

POLICY BRIEF

THE DILEMMA OF COAL PHASE-OUT: HOW TO FACILITATE A TRANSITION TO CLEANER ENERGY SOURCES IN ASIA-PACIFIC?

There is no doubt that phasing out coal in the Asia-Pacific region will significantly reduce CO₂ emissions and contribute towards meeting the 1.5 °C global warming limit set in the Paris Agreement. In 2019, the Asia-Pacific coal market increased by 6.1% to US\$751.8 billion, rising for the third consecutive year after four years of decline.ⁱ In terms of production, China produced close to 80% of coal in the region 2019 followed by Indonesia and Australia (**Figure 1**) while regarding consumption volumes, China and India were the 1st and 2nd countries respectively on the list followed by Japan (**Figure 2**).

However, coal has played a vital role in fueling the economic growth of certain countries in the region. In both wealthier and emerging countries such as China, India and Australia, coal has provided employment as well as stable electricity production and enabled the rise of key industries (e.g. cement, steel). For example, in 2019, Australia's coal mining industry alone employed more than 58 thousand people.ⁱⁱ In India, the coal mining and power generation sector – excluding the transport sector – directly employed around 0.5 million people.ⁱⁱⁱ For China, 2.7 million people were employed in the coal industry by the end of 2020.^{iv} It is thus clear that a significant proportion of the Asia-Pacific population relies on coal for livelihoods.

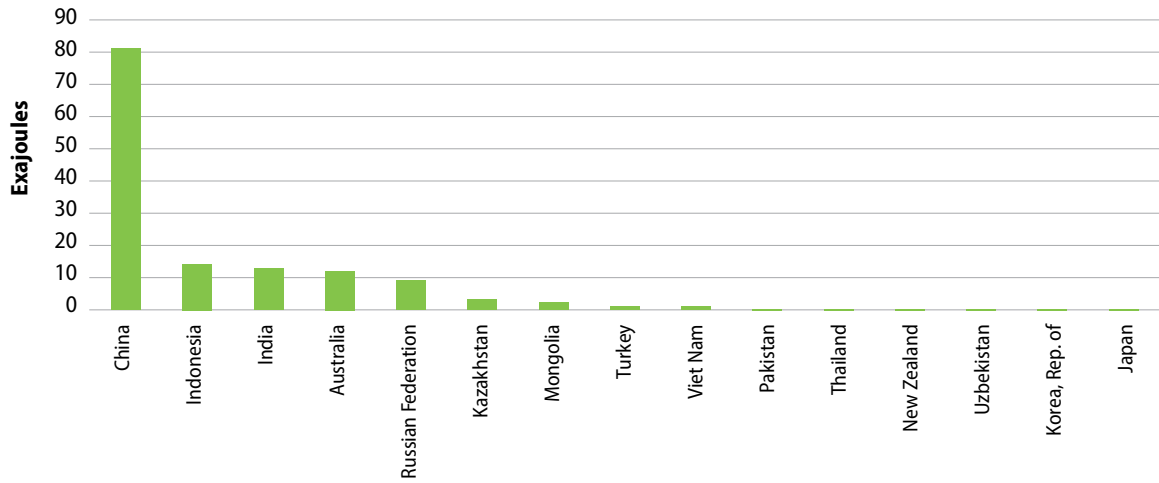
Moreover, in the region's emerging economies, coal accounts for a large proportion of total CO₂ emissions (see **Figure 3**).

It is therefore clear which countries would have to make the most effort and whose populations would be most affected by a phase out of coal in the region – especially if no re-employment provisions are made.

On the other hand, poorer Asia-Pacific countries – especially Small Island Developing States (SIDS) - not only use coal to a much lesser extent but in many cases, face the earliest and worst consequences of coal emissions. This can justify early action to phase out coal in the region.

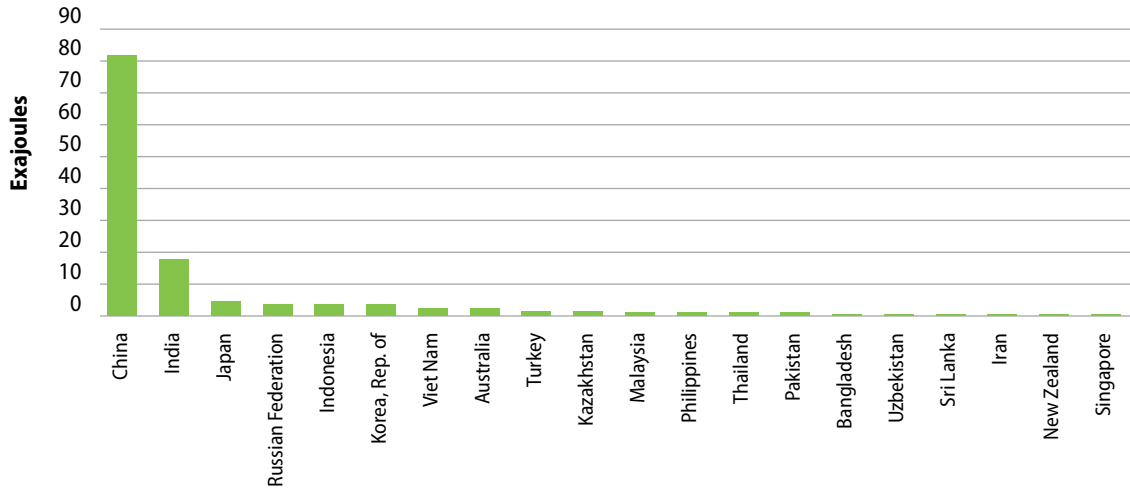
But is phase out of coal expected in the region already?

