

Netherlands

オランダ

Break out session Energy transition, sustainability and circular economy





THE NETHERLANDS オランダ

Agenda

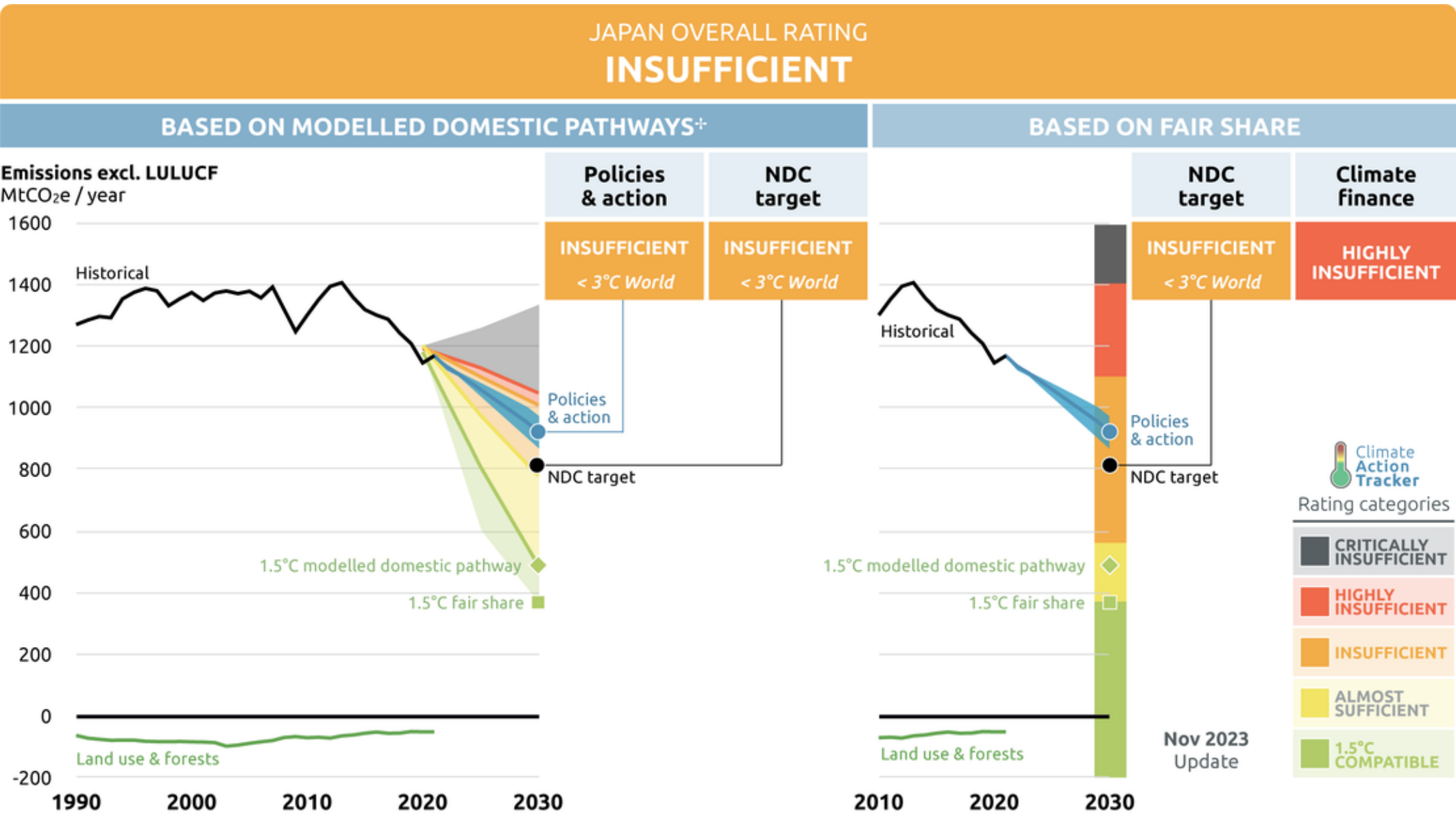


- 5 min: Opening by NL Embassy in Japan
- 10 min: Bilateral economic relations Japan - Netherlands
- 20 min: Draft program track Energy transition, sustainability and circular economy
- 10 min: Experiences from the field (Bronkhorst)
- 10 min: Next steps
- 20 min: Q&A



