Paris Tango. Climate action so far in 2018: individual countries step forward, others backward, risking stranded coal assets

Summary of latest country assessments

3 May 2018

The Climate Action Tracker has updated our assessments of 23 of the 32 countries whose development on climate action we track.

While some progress has been made since November, most governments' policies are still not on track towards meeting their Paris Agreement commitments, many of which are in themselves far from sufficient to keep warming to the agreed 1.5˚C warming limit. Our assessments point to an urgent need for governments to scale up both their policies and targets to bring them more in line with a pathway to limiting warming to 1.5˚C.

Summary of progress across countries

Renewable energy from wind and solar is still developing so fast that the CAT had to revise its projections for emissions in 2030 downwards for the USA (despite the Administration's efforts in the opposite direction) and for Chile (where record low costs for RE paved the way to the adoption of a plan to phase out coal). Argentina presented new energy scenarios that, if implemented, would result in significantly lower emissions.

There are also some standout new policies that have been announced, but not yet implemented (nor quantified by CAT). An example is New Zealand's new government, which has announced it will be at net zero carbon by 2050 and will introduce a Zero Carbon Act.

An increasing number of countries are turning away from coal, with a new "Powering Past Coal Alliance" of more than 20 countries aiming at phasing out its use. One of its members, the UK, has decreased the share of coal in electricity generation from around 40% to 7% in 3 years. Germany, Europe's leading coal user, has just initiated a process to work out a phase out deadline. Outside the realm of national policies, international shipping acknowledged for the first time the need to phase out GHG emissions completely and has set the target to reduce its emissions by at least 50% by 2050 compared to 2008.

In contrast, there is still a disappointing theme of some governments not willing or able to give up coal (yet):

- **Governments that continue with thermal coal expansion**: Japan, Indonesia, and Turkey, for example, are still proceeding with coal plant construction plans that will continue to drive up emissions and risk significant stranded assets. Although China is stopping coal plant construction in some provinces due to overcapacities, coal continues to account for about two-thirds of electricity generation, and additional plants have been permitted. Total coal use in China rose again last year after a decline since 2013. Within the EU, Poland, this year's host of the climate conference, continues to rely heavily on coal and is alone in the EU planning expansion.
- **Governments that have decided to phase-out coal, but need further steps for implementation**: South Korea has announced its intention to shut down several old coal plants earlier than scheduled and to reconsider the new plants seeking permits or under construction, but has not yet been able to fully implement these aspirations. Other countries, for example Chile and Germany have taken a first step and decided to start a process to

determine phase-out schedules. In both countries almost half of the electricity today is generated by coal.

- **Governments still focussed on a coal-fired future, while the reality on the ground is renewables:** continued coal use appears to be still firmly in the sights of the USA and Australian governments, despite clear signs from on the ground that renewable energy is taking over due to cost-competitiveness—and is highly likely to continue doing so.

Under the Paris Agreement, governments have agreed to improve their commitments over time, with preparations for the first round ongoing in 2018. There is a need for most governments to scale up their targets by 2020 to bring them in line with the Paris Agreement 1.5 limit.

Some, for example Mexico and individual EU Member States (Germany, UK, France, Czech Republic) have already developed long term strategies and some are working on strengthening them. Others, like New Zealand, are working on developing strategies to implement their long-term targets. The EU is working on updating their existing long-term strategy as a basis to revise the 2030 target to speed up action. At the other end of the spectrum countries like Australia have failed to put forward long-term targets and any process to ratchet up their—inadequate—2030 target.

Summaries of selected countries

For complete assessments, methods and references, as well as additional countries, please visit our website www.climateactiontracker.org.

The US: Federal action highly insufficient – yet renewables pick up, emissions projections down

In 2017, fossil fuel-fired electricity generation declined in the United States for the first time since the 2008 financial crisis, as wind and solar reached record shares in the electricity mix, and 6.3 GW of coal-fired capacity was shut down, despite the Trump Administration's attempts to boost coal. Renewables and gas are expected to increasingly replace coal in electricity generation. US emissions projections decrease slightly through the early 2020s and then level off in 2030—5% lower than the CAT projected last year.

However, the Federal outlook on climate action has not improved, given a raft of rollbacks by the Trump Administration, including the increase in tariffs on imported solar cells, the Environmental Protection Agency (EPA)'s consideration of a new and weaker rule to replace the Clean Power Plan, its plan to weaken fuel efficiency standards for cars and trucks, the Bureau of Land Management's delay to key requirements to reduce methane from oil and gas production, and the Department of Interior's plan to expand offshore oil and gas exploration.

All eyes remain on the "We Are Still In" campaign where at least 21 states have emission reduction targets, and the full implementation of non-federal climate commitments could take the US halfway toward meeting its NDC commitments. However, the US target under the Paris Agreement would be "Insufficient" to limit warming to 2°C, let alone 1.5˚C.

