

Reform 2020

**Climate Neutral vs.
Carbon Neutral in the
context of Japan**

Aug. 24, 2020

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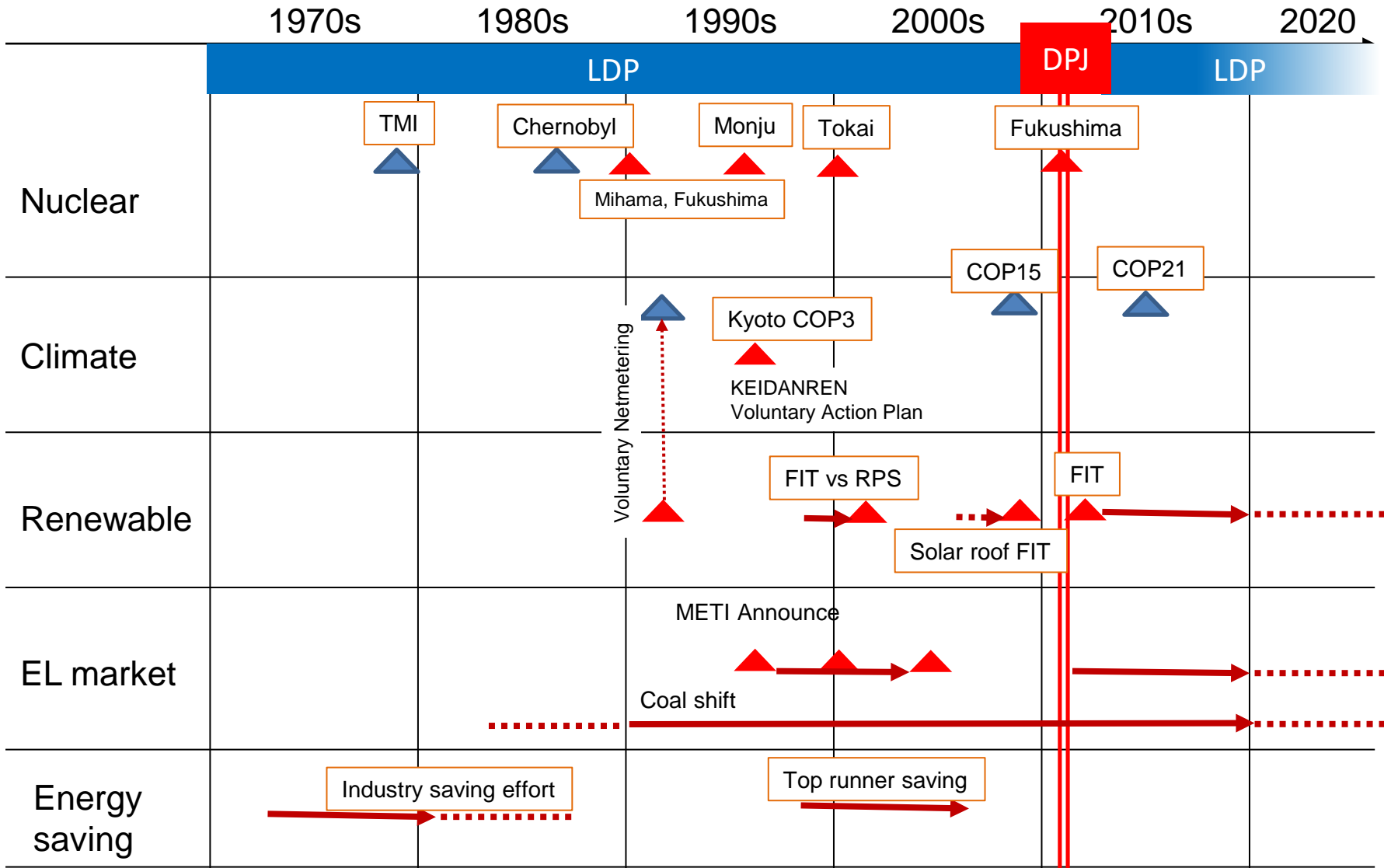
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Contents

