

Japan's role in global climate efforts - will action follow words at G20?

In 2018, Japan started raising its profile in the global climate discourse. In a landmark op-ed in the Financial Times,¹ Prime Minister Abe Shinzo called on the world to “join Japan and act now to save the planet”, expressing his willingness to lead on climate action. The Japanese government has identified climate change as one of the key issues to be addressed by the G20 Leaders at the Summit in Osaka June 28-29.² However, Japan's entanglement with fossil fuels both domestically and overseas is an obvious contradiction to Mr Abe's promise to lead climate action.

The climate emergency demands an urgent response for governments across the world. To show real climate leadership, Japanese government must ensure Japan stops bankrolling the destruction of climate, end the development of the country's new coal power plants and invest in clean, renewable energy.

Ahead of the G20 Summit, we contextualize Japan's role in the international climate and energy politics by offering an overview of Japan's positions and performance in climate and energy policies and markets, with an emphasis on its continued involvement with coal.

Japan as host for G20

- In 2018, Mr Abe made the following statement: “Next year, Japan will chair the G20.

The Government of Japan will exercise firm leadership so that the entire international community can keep pace with each other with responses against climate change issue.”³

- At the World Economic Forum in Davos in January 2019, Mr Abe announced climate change would be among the top priorities at G20. In his speech, he acknowledged the IPCC 1.5-degree report and its message that global emissions of CO2 should reach net zero around 2050. Further, he added: “Decarbonisation and profit making can happen in tandem. We policy makers must be held responsible to make it happen, as I will be stressing in Osaka this year.”⁴

¹ https://www.mofa.go.jp/pd/ip/page4e_000904.html

² <https://www.japan.go.jp/g20/japan/>

³ https://japan.kantei.go.jp/98_abe/actions/201808/_00011.html

⁴ https://www.mofa.go.jp/ecm/ec/page4e_000973.html,

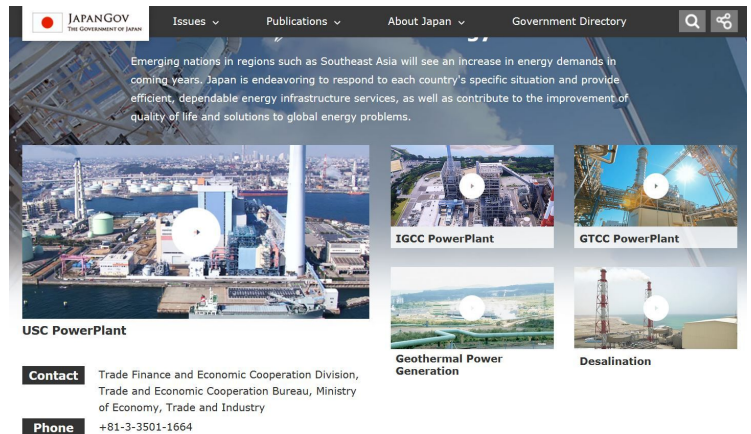
<https://www.reuters.com/article/us-davos-meeting-japan/japans-abe-to-put-trade-climate-at-top-of-g20-to-do-list-idUSKCN1PH120>

- However, in contradiction to the pro-climate message, the Japanese government's official G20 website highlights Japan's coal technology and its export to overseas.⁵

- **The civil society has criticized Japan for its coal involvement, and demanded the country to align its climate and energy policies to the Paris Agreement.** The NGO coalition "No Coal Japan", consisting of 38 civil society groups including Greenpeace Japan, is calling on Japan to make following changes to its current policies and practices to show leadership at G20⁶:

- End finance for coal-fired power plants overseas
- Stop developing new coal plants domestically, and
- Invest in the global transition to renewable energy.

Graph: Screen capture of video on Japan's G20 website, advocating coal technology. Footnote 5.