China: Coal use key to when both CO_2 and overall emissions will peak

After declining between 2014-2016, China's CO_2 emissions rose to a record high in 2017, suggesting that it is still too early to say if they have peaked. This was due to an increase in coal use for the first time in three years (yet still below its 2013 peak), and a rising demand for oil and gas.

If its coal use drops over the next few years, it could be that 2017 was the year that China's CO_2 emissions peaked, which would mean total Chinese GHG emissions could plateau at close to 12.0 $GtCO_2e$/year. However, if coal consumption were to stall at today's levels, and no additional policies are introduced to limit other, non-CO_2 gases, China's total GHG emissions could continue to rise until at least 2030.

With current policies, China is on track to meet or exceed its Nationally Determined Contribution (NDC) under the Paris Agreement. Despite the increase in 2017 emissions, China has announced it has met its 2020 carbon intensity target in 2017, three years ahead of schedule, and the CAT analysis based on official Chinese GDP data confirms this. If China maintains this intensity level (or lowers it) over the next three years, it will achieve the intensity element of its 2020 pledge. Under current policies, China is also likely to achieve its (more stringent) 2020 target to limit fossil fuels, but neither of these targets are compatible with limiting global temperature increase to 1.5°C.

The European Union: More ambition needed toward 1.5˚C

Despite some progress over the last year the European Union has not yet effectively proposed an adequate policy response to the Paris Agreement's 1.5°C warming limit.

The EU's current policies are not sufficient to meet its 2030 target. In recognition of this, the EU is discussing a large package of measures—and it's crucial that the EU and its member states take action. Various EU leaders have voiced this need, but their views have not yet been reflected in actual policies. The new EU long-term greenhouse gas emissions strategy, that the Commission was called to prepare by the member states by the first quarter of 2019, offers an opportunity to increase the level of ambition to reflect the 1.5°C temperature limit.

Power sector emissions have seen the fastest decrease in emissions, but the EU needs to accelerate this trend by addressing coal, where emissions accounted for 66% of EU power sector emissions in 2017, only a slight decrease from 2016. An almost complete phase out is needed by 2030. Some Member States (Austria, Denmark, France, Finland, Italy, Portugal, Sweden, the Netherlands and United Kingdom)—accounting for 26% of EU coal capacity—have set phase-out goals that would achieve this. In Germany, the largest emitter of CO_2 from coal in the EU, a newly created commission will address this issue and determine the date for coal phase out. However, the second largest coal emitter, Poland is instead planning the construction of new coal-fired power plants. The reform of the EU ETS and the adoption of new air pollution regulations may reduce coal's competitiveness.

Meanwhile renewables development has slowed down, with newly installed capacity 2014–2016 40% lower than 2010–2012—completely out of sync with global trends. There also needs to be a step-change in meaningful action in the transport and buildings sectors. The EU as a whole is falling behind China, India, Norway and California in taking up electric vehicles.

India: Could be climate leader if renewables continue to trump coal

With its currently implemented policies, India's is expected to overachieve its Paris Agreement targets for climate action. Its plans include both a non-fossil capacity target for the power sector and an overall emissions intensity target for the whole economy by 2030. However, if India also were to fully implement its Draft Electricity Plan, it could achieve its target of 40% non-fossil-based power capacity by 2030 as early as 2020—a full ten years earlier.

It is clear that India could strengthen—and still achieve—its Paris Agreement contribution, in which case the CAT could upgrade its rating to "1.5°C Paris Agreement compatible." This would make India a global climate leader.

This would also require abolishing current plans to expand fossil fuel production and new-coal fired power plants. These plans appear to be in contrast with other policies—its draft National Energy Policy projects more than 60% of power capacity will be based on renewables by 2040. Declining future costs of solar and renewables storage is likely to foster low-carbon investments, and the Draft Electricity Plan confirms no new coal capacity is needed after 2022. India is also attempting to establish itself as a global leader on transport.

Russian Federation: Little progress, could risk global competitiveness

Since our last assessment in 2017, the Russian Federation has made little progress in climate action implementation—indeed, the government is delaying the adoption of ambitious climate targets and policies, which has led to it being the only big emitter that has not yet ratified the Paris Agreement. Their national strategy may delay ratification until at least 2019.

With this approach, the Russian economy is at risk of losing global competitiveness in the medium to long term in a market that is moving fast towards the development of low-carbon technologies. While it is more than likely that Russia will achieve its INDC target, the target is so weak that it would not require a decrease in GHG emissions from current levels—nor would it require the Government to adopt a low-carbon economic development strategy.

Japan: Coal is a concern, and key ministries diametrically opposed

Japan's coal plant construction plans, which could add a possible 17 GW of coal power, remain a concern and pose a serious risk to the government's future mitigation efforts. We project that the coal share could further increase by 2030 without a further push for renewables and if the nuclear reintroduction fails: coal could add about 100 $MtCO_2e$ a year to Japan's emissions.

The Japanese government is working on its new Basic Energy Plan but there is a disappointing absence of discussion on how it could improve its 2030 renewable electricity target, likely to be achieved with current policies, or on how to transform its energy system to a low-carbon one compatible with the Paris Agreement.