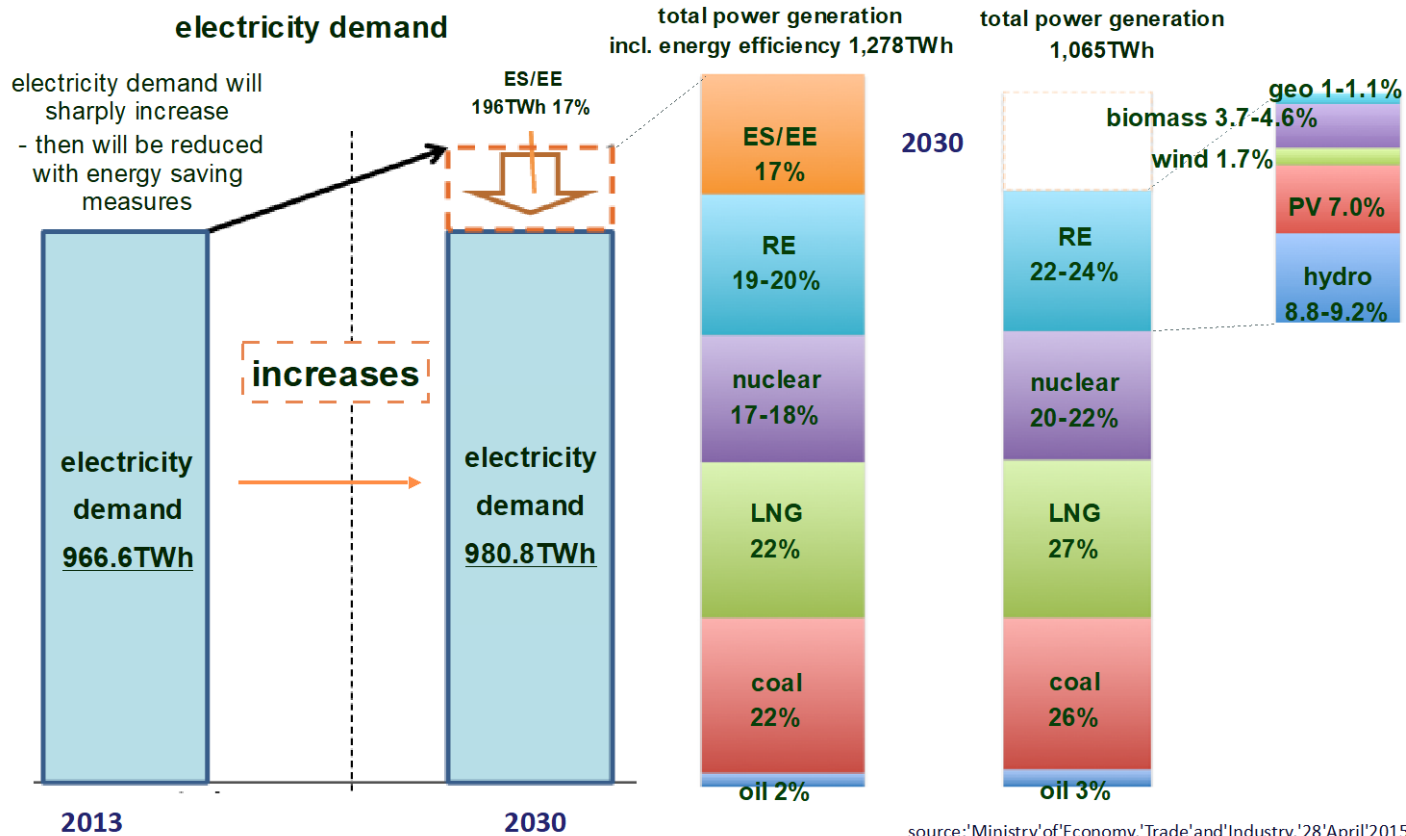
- 1. Current energy/climate policy**
- 2. New development**
- 3. CCUS**
- 4. Green Recovery/Green New Deal
Japanese Version**
- 5. Conclusion**

