



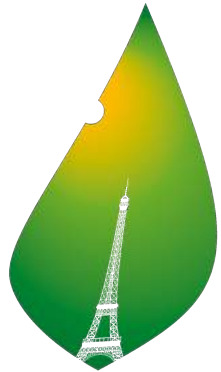
# Coal transition scenarios in light of the Paris Agreement

The case of Japan

Paola A. Yanguas-Parra  
February 2019

# The Paris Agreement

## The future of coal-fired power



### Paris Agreement (Article 2)

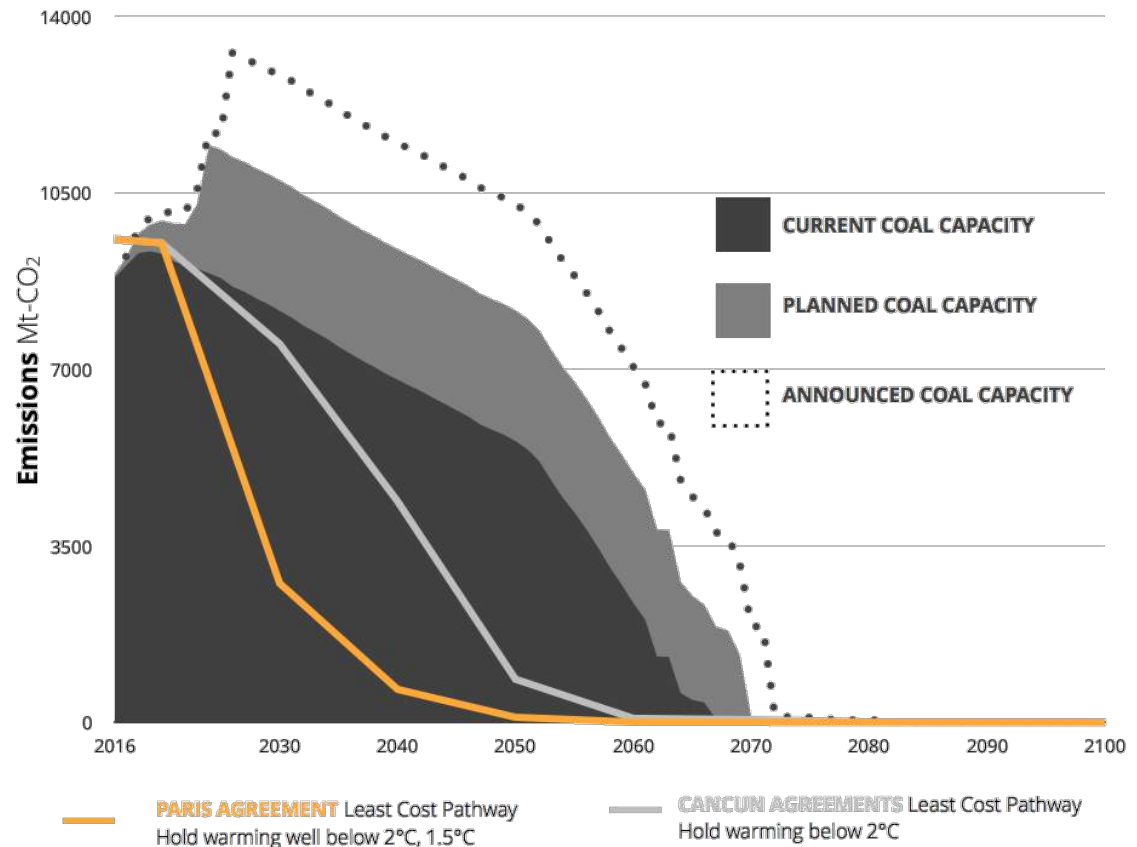
COP21 • CMP11  
**PARIS 2015**  
UN CLIMATE CHANGE CONFERENCE

*hold “the increase in the global average temperature to **well below 2°C** above pre-industrial levels and pursuing efforts to **limit the temperature increase to 1.5°C(..)**”*