Bilateral economic relations Japan and the Netherlands

Introduction



Electricity generated/Power source mix in FY2030

| (billion kWh) | Electricity generated | Power source mix |
|------------------|-----------------------|------------------|
| Oil | 19 | 2% |
| Coal | 178 | 19% |
| LNG | 187 | 20% |
| Nuclear | 188-206 | 20-22% |
| Renewables | 336-353 | 36-38% |
| Hydrogen/Ammonia | 9 | 1% |
| Total | 934 | 100% |

(Note) Each figure is approximate and may not add up to the total figure due to rounding.

| (billion kWh) | Electricity generated | Power source mix |
|---------------|-----------------------|------------------|
| Photovoltaic | 129-146 | 14-16% |
| Wind | 51 | 5% |
| Geothermal | 11 | 1% |
| Hydro | 98 | 11% |
| Biomass | 47 | 5% |

(Note) All figures are approximate d based on the current estimation.

Doing business in Japan



Japanese economy:

- 4th largest economy
- Strong work ethics, high standards

Challenges:

- Declining population
- Labor shortage

Policy:

- Carbon Neutral in 2050
 - 46% reduction GHG in 2030 compared to 2013

- **Circular Economy**

- 87% plastic recycling, however 61% thermal recycling for energy recovery
- Built environment – relocation of pavilion
- Sustainable Carbon
- Public and private attention from JP to NL/EU

- **Energy transition**

- Energy saving/energy efficiency
- Green energy like hydrogen, solar and (off-shore) wind energy
- Biomass
- Heat and storage in built environment



Program track energy transition, sustainability and circular economy

Programming (5 tracks)

- > **Energy transition, sustainability and circular economy**
- > Agrifood and horticulture
- > Life sciences and health, incl. sports/vitality
- > High-tech & digitalisation
- > Culture



Theme week: The Future of Earth and biodiversity week – Overview



Themeweek EXPO: 17-28 sept 2025

World Smart Energy Week 17-19 sept 2025

Economic missions:

- | | |
|---|----------------------------------|
| • Hydrogen | 17-24 sept 2025 |
| • Offshore energy | 18-24 sept 2025 |
| • ATES (Aquifer Thermal Energy Storage) | 21-25 sept 2025 |
| • Circular Economy (circular building) | 21-25 sept 2025 |
| • Sustainable chemistry | tbd (prior to theme week) |

3-day program at pavilion: 22-24 sept to:

- Address crossover topics, such as **ecology** and **circular economy in the energy** transition
- Organise Satellite events on hydrogen and offshore possibly with other EU-countries
- Subtracks together at pavilion

Hydrogen: Trade mission



- Starting with extended PIB-cluster
- Attending World Smart Energy Week, World Hydrogen Summit
- Facing and tackling similar (common ground) challenges on hydrogen (import, carriers and cracking)
- **Goal:** MoU/G2G-meetings/manufacturing industry/business development
- **Target group:** manufacturers, producers and consumers of hydrogen

Looking forward: the outgoing mission to Japan



Takasago Hydrogen park:

MHI's hydrogen demo field



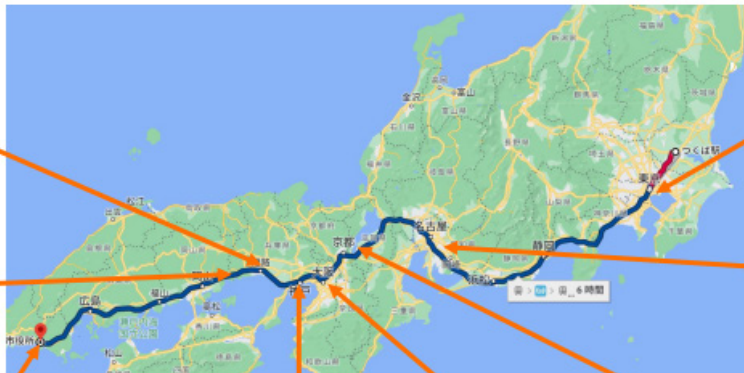
Aioi Ammonia field:

IHI's ammonia demo field



Shunan Industrial Complex:

Use of hydrogen and ammonia in chemical plant.