1. Current energy/climate policy

Climate/Energy/Political Environment



Planned energy mix in 2030 by the current Japanese Government



Unrealistic on nuclear and negative on renewables

International assessment of Japan's Climate Change Performance has been very low

Climate Change Performance Index

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
35/56	40/58	44/58	47/58	50/58	55/58	57/58	47/57	46/57	48/58

Source : <https://www.climate-change-performance-index/>

Latest ranking on coal transition

Coal transition progress ranking: OECD & EU28 (1)



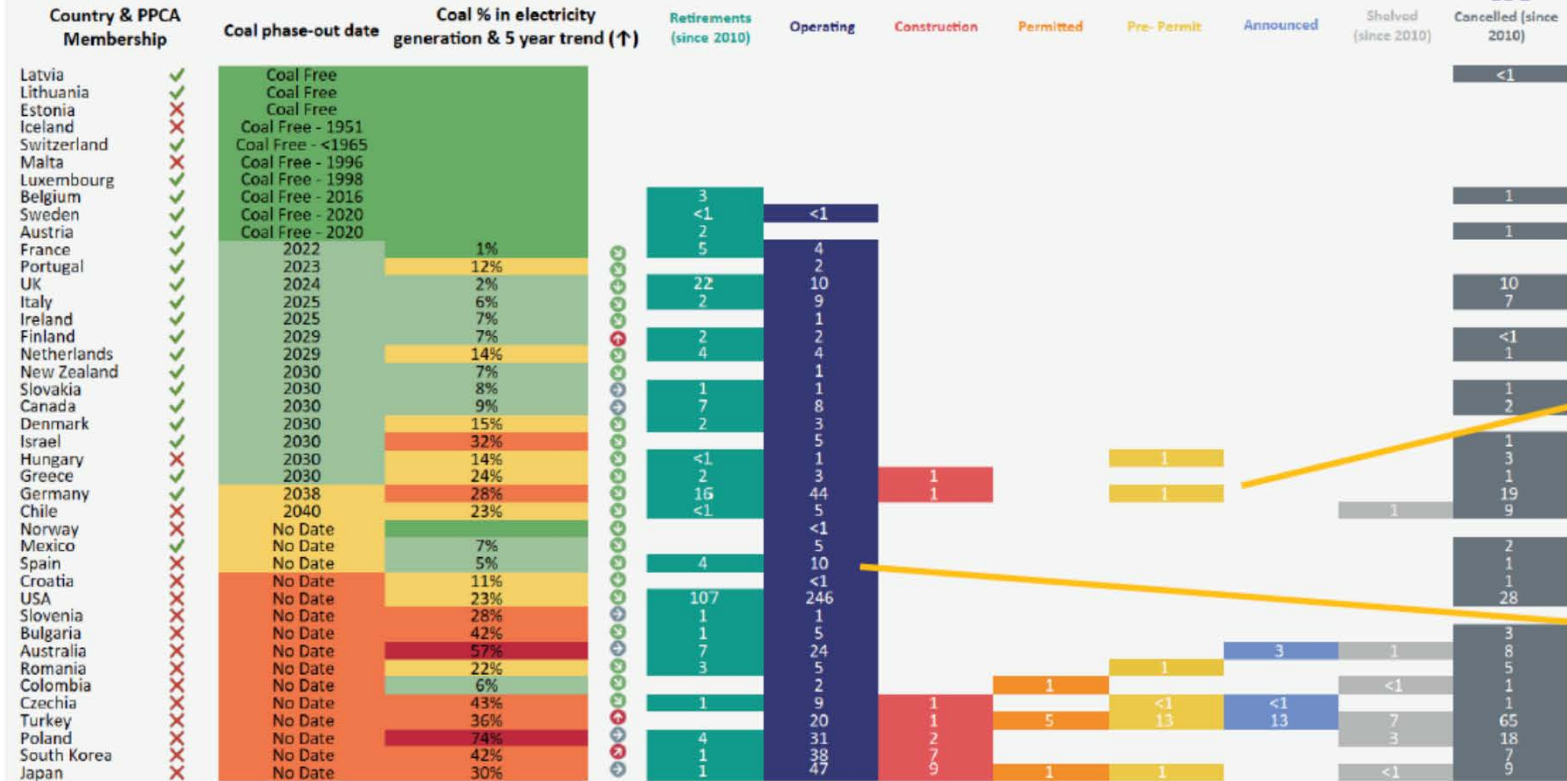
E3G

Coal Transition Progress Ranking: OECD & EU28 Countries

Sources: Global Energy Monitor, Ember, E3G Analysis. Data through to end of 2019



E3G



Spotlight: In Germany the controversial new Datteln power plant has finally entered operation while the proposed Stade project has been cancelled by the coal exit law, meaning Germany now has no projects under development.

Spotlight: In Spain, half of the 10GW of operating capacity closed in June 2020.

50 new coal-fired power plants construction plan after 2012