Public awareness & expectations

- The Japanese people are considerably worried about climate change. Research commissioned by Greenpeace Japan in August 2018, surveying 1000 people, showed that 82% of Japanese people feel the threat of extreme weather, such as heavy rain or the historically high temperatures experienced that year. 84% thought that these extreme weather events are related to long-term trends caused by global warming.⁷

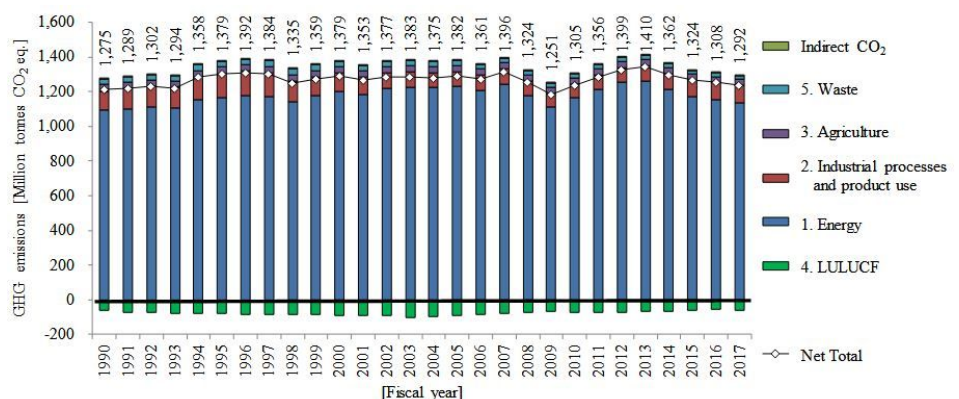
- According to Meteorological Society of Japan, the heatwave of 2018 could not have occurred without human-induced global warming. It was estimated that 1032 people died as a result.⁸

- Inspired by the global youth movement started by Swedish teenager Greta Thunberg, the youth in Japan have begun to join the global climate movement which asks for stronger climate action. In 2019, Fridays for Future demonstrations have been organised in both Tokyo and Kyoto.

- A survey by Japan's Ministry of Foreign Affairs revealed the topics that are most interesting for the Japanese general public for the G20 Summit this year are the issue of marine plastic litter (49%) followed by climate change and energy (48%) and global economy and trade (42%).⁹

Japan's performance trend on greenhouse gas emissions

- **During the past three decades, Japan's GHG emissions have not seen significant decrease - a clear contradiction to the claim of climate leadership.**



⁵ Official Japan G20 site > About Japan > Infrastructure with Japan > Plant and Energy
<https://www.japan.go.jp/technology/infrastructure/category.html?ca=plant-and-energy>

⁶ <http://www.nocoaliapan.org/about-us/g20-osaka/>

⁷ <https://www.greenpeace.org/archive-japan/ja/news/press/2018/pr20180821/>

⁸ https://www.istage.ist.go.jp/article/sola/advpub/0/advpub_15A-002/_pdf-char/en

⁹ https://www.mofa.go.jp/press/release/press4e_002430.html

Compared to 1990, Japan's emissions were 1.33% higher in 2017 (from 1,275 million tonnes of CO₂ equivalent to 1,292 million tonnes, based on newest official data¹⁰). The last years on record, 2013-2017, saw a declining trend in emissions.

- **Energy related emissions are by far the biggest contributor (88%) to Japan's GHG emissions.**¹¹ Within energy related emissions, about 45% come from electricity generation. Emissions from coal fired power plants account for 18% of total GHG emissions.¹²

Graph: Japan's GHG emissions and removals 1990-2017. Graph and data by Ministry of the Environment, Japan, 2019.

Japan's electricity generation mix

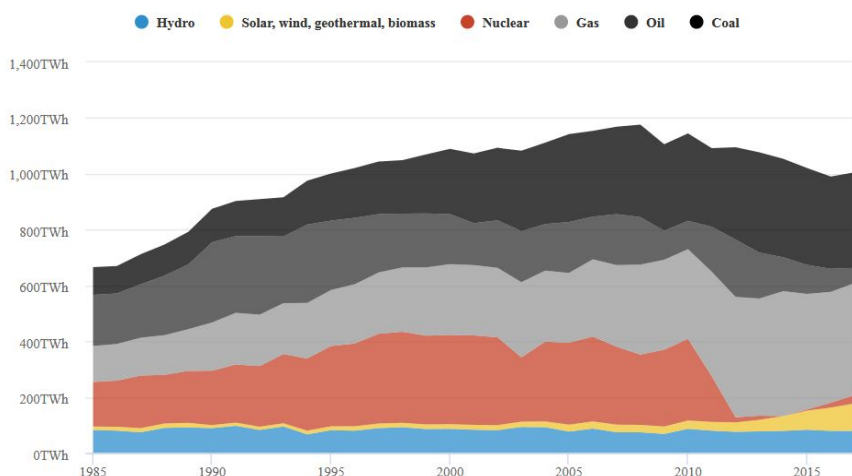
- **Japan's electricity generation is currently dominated by fossil fuels.** In the fiscal year 2017, the mix consisted of natural gas (39.8%), coal (32.3%), renewables (16.1%) petroleum and waste (8.7%) and nuclear (3.1%).¹³