Kobe Hystra port:

Liquid hydrogen ship and bunkering, storage and power generation



Mitsui Chemical:

Use of ammonia in crackers and chemical processing



Osaka Gas:

Direct methanation



Kusatsu Panasonic:

Battery, Fuel cell, electrolysis testing field



Tokyo - FC Expo:

Exhibition and seminars



Nagoya Toyota:

Liquid hydrogen Corolla

Paint drying line



Offshore energy: Innovation mission



- Current SMM on offshore energy (2023-2026).
- Large offshore potential for Japan (challenges in supply chain & floating)
- **Goal:** Focus on future joint research & innovation programs, developing financing structures for R&D.
- **First step:** MoU on government level regarding joint R&D.
- **Topics:** Floating Wind, System integration
- **Crossover topics:** Ecology and Circular Economy.
- **Target group:** maritime industry, (engineering, design, and project) consultancies, knowledge institutes
- **Activities:** Attending World Smart Energy Week, offshore satellite event, matchmaking event, Crossover topics event



ATES (Aquifer Thermal Energy Storage): economic mission



- ATES for cooling/heating (Dutch: WKO): airco accounts for 50% of power consumption of built environment. NL has experience and expertise (+3000 installations)
- Large CO2 reduction potential with ATES + opportunities for collaboration

Opportunities:

- Consultancy, designing, technical support, materials, components and equipment.
- Ongoing ATES construction sites in Kansai region
→ main components of wells are imported from the NL (screen, casing, gravel, flange, socket).

Target group: Technical, manufacturing industry for ATES construction sites



Sustainable Chemistry: economic mission



- **Goal:** strengthen future cooperation between NL and JP on circular / sustainable chemistry – based on Sector Study, incoming missions and latest webinars.
- **Target group:** Chemical companies, knowledge-institutes and start/scale-ups active in the field of chemistry, biobased chemistry and/or sustainable chemistry.
- **Chemical recycling technology**
 - 87% plastic recycling, however 61% thermal recycling for energy recovery
 - Only 4% of Japan's waste plastics chemically recycled
 - Bioplastics
- **Electrification of processes**
 - Energy saving/energy efficiency
 - Green energy like hydrogen, solar and (off-shore) wind energy
 - Biomass
- **Carbon Capture, Utilization and Storage**
 - JP government financial support for seven CCS projects



Circular Economy: economic mission



- Large interest from Japan in Dutch CE practices.
- Focus on circular building, resulting from two incoming missions last year.
- **Goal:** Promote Dutch innovations and policies in the field of circular building and the re-use of building materials in Japan
- **Target group:** Parties in both public and private sector with an interest in circular building that wish to establish or strengthen bilateral cooperation with Japan (both from a commercial and a knowledge/innovation perspective).
- Activities regarding the re-use of the pavilion /re-use of materials in general.
- Involvement of both Japanese public and private-sector. Promote facilitation by Japanese public sector of circular building



NOM Innovation Challenge



- Cooperation between Japanese companies, located in the NL and Dutch solution providers for sustainability
- Examples to be smart and circular:
 - Water technology
 - Autonomous systems
 - Recycling and use of waste streams
- Goal:
 - Showing Dutch solutions to become an innovative front runner
 - Providing opportunities for Dutch solution providers to cooperate internationally
 - Showing smart R&D solutions for clean production at the Expo
 - Stimulating cooperation between Japanese and Dutch companies

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Road 2 Osaka

Road 2 Osaka



| Date | Activity |
|----------------|--|
| May 13 2024 | Mission to NL to World Hydrogen Summit |
| May 24 2024 | Online workshop ATES |
| May 27 2024 | Online workshop Sustainable Chemistry |
| June 10 2024 | Online workshop Sustainable Chemistry |
| September 2024 | Mission to JP on ATES |
| October 2024 | Smart Energy Week (Tokyo/Makuhari) |
| November 2024 | CE Specialist visit to Japan |
| November 2024 | Smart Energy Week (Osaka) |
| December 2024 | ATES Specialist visit to Japan |
| May 2025 | World Hydrogen Summit |
| Summer 2025 | Economic mission Sustainable Chemistry |
| September 2025 | Future of Earth Biodiversity Week |

