies.go.jp/aim/index.html>



脱炭素社会に必要な取り組み

Necessary measures to realize decarbonized society

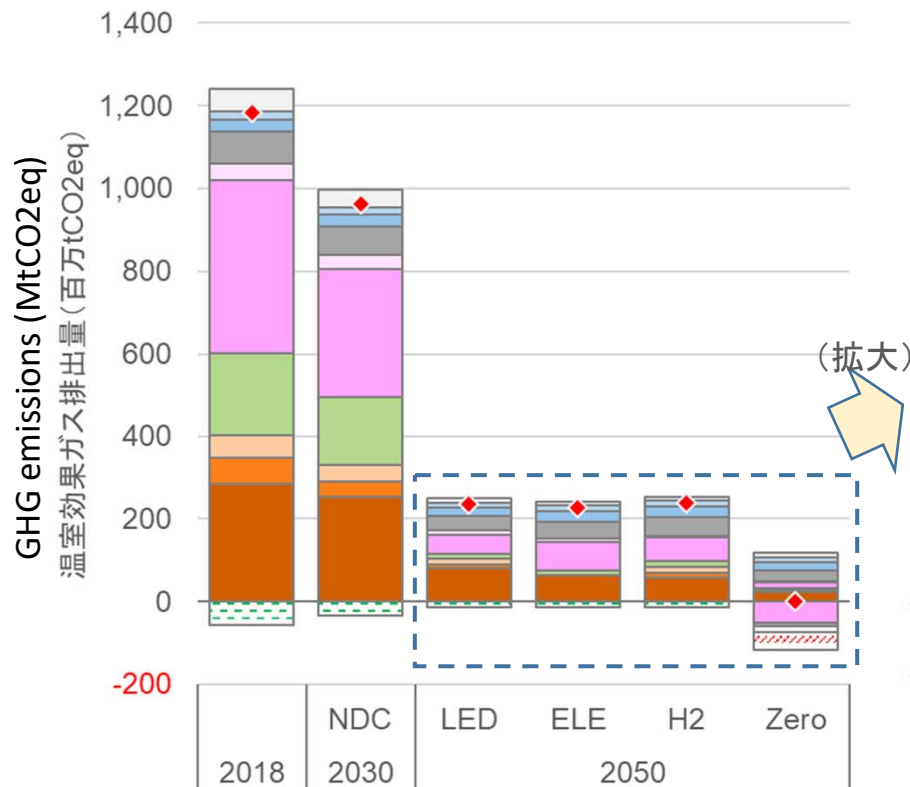
- 既存技術による省エネ
 - 電化
 - 脱炭素電源
 - 非エネCO2対策
 - 行動変容を含めた需要対策
 - ✓ 「節約」だけでない無駄の排除
 - ✓ 革新的な技術だけでなくソフトな取り組みも重要となる
 - 革新的な技術
 - 途上国での取り組み
- Energy saving using existing tech.
 - Electrification
 - Decarbonized power supply
 - Non-CO2 reduction
 - Demand side countermeasures including behavior change
 - ✓ Waste elimination
 - ✓ Not only hardware but also software
 - Innovative technologies
 - Support for developing countries

AIMモデルを用いた日本における2050年脱炭素社会の姿

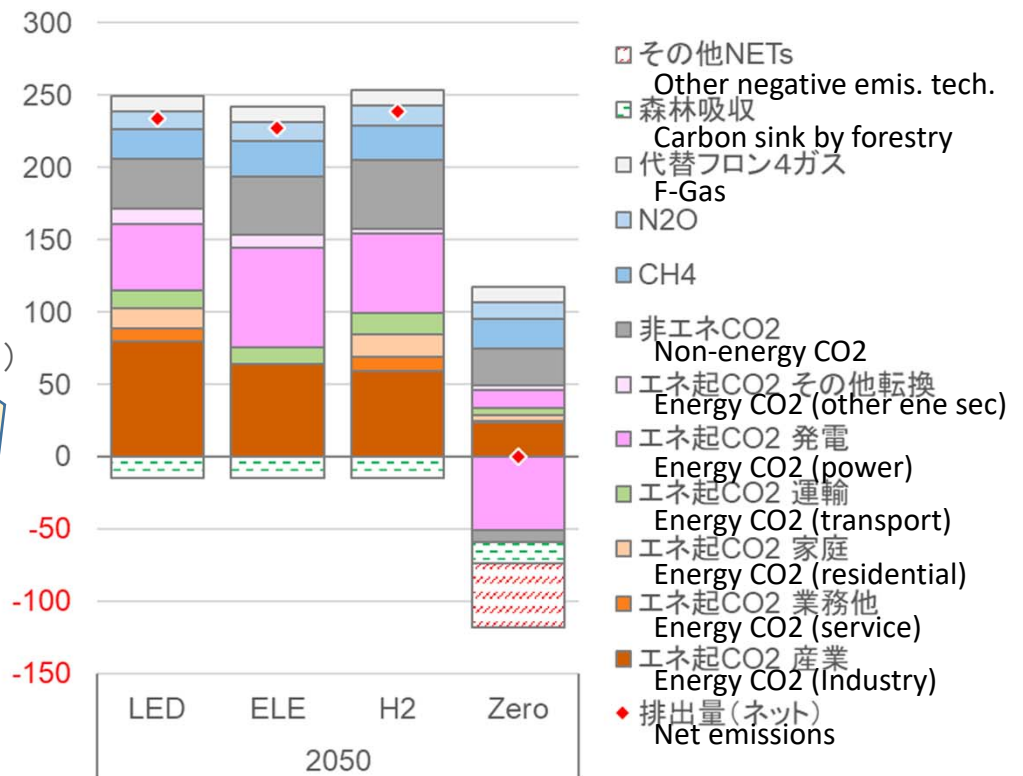
Tentative results to achieve net zero GHG emissions in Japan in 2050 using AIM (Asia-Pacific Integrated Model)