## IPCC 1.5°C SR

*The share of coal for electricity generation shows a **steep reduction** in all pathways with no or low overshoot to close to **3-11% by 2030** and **0-2% by 2050**.*

**WORLD** potential CO<sub>2</sub> emissions from existing and planned coal capacity against least-cost pathways.



Source: IIASA/Joeri Rogelj, GCPT, own calculations



# Policy actions to power past coal are on the rise...



## 2050



## 2030

OECD

No new capacity can be installed and operated over its full economic lifetime anywhere

- Great risk of stranded assets
- Current plans in many regions not in line with Paris Agreement

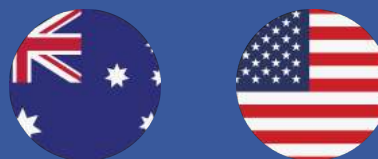
Governments that continue with major thermal coal expansion:



Governments that have decided to phase-out coal, but need further steps for implementation:



Governments still wedded to a coal-fired future, but the reality on the ground is renewables:

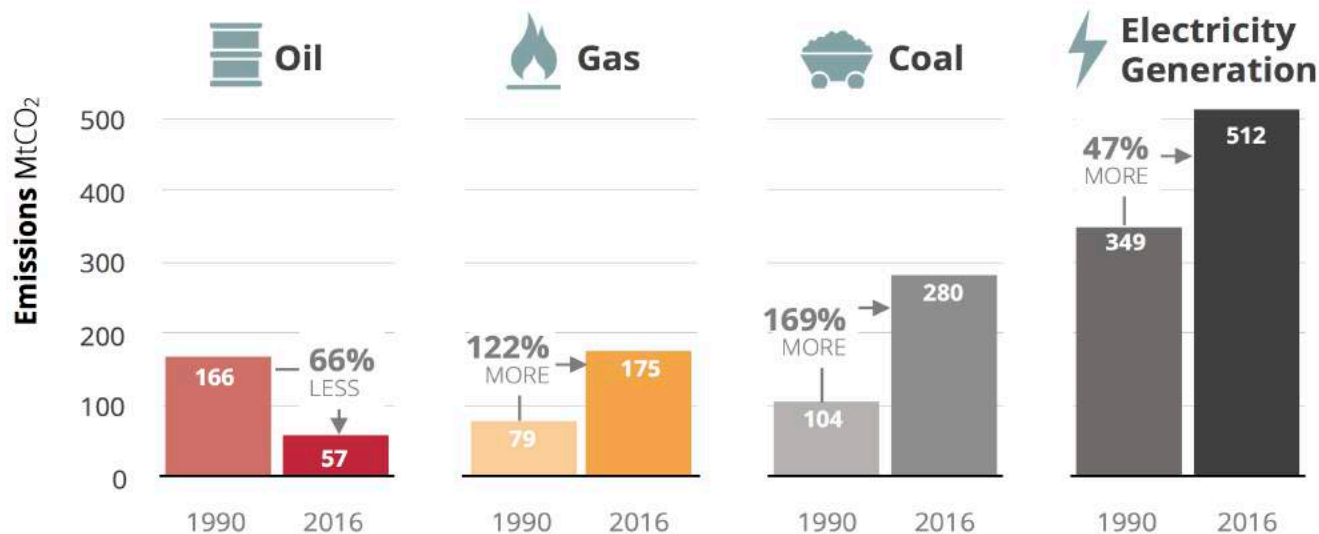


# Japan's energy and emissions profile



## PAST AND PRESENT EMISSIONS IN JAPAN

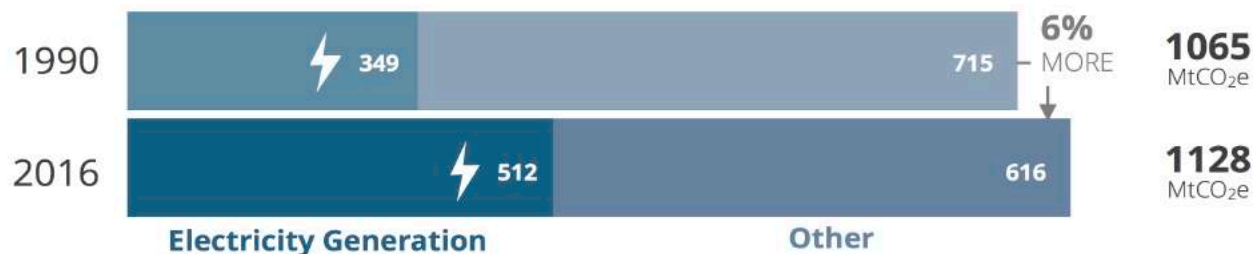
CHANGES IN ENERGY RELATED EMISSIONS 1990 - 2016