Experiences from the field: Doing business in Japan (PIB-hydrogen)

Fergus van Beek - Bronkhorst





Doing business in Japan

FERGUS VAN BEEK | JUNE 17TH, 2024 | NETHERLANDS



Bronkhorst & Fergus van Beek

Bronkhorst:

- Manufacturer of Low Flow Process Instrumentation – Mass Flow Controllers
- HQ in Ruurlo – The Netherlands
- Approx. 800 employees
- Top 5 player worldwide
- Active in Japan since 1983 – Bronkhorst Japan K.K. since 2006

Fergus van Beek:

- Executive Board – Marketing & Sales
- 30 years with Bronkhorst
- Travels to Japan: approx. 30 times
- ‘Founding father’ of Bronkhorst Japan K.K.



Doing Business in Japan

- Not as problematic as often published in books
- In the Business:
 - ◆ Strict hierarchy – frozen faces, low volume, slowly to the topic
 - ◆ Avoid face loss
 - ◆ Let them sleep
 - ◆ Take your time, but don't be late! (or early)
 - ◆ Be patient – very patient...
- Outside the business
 - ◆ Forget the rules!
 - ◆ Enjoy the food and beer, sake or sochu
 - ◆ Relationships are built here – and so is the business



Doing Business in Japan

- Dutch Embassy in Japan
- RVO
[Rijksdienst voor Ondernemend Nederland \(rvo.nl\)](https://www.rvo.nl)
- Fenetre
[Fenetre Partners | Market Entry into Japan](#)
- Fenedex
<http://www.fenedex.nl/>
- Rijksdienst voor Ondernemend Nederland
<http://www.rvo.nl/onderwerpen/internationaal-ondernemen>

Japan

THANK YOU FOR YOUR ATTENTION



Next steps

Next steps



- Detailed program will be determined during fall 2024.
- **If you are interested to join or to provide relevant input, please contact us**
- **Also if you are interested in sponsor opportunities at the Expo, please contact us or the Foreign Office**
- Starting after summer 2024 with detail programming for each mission

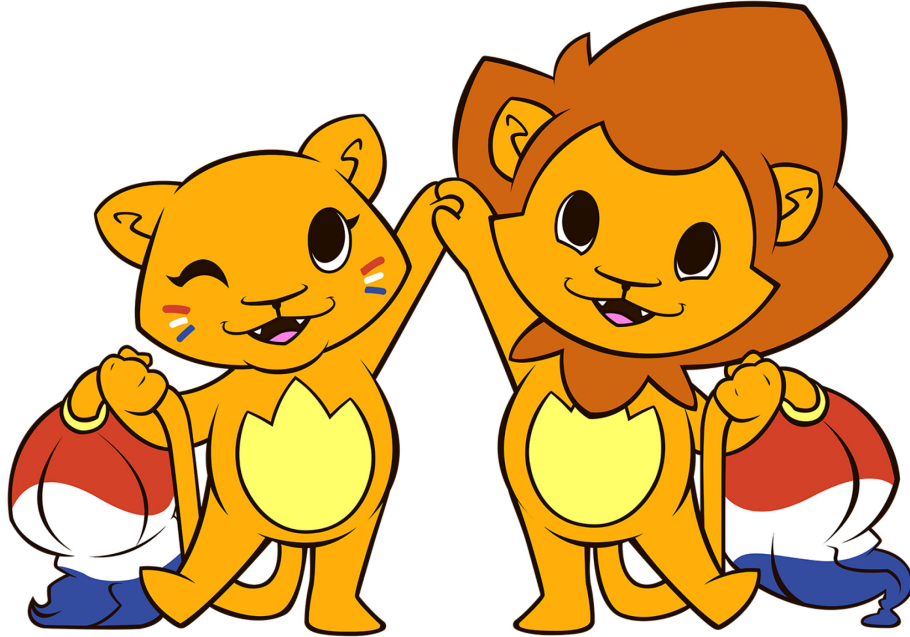


Q&A

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Thank you very much for
your time and presence



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