- **Electricity generation went through a rapid change since 2011 due to the TEPCO's Fukushima nuclear disaster,** after which the nuclear fleet was shut down. The resulting drop in electricity generation was responded to by energy conservation measures, increased gas consumption, and by accelerating RE, especially solar, installation.¹⁴

- **Japan is one of the eight G20 countries in which the absolute amount of electricity generation**

from coal increased between 2012-2017. During that period, generation of electricity from coal in Japan increased by 14%. In comparison, the amount of coal generation decreased 20% in USA, 24% in EU and 84% in UK in the same time period.¹⁵

Graph: Sources of electricity production in Japan 1985-2017 Graph by Carbon Brief, data from BP Statistical Review of World Energy 2018. Footnote 14.



Government's climate & energy goals

Climate goals: In its INDC of 2015, Japan has set an objective of 26% GHG reduction by 2030 (compared to 2013), and at least 80% by 2050.¹⁶

- In June 2019, the Japanese government adopted a "Long-term Strategy For Paris Climate Agreement-based Growth Strategy" (LTS). The strategy does not make changes to the previously established energy or climate goals. According to the strategy, Japan will **aim for net zero emissions as soon as possible in the second half of the century.**¹⁷

¹⁰ http://www.gio.nies.go.jp/aboutghg/nir/2019/NIR-JPN-2019-v3.0_GIOweb.pdf; Figure 2 Trends in GHGs emissions and removals in each sector

¹¹ http://www.gio.nies.go.jp/aboutghg/nir/2019/NIR-JPN-2019-v3.0_GIOweb.pdf; Figure 2 Trends in GHGs emissions and removals in each sector

¹² <https://climateanalytics.org/media/japan-coalphaseout-2018-en-report.pdf>

¹³ Ministry of Economy, Trade and Industry (11/2018) accessed via <https://www.renewable-ei.org/en/statistics/electricity/>

¹⁴ <https://www.carbonbrief.org/carbon-brief-profile-japan>

¹⁵ <https://www.climate-transparency.org/wp-content/uploads/2019/05/Managing-the-phase-out-of-coal-DIGITAL.pdf>

¹⁶ <https://www.env.go.jp/en/earth/cc/2030indc.html>

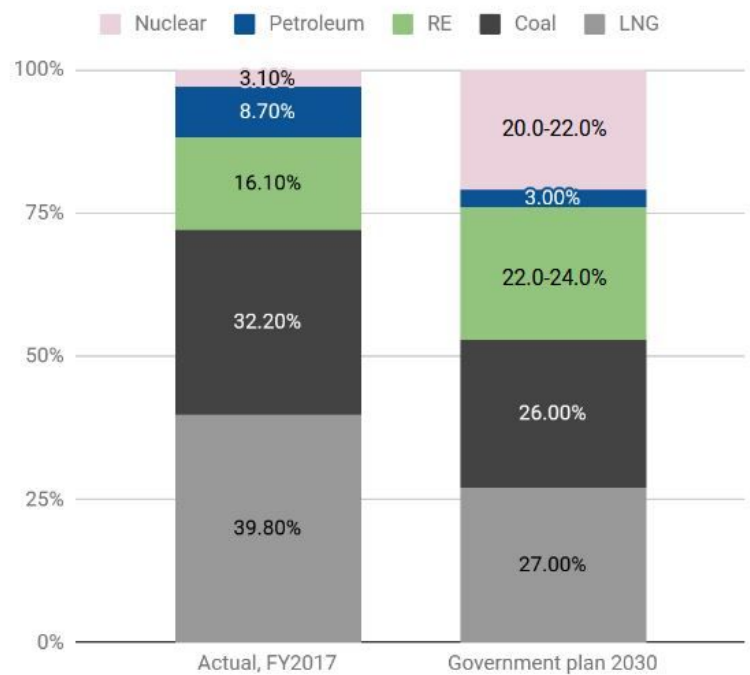
¹⁷ <https://thediplomat.com/2019/04/does-japans-new-climate-change-strategy-go-far-enough/>,