55% of electricity related emissions



## TOTAL ENERGY RELATED EMISSIONS

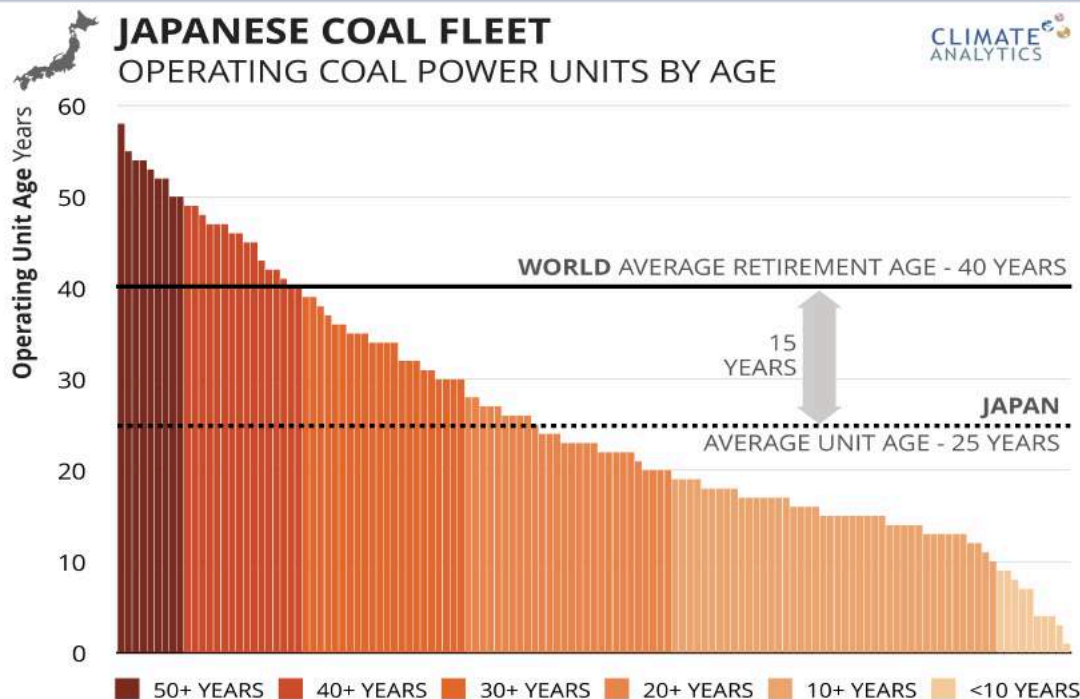


20% of total GHG emissions