温室効果ガス排出量 GHG emissions

<部門排出別 温室効果ガス排出量>
<GHG emissions by sector>



<2050年 部門排出別 温室効果ガス排出量>
<GHG emission by sector in 2050>



注) Zeroシナリオにおいて、「エネ起CO2発電」「非エネCO2」がプラス・マイナスの両方に表れているのは、このシナリオでは発電と廃棄物焼却においてバイオマス起源CO2のCCUS(BECCS)を考慮していて、その分についてはマイナスで示しているためである。

詳細はhttps://www-iam.nies.go.jp/aim/index_j.htmlにおいて資料を公開しています。

Report in Japanese is opened at https://www-iam.nies.go.jp/aim/index_j.html.

目標は同じでも現状により経路は異なる。

Goal is common, but pathways are different.

- 最終的な到達点はどの国も同じ: 持続可能な社会

Final goal is common among countries: sustainable development

- ✓ SDGs (経済、社会、環境 economy, society, environment)
- ✓ GHG削減目標(脱炭素社会) GHG mitigation target (net zero GHG emission)

- 一方で道筋は国によって異なる。

But process/strategy may be different among countries;

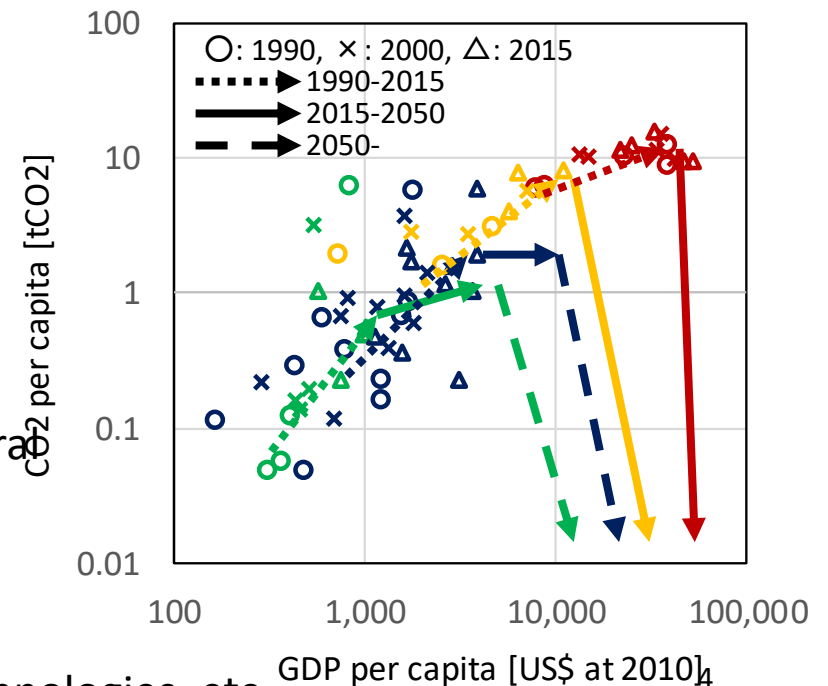
- ✓ 経済とCO2の観点から

Viewpoint of economy and CO2

- Japan, Korea, Taiwan
- China, Thailand, Malaysia
- Bhutan, India, Indonesia, Lao, Vietnam
- Cambodia, Nepal
- 国内でも都市と地方の格差是正などの課題
Correction of disparities between urban & rural

- ✓ その他の観点 Other viewpoints

- 資源や気候 Available resources, climate, ..
- 社会的状況(高齢化、技術水準など)
Social conditions such as aging, available technologies, etc



途上国支援では何が必要か？

What is needed to support developing countries?