Red: operation 20

Orange: under

Construction 10

Yellow: under EIA 5

Black: planning 2

Green: cancelled 13

(as of 2020 July 21)

2. Accelerators and Brakes

Brakes

- **FIT→FIP**
- **Introduction of the Capacity market, Base-load market, Non-fossil fuel energy certificate market, etc.**
- **Non-priority connection to the grid is still a problem for RE**

Capacity market

- **Introduced silently (secretly?) in April 2020**
- **It may provide 10 bil. JPY (100 mil.US\$) /year to a nuclear and coal-fired power plant**
- **General public do not know at all about this!**

3. CCUS

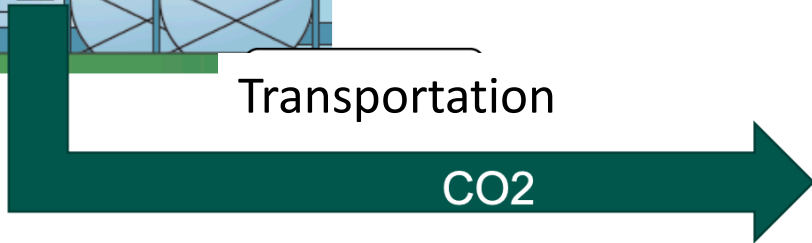
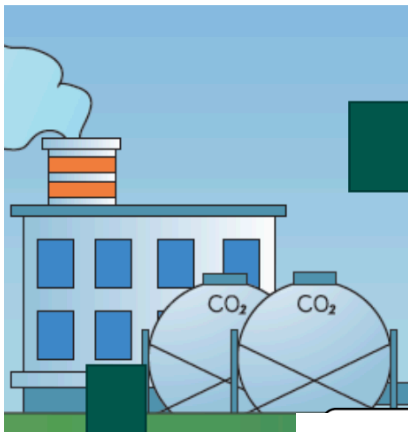
**(Climate Neutral vs. Carbon
Neutral in the context of Japan?)**

Carbon dioxide Capture, Utilization and Storage

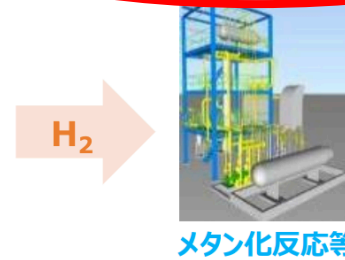
- **“Utilization” is a new topic for most of the general public in Japan**
- **However, METI has been engaging in research and development efforts as well as demonstration tests for technologies for CCUS**

Utilization

Capture (C)



Utilization (U)