<https://www.reuters.com/article/us-japan-environment/japan-adopts-long-term-emissions-strategy-under-paris-agreement-idUSKCN1TC1AJ>

Energy goals: The currently standing national Strategic Energy Plan (“Basic Energy Plan”) was published in July 2018.¹⁸ In the strategy, the following targets were set for the electricity generation mix in 2030: LNG 27%, coal 26%, renewables 22-24%, nuclear 20-22%, oil 3%.

- Greenpeace has criticised the energy plan’s continued reliance on coal and other fossil fuels, and that the projected nuclear share is both dangerous and not credible.¹⁹
- Japan’s plan to aim for 26% share of coal in its electricity mix in 2030 is in stark contrast to the analysis by NGOs like Greenpeace²⁰, science and policy institutes such as Climate Analytics²¹ and groups like Powering Past Coal Alliance²² that **OECD countries such as Japan should phase out coal by 2030 in order to meet the Paris Agreement objectives.**
- **In a comparison of coal phase-out policies and targets of G20 countries, Japan is rated to be in the lowest of four ranks.**²³

- Further point for concern is the fact that in its long-term climate strategy, the government emphasises use of undeveloped and uncertain technologies such as hydrogen power and carbon capture and sequestration (CCS).
- Meanwhile, stronger targets are being advocated on the sub-national level. As part of a group of mayors from G20 countries (so called U20), in May 2019 the Tokyo Metropolitan Government endorsed a joint Communique that calls for decarbonizing the energy grid, with 100% renewable electricity by 2030, and 100% renewable energy by 2050.²⁴



Graph: Japan’s electricity generation mix in 2017 and 2030 (planned). Graph by Greenpeace Japan, data by METI 2018. 2030 mix represent smaller total generation, according to the government’s target to reduce total electricity demand by 17% compared to a business-as-usual scenario. Footnote 13, 14, 18.

Japan’s domestic coal fleet pre-2011

- Japan’s old coal fleet prior to the beginning of expansion in 2011 consisted of 109 coal plants with the overall capacity of 43.4GW.²⁵
- The coal used in the country is imported mainly from Australia (75.5%), Indonesia (10.8%) and Russia (10%), according to 2016 figures.²⁶ Having no significant domestic coal resources, Japan has become the world’s biggest importer of coal, accounting for 18% of the world’s total coal imports.²⁷

¹⁸ https://www.enecho.meti.go.jp/en/category/others/basic_plan/5th/pdf/strategic_energy_plan.pdf
¹⁹ <https://www.greenpeace.org/archive-japan/ja/news/press/2018/pr201807031/>
²⁰ https://www.greenpeace.org/international/publication/18866/a_coal_phase_out_pathway/
²¹ <https://climateanalytics.org/briefings/coal-phase-out/>
²² https://poweringpastcoal.org/about/Powering_Past_Coal_Alliance_Declaration
²³ <https://www.climate-transparency.org/wp-content/uploads/2019/05/Managing-the-phase-out-of-coal-DIGITAL.pdf>
²⁴ http://www.metro.tokyo.jp/tosei/hodohappyo/press/2019/05/22/documents/04_04.pdf
²⁵ https://sekitan.jp/plant-map/en/v2/table_existing_en
²⁶ https://www.enecho.meti.go.jp/en/category/brochures/pdf/japan_energy_2017.pdf
²⁷ <https://www.climate-transparency.org/wp-content/uploads/2019/05/Managing-the-phase-out-of-coal-DIGITAL.pdf>