- 中国では2060年脱炭素が示されたが、多くの途上国での取り組みはまだ十分ではない。
- 長期戦略を策定中で、GHG排出についてはピークアウトの議論が中心となる見込み。
 - ✓ いつGHG排出量がピークアウトを迎えるか？
 - ✓ ピークアウトを前倒しで実現するとどのような影響が生じるか？
 - ✓ NDCの深掘り
 - ✓ 日本での知見の共有
- GHG mitigation targets in most of developing countries are not enough.
- Existing discussion mainly focuses on "peak-out" rather than net-zero emission.
 - ✓ When will we achieve peak-out?
 - ✓ Which impact will happen if accelerated schedule of peak-out?
 - ✓ More ambitious NDC to meet peak-out.
 - ✓ Share knowledges in Japan

人材育成に向けた取り組み Capacity building

- 多くの途上国のNDCでは、先進国からの援助を期待。
Many developing countries hope supports from developed countries.
 - ✓ ハードの支援：技術移転
Hardware: technology transfer
 - ✓ ソフト(人材育成)の支援：自国の将来像を自国民で描くことが重要。
Software including capacity building:
It is important to draw future scenarios by domestic stakeholders.
- 国立環境研究所では、IGES等と連携して、ベトナム、タイ、インドネシア等を対象に長期戦略の策定を支援。
NIES has supported to develop long-term strategies for Vietnam, Thailand, Indonesia etc. with IGES.



<http://www.nies.go.jp/kanko/kankyogi/74/74.pdf>

ベトナム支援の例 第6回日越環境政策対話における共同閣僚声明

Joint Ministerial Statement: 6th Viet Nam - Japan Environmental Policy Dialogue

Joint Ministerial Statement
6th Viet Nam - Japan Environmental Policy Dialogue

The 6th Viet Nam - Japan Environmental Policy Dialogue between the Ministry of Natural Resources of Viet Nam and the Ministry of the Environment of Japan was organized virtually on 24th and 25th August 2020. Following is the summary of discussions of the meeting:

Session 1: Review on Progress of the Cooperation

1. Both sides welcomed the outcome of the cooperation between the two Ministries since the 5th Policy Dialogue and shared the progress of the cooperation in various areas within the framework of the dialogue, including in the Joint Credit Mechanism (JCM), Partnership to Strengthen Transparency for co-innovation (PaSTI), supporting climate adaptation plans for three provinces in Viet Nam, revision of Environmental Protection Law 2014, amongst others.

Session 2: Climate Change

2. Both sides shared the review of climate change measures after the adoption of Paris Agreement and confirmed commitment for continuous and enhanced cooperation in the areas of mitigation, transparency and adaptation.
3. Regarding mitigation, both sides agreed on comprehensive cooperation for advancing transition towards decarbonization in Viet Nam through introducing and/or updating policies, instruments, capacity building and diffusion of low-carbon and decarbonized technologies, including developing the long-term strategy and mainstreaming renewable energy by for instance utilizing AIM model.
4. Both sides welcomed the progress of renewing the bilateral document on the JCM and confirmed that the JCM continues to be an important mechanism in contributing to mitigation activities. Both sides also recognized the potential in utilizing the JCM for the achievement of SDGs and facilitating multilateral partnerships among the JCM partner countries and relevant stakeholders through the JCM Global Partnership.
5. Regarding transparency, both sides agreed to promote identification of specific activities in the Partnership to Strengthen Transparency for co-Innovation (PaSTI) and to cooperate in Long-term Strategy towards reducing emissions, and confirmed to discuss detailed activities.
6. Both sides also agreed on accelerating efforts to advance lifecycle management of fluorocarbons including continued engagement to global actions, such as the Initiative on Fluorocarbons Life Cycle Management, amongst others.
7. Recognizing the strategic importance of engaging cities in advancing decarbonization, both