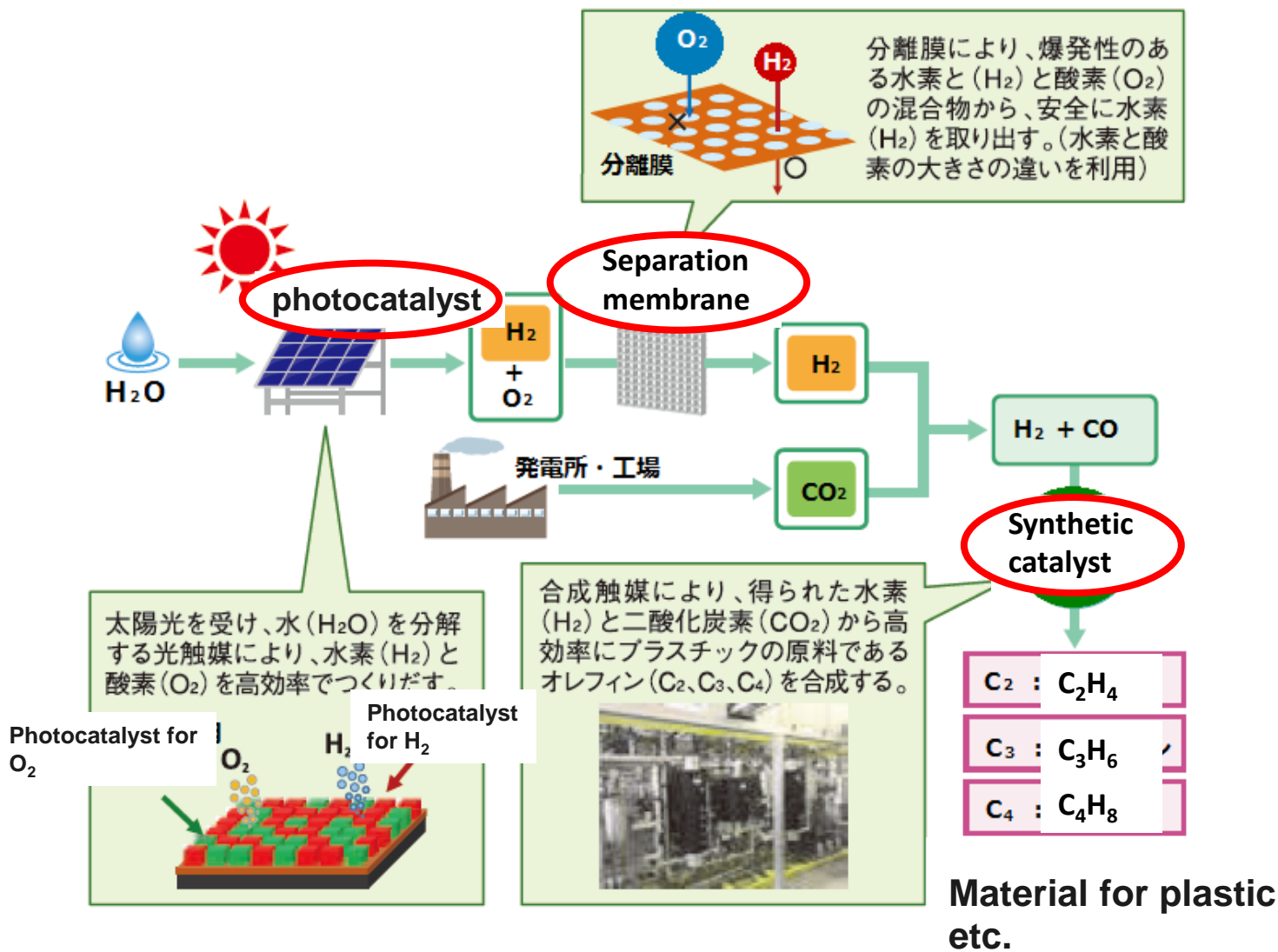


- Chemical products
- Fuel
- algae culture
- Artificial photosynthesis etc.