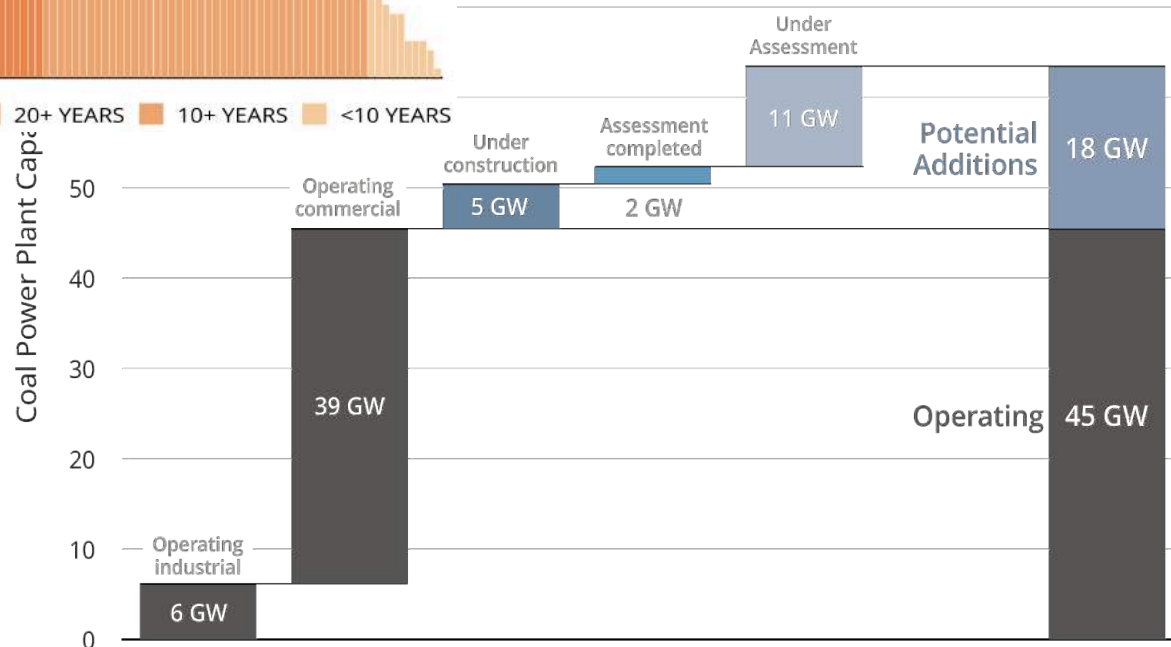




# Age structure of Japan's coal fleet and planned expansion

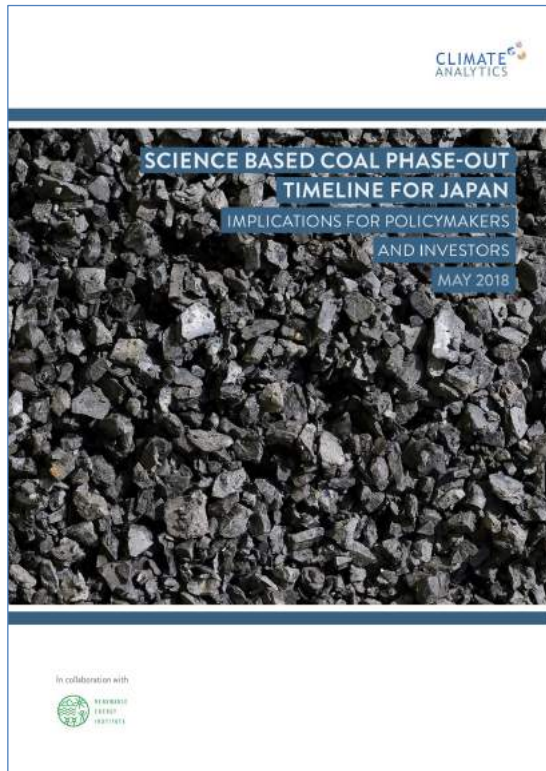