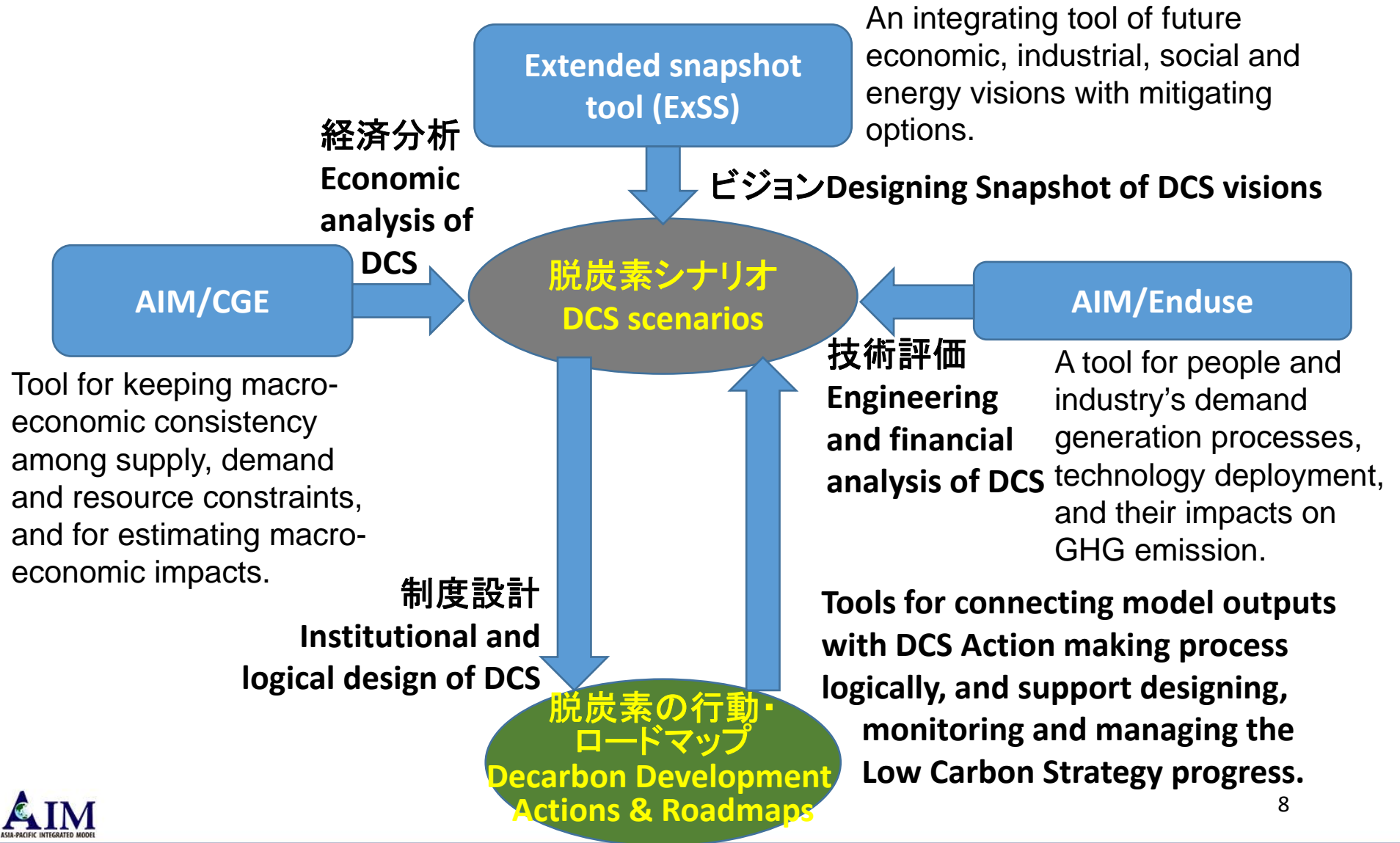
両省は緩和に関し、ベトナムにおける脱炭素化への移行を、政策、政策実施手段、能力構築、及び低炭素及び脱炭素化技術の導入や普及及び／またはアップデートを通じて前進させるための包括的協力に合意した。当該協力には、例えばAIMモデルを利用した長期戦略の策定と再生エネルギーの主流化を含む、

Regarding mitigation, both sides agreed on comprehensive cooperation for advancing transition towards decarbonization in Viet Nam through introducing and/or updating policies, instruments, capacity building and diffusion of low-carbon and decarbonized technologies, including developing the long-term strategy and mainstreaming renewable energy by for instance utilizing AIM model.

<https://www.env.go.jp/press/files/jp/114598.pdf>

社会・経済政策と脱炭素行動を整合させるツールの統合

How to combine the tools in order to keep consistency and unity among Socio-Economic policies and DCS actions



アジアの脱炭素社会実現に向けたシナリオアプローチ

Collaboration with Asian countries;
Scenario approach towards Decarbonized Society in Asia