Storage (S)

Artificial photosynthesis



H₂ hype in Japan

- Obviously, these are efforts to keep the nuclear and coal-fired power alive and to destruct from the measures to reduce the CO₂ emissions
- Typical “Tech. fix”
- In fact, most of the people who trumpet the H₂ in Japan are pro-nuclear and pro-coal

4. Green Recovery/New Deal Japanese Version

Brown recovery again in Japan

- **No serious discussion on green recovery among the current policy makers**
- **“Green portion” is just around 0.2% of supplementally budget (59 trillion yen=590 bil. US\$) for pandemic**
- **Same as the 2009 recovery plan**

原発ゼロ・ エネルギー 転換戦略

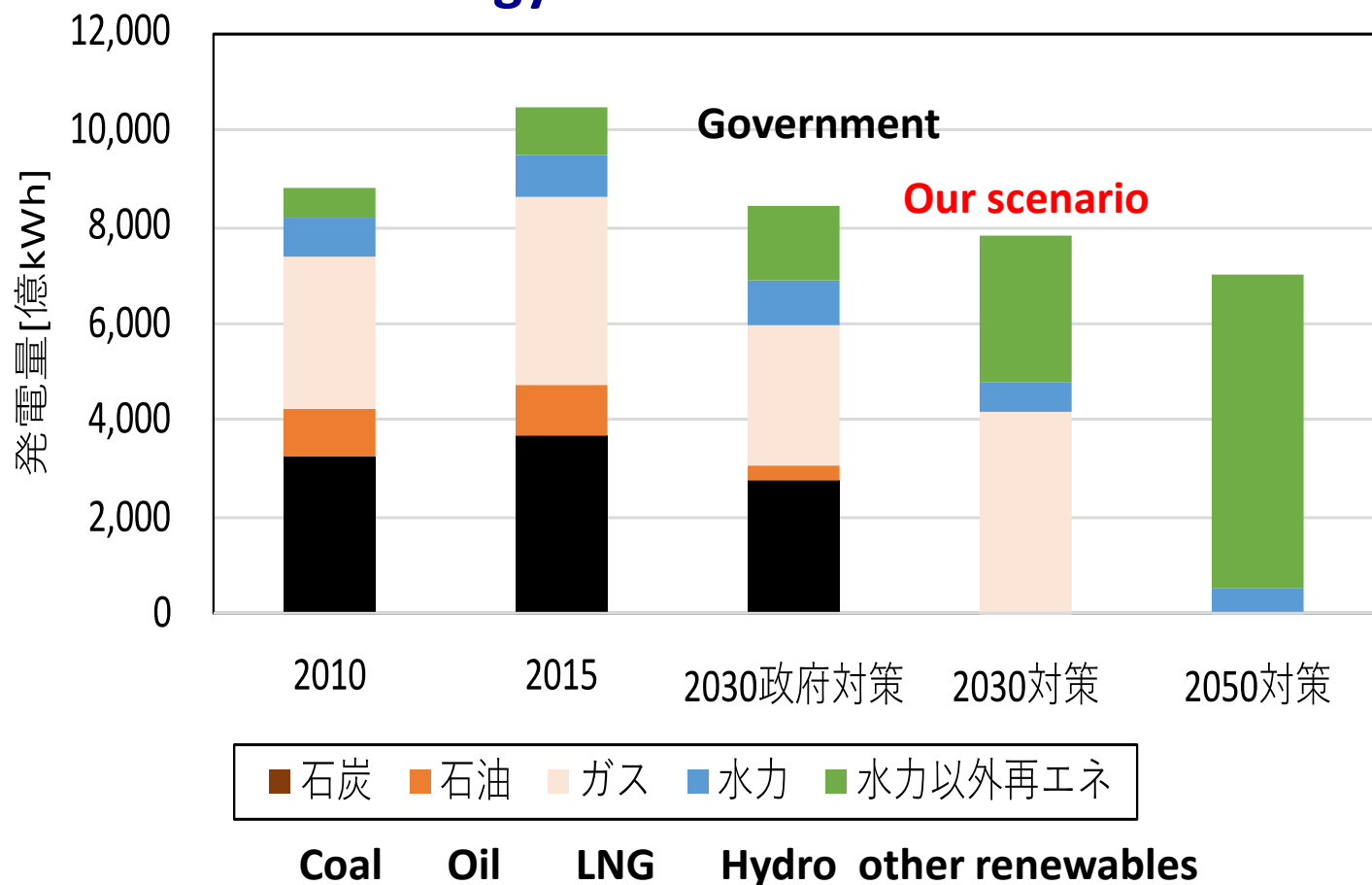
日本経済再生のための
エネルギー民主主義の確立へ

[https://www.
etffjp.group/](https://www.etffjp.group/)