Expansion of domestic coal fleet since 2012

- **Starting in 2012, utilities began the development of 50 new coal-fired power plants (CFPP) units, totalling 23.3GW in capacity.**²⁸ Assuming no immediate closures of the old fleet, this would mean a 53.7% expansion of the previously existing CFPP capacity.
- According to an analysis by Climate Analytics, completion of all of the 50 proposed CFPPs would result in Japan exceeding its carbon budget in line with the Paris Agreement by about three times.²⁹
- **Of the initial 50 projects, to date 12 units (1.3GW) have begun operation, 15 are under construction (8.5GW), 10 are in assessment or planning (6.4GW), and 13 units (7.GW) have been cancelled or changed to other energy sources, such as LNG or biomass.**³⁰
- Cancellation of the projects have accelerated during 2018 and 2019. In majority of the cases, the utilities have explained their withdrawal by a change in the business environment (including decreasing power demand), uncertainty about the projects' ability to make sufficient economic returns and increasing environmental expectations.³¹
- Currently, attention is on the case of Yokosuka CFPP plan in Kanagawa, west of Tokyo. While three other projects in the region have been cancelled, local people along with NGOs like Kiko Network and Greenpeace Japan are opposing the planned project due to its harmful climate impact and expected air pollutant emissions. In May 2019, 45 local residents filed an administrative lawsuit against the national government (METI), arguing that the Environmental Impact Assessment process for the Yokosuka project had been conducted in an unlawfully simplified and fast-tracked process.³²

Japan's public funding for overseas coal

- Globally, Asia has become the biggest source of international public financing of coal power projects. **Japan is the second biggest source of public funding for coal in the G20**, behind China and followed by South Korea, having financed approximately 20GW up to 2018 and currently considering funding for an additional 3GW.³³ The biggest recipients of such funding from Japan have been Vietnam, Indonesia and India.³⁴
- Funding of coal beyond its own borders has a significant influence on Japan's climate credibility. According to NYT reporting, **nearly 60% of planned coal projects developed by Japanese companies are outside the country.**³⁵



- The Japanese public institutions responsible for this funding, following government policies, are Japan Bank for International Cooperation (**JBIC**), Nippon Export and Investment Insurance (**NEXI**) and Japan International Cooperation Agency (**JICA**).
- A Greenpeace Japan report of December 2018 reviewed all CFPP projects with Japanese public and private funding in Indonesia, and found 8 units (5.51GW) currently under construction and 4 units (2.2GW) under planning. Most of the projects were located in the region where the problem of overcapacity of electricity generation is widely reported and bad air quality is causing wide-scale public health issues. The report also revealed that although so called "quality infrastructure" has been Japan's keyword for its overseas projects³⁶, the Japanese backed coal plants can implement significantly lower standards

²⁸ https://sekitan.jp/plant-map/en/v2/table_en

²⁹ <https://climateanalytics.org/media/japan-coalphaseout-2018-en-report.pdf>

³⁰ https://sekitan.jp/plant-map/en/v2/table_en

³¹ http://www.ipower.co.jp/english/news_release/pdf/news180427_1.pdf, <https://www.greenpeace.org/japan/sustainable/press-release/2018/06/05/813/>, https://www.tokyo-gas.co.jp/Press_e/20190131-02e.pdf

³² <https://www.kikonet.org/eng/press-release/2019-05-27/yokosuka-coal-lawsuit>

³³ <https://www.nrdc.org/experts/han-chen/q20-countries-public-coal-financing-reaches-five-year-high>.

<https://www.climate-transparency.org/wp-content/uploads/2019/05/Managing-the-phase-out-of-coal-DIGITAL.pdf>

³⁴ <https://www.nrdc.org/experts/han-chen/power-shift-new-report-international-coal-vs-re-finance>

³⁵ <https://www.nytimes.com/2018/11/24/climate/coal-global-warming.html>

³⁶ <https://www.japan.go.jp/technology/infrastructure/>

overseas than at Japan. It was found the air pollution emissions from one of the Japanese-built coal plants in Indonesia was estimated to be about 5 times higher than the emissions from new coal plants in Japan.³⁷ Similar findings have been made by other Japanese NGOs.³⁸

- In April 2019, the issues related to coal mining and power generation became viral in Indonesia after the publishing of a documentary film “Sexy Killers”. The movie covers some coal projects with Japanese funding, and it has been viewed more than 22 million times and sparked a wide discussion about the harmful impacts of coal projects and the political corruption related to them.³⁹

Private sector’s changing coal investment policies

- Japanese private companies have also been heavily investing in coal both on domestic and overseas markets. During the past year, new policies from various financial institutions are signaling a change of direction.