## CAPACITY BY STATUS

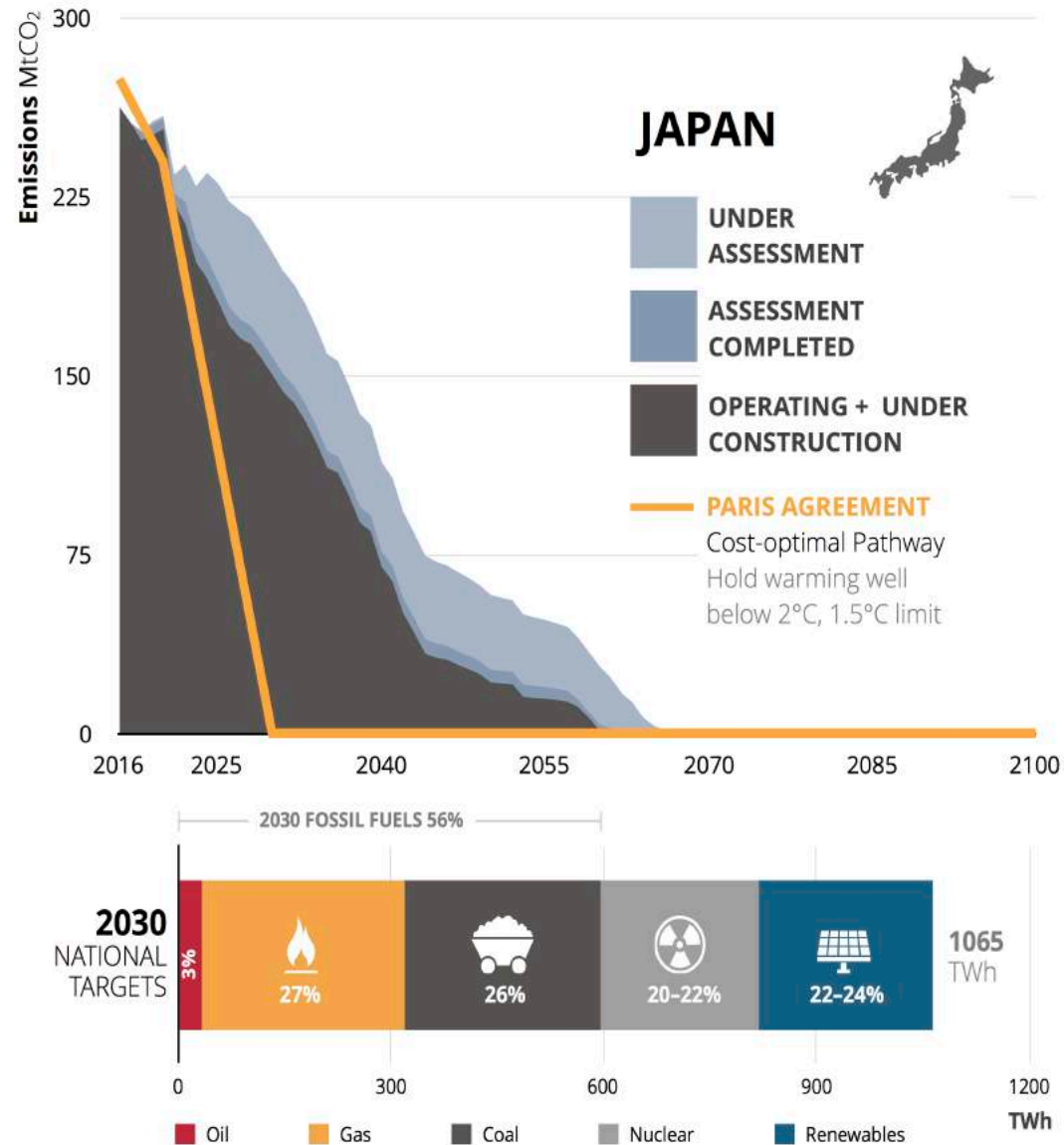


An increasing number of planned coal plants are being cancelled – 15.3GW (Feb 2019)