**Zero Nuke, Energy Transition Strategy: Energy
Democracy for Revitalizing the Japanese Economy**

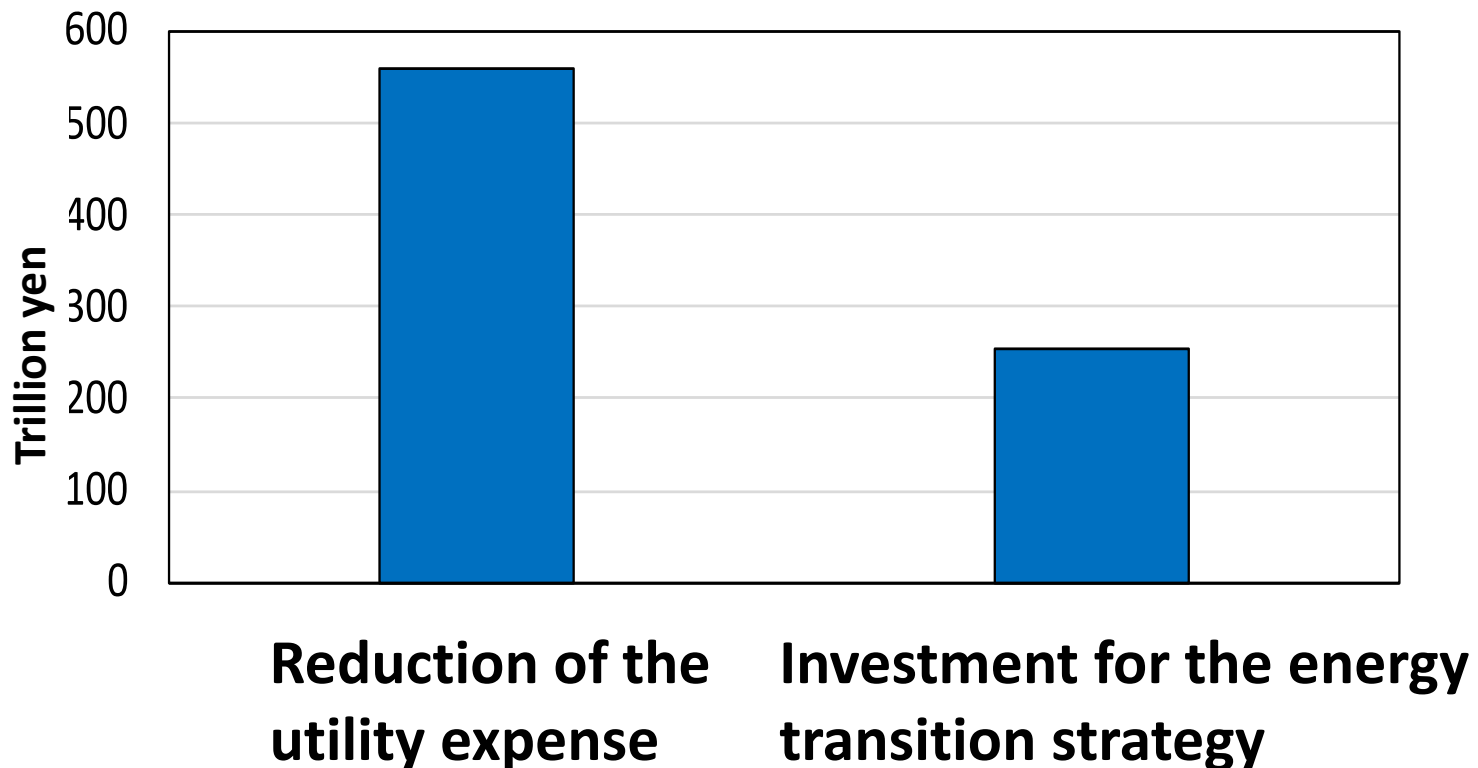
Energy mix in 2030 without nuclear and without coal is possible