Coal Production in the Asia Pacific Region (Exajoules, 2020)



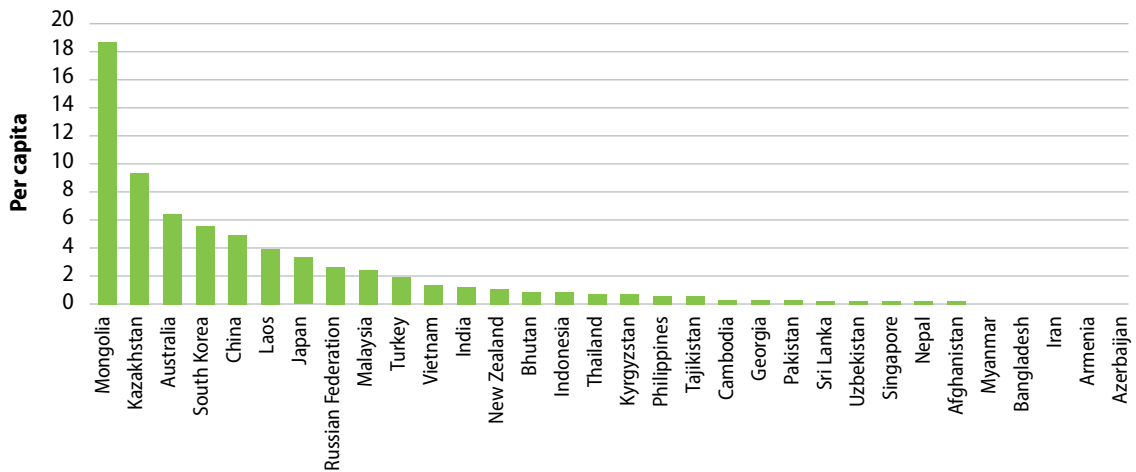
Source: BP Statistical Review of World Energy 2021

Coal Consumption in the Asia Pacific Region (Exajoules, 2020)



Source: BP Statistical Review of World Energy 2021

Largest Proportions of Total CO₂ emissions made up by coal in Asia Pacific Countries, Per capita



Source: Our World In Data, <https://ourworldindata.org/emissions-by-fuel>

Asia-Pacific NDCs and coal actions

In light of the climate emergency, certain Asia-Pacific countries have announced through their Nationally Determined Contributions (NDCs) their intention/ commitment to scale up renewables and cut down coal emissions.

Analysis of NDCs reveals that some of the largest coal emitters of the region such as China, Indonesia, India, South Korea and Vietnam plan to cut their coal emissions - albeit to different levels and with different methods (**Figure 4**). From the targets set by the above countries, it is apparent that China's and India's coal commitments are the strongest/ highest in the region – especially with China's recent announcement of a phase-down from 2026 onwards^v - while Vietnam's and Mongolia's coal commitments may not be significant enough to drive transformation.

None of these economies – nor the higher income economies such as Australia and Japan – have announced a full phase-out of coal, although in April 2021 Japan announced a possible reduction of coal to 26% of its energy mix in 2030-31.^{vi} In April 2021 and in June 2021 Korea^{vii} and Japan^{viii} also respectively announced they will not finance coal overseas.

Figure 4: Announced NDC Actions on coal by key Asia Pacific countries



South Korea

Targets:

- Reduce GHG emissions by 24.4% by 2030 compared to 2017 levels;

Methods:

- Significantly reduce coal power generation (e.g. ban on new coal-fired power plants, additional reduction of existing coal power plants, conversion to eco-friendly fuels such as LNG);
- Scaling up renewable energy to a 20% share by 2030 and a 30-35% share by 2040;
- Launching the K-Emissions Trading Scheme.

Vietnam

Targets:

- Reduce emissions by 7.3% until 2025 and by 9% until 2030 (unconditional) or 27% by 2030 (conditional) (versus a business as usual scenario);

Methods:

- No new coal-fired power stations;
- Renewable energy in primary supply target of 15-20% by 2030 and 25-30% by 2045;
- Develop biogas to replace coal for cooking in rural areas;
- Using ethanol in transportation;
- Using high-performance air conditioning and renewable energy development actions.