- In 2018, all three of Japan’s biggest life insurance companies - Dai-ichi Life⁴⁰, Nippon Life⁴¹ and Meiji Yasuda⁴²- published new policies to restrict their coal financing.

- Some moves to restrict involvement in coal have also been seen from Japan’s major trading companies, such as Marubeni, Itochu and Sojitz and others.⁴³

- Though Japanese banks have been ranked as some of the world’s leading arrangers for clean energy project finance⁴⁴, their involvement in coal has been heavily criticised. While an increasing number of international banks are taking distance from coal⁴⁵, Japan’s top 3 commercial banks have become major funders of coal globally. In a global comparison of banks’ lending for the world’s top 120 coal plant developers between 2016-2018, financial groups Mizuho, MUFG and SMBC were ranked 1st, 2nd and 4th highest respectively.⁴⁶ Another global comparison, analysing loans and underwriting for coal power generation, ranked MUFG, Mizuho and SMBC 6th, 8th and 21st respectively.⁴⁷

- Following international criticism and NGO pressure, all three banks published their first coal investment policies in 2018. While MUFG and Mizuho didn’t indicate clear restrictions, SMBC’s policy restricted new project funding to those at or above ultra-supercritical efficiency.⁴⁸

- In May 2019, MUFG came out with its new coal policy, stating “MUFG will not provide financing to new coal fired power generation projects.” Though some conditions are listed as grounds for considering possible exceptions, the language marks a clear difference to the 2018 policy. Soon after, a

new, strengthened policy also came out from Mizuho. Greenpeace Japan responded to the news by asking for additional measures to address investments in companies that derive revenue from coal-related operations.⁴⁹

Rank	Bank	Country
1	Mizuho Financial	Japan
2	Mitsubishi UFJ Financial	Japan
3	China Construction Bank	China
4	SMFG	Japan
5	Bank Rakyat Indonesia	Indonesia
6	Bank of China	China

Graph: The biggest lenders to coal developers globally. Graph and data by BankTrack. Footnote 46.

³⁷ <https://www.greenpeace.org/japan/sustainable/publication/2018/12/06/6544/>

³⁸ https://sekitan.jp/bic/wp-content/uploads/2019/01/Comparison-of-pollution-control-tech-btw-Japan-overseas_v12_ip.pdf

³⁹ <https://www.eco-business.com/videos/documentary-film-sexy-killers-probes-indonesian-candidates-ties-to-big-coal/>

⁴⁰ <https://www.youtube.com/watch?v=qIB7vq4I-TQ>

⁴¹ <https://www.greenpeace.org/archive-japan/ja/news/press/2018/pr201805091/>

⁴² <https://www.greenpeace.org/archive-japan/ja/news/press/2018/pr201807131/>

⁴³ <https://www.greenpeace.org/japan/sustainable/press-release/2018/09/14/657/>

⁴⁴ <http://ieefa.org/ieefa-japan-pivot-from-thermal-coal-to-renewables-is-building/>

⁴⁵ <https://data.bloomberglp.com/bnef/sites/14/2018/01/2017-Clean-Energy-EST-League-Tables.pdf>

⁴⁶ http://ieefa.org/wp-content/uploads/2019/02/IEEFA-Report_100-and-counting_Coal-Exit_Feb-2019.pdf

⁴⁷ https://www.banktrack.org/article/cop24_new_research_reveals_the_banks_and_investors_financing_the_expansion_of_the_global_coal_plant_fleet

⁴⁸ <https://www.ran.org/bankingonclimatechange2019/>

⁴⁹ <https://www.renewable-ei.org/en/activities/column/REupdate/20181011.php>

⁴⁹ <https://www.greenpeace.org/japan/nature/press-release/2019/05/16/8275/>, <https://www.greenpeace.org/japan/nature/press-release/2019/05/22/8478/>