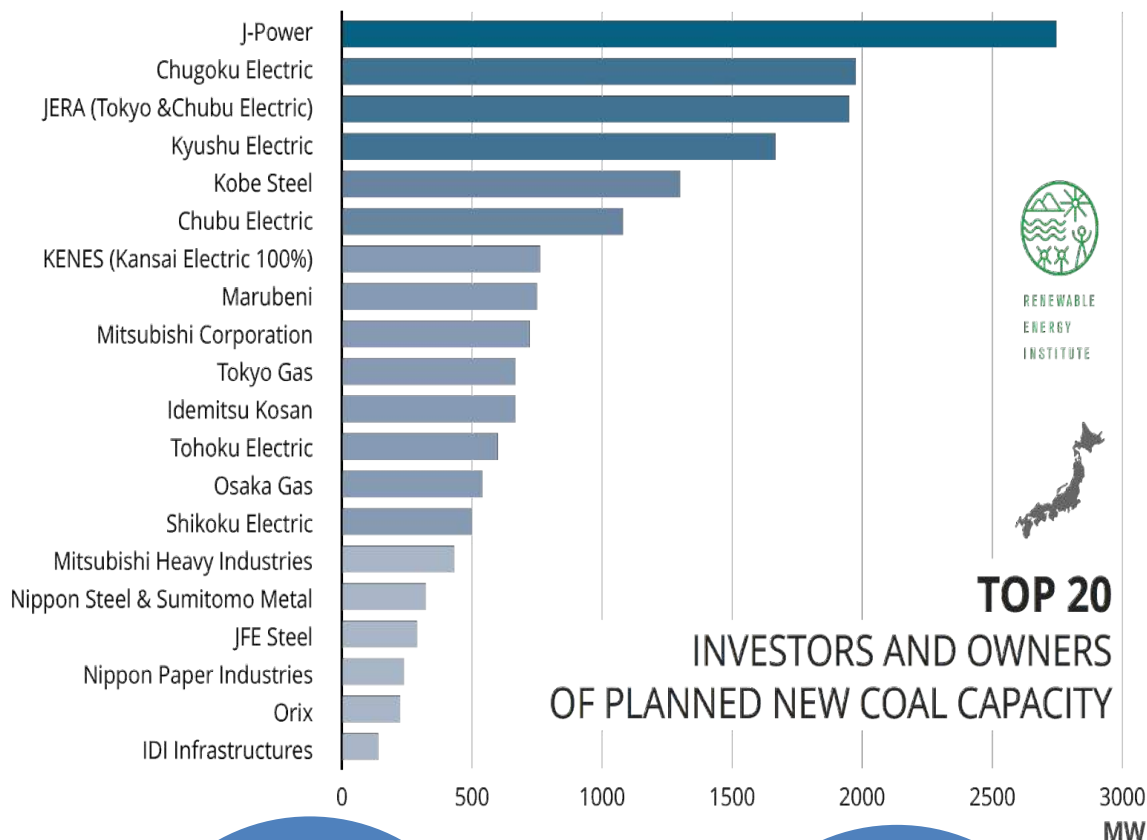
# National targets and fleet expansion are inconsistent with the PA



POTENTIAL CO<sub>2</sub> EMISSIONS FROM EXISTING AND PLANNED COAL CAPACITY AGAINST COST-OPTIMAL PATHWAYS.



# Japan – Less relevance for Just Transition but huge risks of stranded assets



## Announcements financial institutions

Marubeni  
Mitsubishi UFJ  
Sumitomo Mitsui Banking Corp  
Mizuho Financial Group  
Dai-ichi Life Insurance  
Nippon Life Insurance  
Meiji Yasuda Life Insurance

Japan Climate Initiative  
(JCI) 347 member –  
29 cities/Municipalities  
(Feb 2019)

RE commitments  
from consumers like  
SBT, RE100 & Apple

Civil Society  
has divested  
¥568.180.000  
in Japan from coal  
supporters

- ✓ The science is clear: achievement of the Paris Agreement implies global coal phase-out by 2050
  - By 2030 OECD
- ✓ No new capacity can be installed and operated over its full economic lifetime anywhere
  - Great risk of stranded assets for coal users and exporters
  - Current plans in many regions, including Japan are not in line with Paris Agreement
- ✓ Different regions will face different challenges to phase-out coal. In Japan the biggest challenge is assets stranding risk
- ✓ Recent developments in Japan and worldwide show that the end of the coal era is approaching. Risk is starting to materialise
- ✓ Timing of phase-out is key for planning the transition out of coal



# Thank you !

For additional information about our work on coal phase-out:

<https://climateanalytics.org/briefings/coal-phase-out/>

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Supporting science based policy to prevent dangerous climate change enabling sustainable development  
[www.climateanalytics.org](http://www.climateanalytics.org)

For additional information about climate impacts and feasibility of the 1.5°C limit on our website...

[climateanalytics.org/hot-topics](https://climateanalytics.org/hot-topics)

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