Potential Environmental benefits of a coal phase-out

Phasing out coal in the Asia-Pacific region could have tangible benefits for climate change. For instance, an initial 50% reduction in the countries' coal emissions would reduce Asia-Pacific's current total CO₂ emissions by 34%. This reduction will also result in making the region accountable for the 32% of the global CO₂ emissions instead of 48% at present. Furthermore, a coal phase-out would yield substantial environmental and public health benefits as it would reduce soil, water and air pollution and therefore improve public health.

In contrast, not taking action against climate change by phasing out coal will intensify the extreme weather events in the Asia-Pacific region - which has already been characterized as the most disaster-prone region in the world.^{ix} This will further lead to significant damages, fatalities and economic losses for countries.

Potential social benefits of a coal phase-out

Phasing out coal could also bring about positive socio-economic benefits for Asia-Pacific countries. Considering that only in Southeast Asia, fossil fuel subsidies were worth USD 35\$ billion in 2018,^x this implies that reducing subsidies for coal would reduce the budget deficits of Asia-Pacific countries and would thus allow a more efficient allocation of resources to take place.

Countries can also use a coal phase-out to switch to renewable energy – both with regards to energy use and jobs. By investing more on renewable energies, countries will be able to provide electricity access to even remote areas of the Asia-Pacific region. This will improve health, education, productivity and technology access and will eventually combat poverty and inequality for the underserved areas. There is evidence to suggest that renewables actually create more jobs than coal does.

Additionally, while the world moves gradually away from coal, focusing on renewables will reduce the risk of investing in stranded assets and will further enhance the energy independence and security of the Asia-Pacific region.

Compensating vulnerable populations for coal phase-out

COVID-19 has brought to the fore the need for governments to be ready to compensate vulnerable people, for example when they need to social distance or are made unemployed. There is no doubt that any coal-phase out would come with important challenges, but lessons can be learnt.

To address the implications of a coal phase-out - such as unemployment - and to ensure a just transition, Asia-Pacific countries can not only look to their COVID-19 experiences but also best practices of certain countries that have tried to make “coal transitions”. These can include measures to support directly affected groups or the use of new financial models.

For instance, Germany (Ruhr region), Italy (ENEL company)^{xi} and Australia (Hazelwood coal plant),^{xii} introduced work redistribution programmes for the affected populations, created new job opportunities in the renewable energy sector, provided financial support for skills development and training as well as launched early retirement schemes. Italy’s ENEL company, which launched its Future e-programme, decided to reuse and transform 9 out of its 23 thermoelectric plants into tourism/ hospitality facilities, biotechnology, multi-functional centres as well as into venues for local food and wine exhibitions.

Finally, in Chile, the Climate Investment Funds (CIF) and the Inter-American Development Bank (IDB) partnered to provide financial incentives to coal companies to reduce their greenhouse gas emissions and use clean technologies.^{xiii}

Options to Foster a Coal Phase-down

Based on the current coal production and consumption volumes of the Asia-Pacific region, it is clear that coal-related commitments currently included in countries’ NDCs do not come close to a full coal phase-out. However, this brief provides analysis of tangible benefits of phasing out coal as well as the best practices of other coal transitioning countries.

Several options available for Asia-Pacific policymakers and governments on how to accelerate a phase-out of coal arise:

1) Begin exploring now the domestic implications of a coal-phase out -using scenario analysis

In order to deliver on the Paris Agreement and ensure a green recovery from COVID-19, governments can first develop a range of just transition strategies and scenarios, including a coal-phase out to include in NDCs. This can be used to involve and inform all relevant stakeholders and consider different plans, strategies and policies that might be required for implementation.

2) Explore and learn from practices of the “role model” countries

Study the “role model” countries and identify the key elements that constitute a successful strategy for a coal phase-out (in particular their measures to support employment transitions) and be transparent about the coming changes. For example, if phasing out fossil fuel subsidies, clearly and transparently allocate the budgetary savings to accelerate investments in renewable energies (i.e., wind, solar), so that the public understands and buys into the process.

3) Engage the private sector and external financiers in a phase-out

Policymakers can collaborate with regional financial institutions (e.g. Asian Development Bank, AIIB) to further motivate private capital towards renewable investment/ away from coal faster. Public and Private Partnerships can also be created to reduce risk for the private sector to finance large-scale renewable energy projects.

4) Promote regional and international cooperation on coal-phase out

The wealthier Asia-Pacific countries can provide development and financial support to coal-dependent countries to shift investments towards clean energy. Moreover, all national and subnational governments of the region together with non-state actors such as the private sector, civil society organisations and research tanks can coordinate together and build a “coalition” for the coal phase-out process to share experience and ambition, and even conducting joint research into alternative energy options.

5) Leverage regional organisations for greater coordination

Countries can utilize existing regional and multilateral fora (e.g. ASEAN, UNEP, ESCAP) to work together to exchange experience and align coal-phase out policies and initiatives with each other. For example, much of Australia's coal is exported to China, not used domestically. Such organisations can also support in, for example, developing new regional initiatives and/ or leveraging agreements to facilitate trade of renewable energy, green hydrogen and more.

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