Energy mix in 2030 and 2050



Investment needed for the energy transition is much smaller than the reduction of utility expense

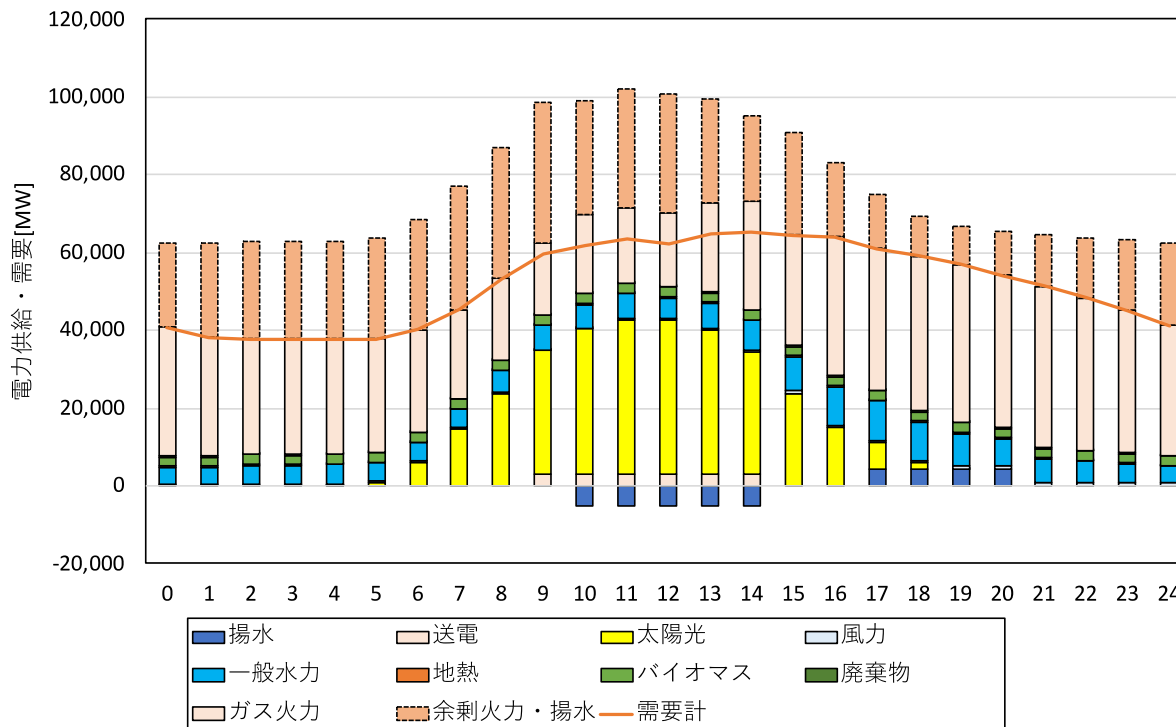
Accumulated (2018~2050)



There will be no power shortage even without coal and nuclear in 2030

Western Japan, most difficult day for RE

西日本夏季(2018/7/25ベース、大阪の天気：晴、最高気温36.9度、最低26.4度)



Source: Authors

Several similar scenarios by the civil society have been published

- Almost identical demand and supply figures (“demand” has been neglected in Japan)
- Debate on the future possibility of the power shortage is and will be very controversial
- How to explain/realize “flexibility” in power system is extremely critical

5. Conclusion

Battles are waiting.....

- **Energy mix, NDC, fiscal budget planning, etc.**
- **General election is to start soon**
- **Gov. will keep on stressing Tech. fix with nuclear and coal**
- **Korean, German, US and Canadian GR/GND seem to be good examples**