Instead it focusses on whether new nuclear reactors could be constructed toward 2050 and how to reduce the economic costs resulting from the renewable electricity support scheme.

Another point of concern is the development of a long-term strategy, as two key government ministries appear to be at odds with each other. The Ministry of the Environment (MOEJ) and the Ministry of Economy, Trade and Industry (METI) last year published reports that take fundamentally different directions.

While the MOEJ focuses on how to achieve the 80% by 2050 reduction target domestically, and emphasises a need for the early introduction of a fully-fledged carbon pricing scheme, the METI emphasises the difficulty of achieving the 2050 target domestically and instead focuses instead on Japan’s international contribution to global emissions reductions, and is critical about any introduction of a full-fledged, nation-wide carbon pricing in the near-term.

Australia: Emissions are increasing, no effective policies at federal level

Australia’s climate policy settings have not improved over the past year and its emissions are set to far exceed its Paris Agreement 2030 target. While the Federal Government continues to maintain that they are on track to meet that target, the CAT is not aware of any factual basis to support this.

The Federal Government continues to promote coal as a solution to energy security issues, downplay renewable energy and obfuscate on its climate policies. Its proposal, with the National Energy Guarantee (NEG) to set an electricity emissions reduction pathway along the same pathway as overall emissions reductions is contrary to independent advice that shows this sector needs to – and can – reduce emissions much faster than industry or agriculture and risks slowing down investments in renewable energy below business as usual, as well as locking-in carbon intensive fossil fuel infrastructure (coal and gas).

Meanwhile at state level, public opinion and across the business sector in Australia, is taking action, with all states and territories (except Western Australia) with strong renewables targets and/or zero emissions targets in place. One of them – South Australia (SA) is widely viewed as a global leader: with a 48% share of total generation in wind and solar, it has one of the highest shares of variable

renewable energy and it has the world's largest lithium ion batteries. However, the South Australian government has recently changed, which could slow progress in the state.

Australian households are massively deploying small-scale solar – at a 15% share it's one of the highest in the world – and increasingly combining this with battery storage. Public opinion is supportive of renewables and climate policy.

New Zealand: Implemented actions insufficient, but set to step up climate action

Across the Tasman from Australia, New Zealand is set to go in quite a different direction. Its climate policies are about to undergo an overhaul after the 2017 election of a new Government, which has declared climate action as one of its priorities. An independent Productivity Commission last week released the first draft of its "Low Emissions Economy" report that sets out a strategy for the country to achieve Net Zero emissions by 2050. It includes a range of options for action across the economy, including transport and agriculture and recommends a reformed ETS and increased carbon pricing. The Government is also drawing up a "Zero Carbon Act" to be introduced later this year that will set up an independent Climate Commission, and the Prime Minister recently announced a ban on new offshore oil and gas drilling.

However, the CAT cannot yet quantify the potential impact on emissions projections. The most recent projections show emissions will be around 21% above 1990 levels by 2030,—a reduction of only 6% compared with business as usual—far from its "Insufficient" Paris Agreement target. Emissions from the industry and transport sectors are projected to continue growing until 2030. This growth will be compensated by emissions reductions in the energy and agriculture sectors, resulting in a net 4% reduction of emissions excluding LULUCF by 2030 compared to 2015 levels. Additionally, the LULUCF sector, which historically has represented a big carbon sink, will see a progressive reduction from -24 $MtCO_2e$ in 2015 to approximately -16 $MtCO_2e$ in 2020 and -4 $MtCO_2e$ in 2030.

South Africa: Fossil fuel interests delay progress

Progress in South Africa's energy policy has been plagued with delays caused by President Jacob Zuma's former government's interests, unresolved questions about the 'just transition' away from coal-based electricity generation, and fossil fuel industry pushback.

Both the Department of Energy's Integrated Resource Electricity Plan and the Government's Carbon Tax have been delayed for two years, with neither yet in place. The financially struggling state-owned power utility Eskom has only just signed long-awaited power supply contracts with renewables companies, again after two years of delays, putting the country's investment attractiveness for renewables at risk. With the inauguration of new President Matamela Cyril Ramaphosa in February 2018, the Department of Energy has yet to release its long-awaited update of South Africa's plan for future energy supply.

The exact start date for South Africa's planned carbon tax remains uncertain; it may start by mid-2018 after additional Parliamentary hearings. And yet, external analysis shows the carbon tax in its final form may provide exemptions for up to 95% of emissions during the first phase up to 2022. While South Africa may get close to meeting its 2030 NDC target; it is weak, and the CAT rates it as "Highly Insufficient". South Africa does have a strong renewable energy target for 2030, but its coal-fired generation, which supplied 92% of electricity in 2015, is still expected to grow, with many new coal plants planned and under construction.

Brazil: Going backwards on deforestation promises

Brazil's remarkable progress in slowing deforestation, and the resulting emissions, observed since 2005, appears to have stopped, with deforestation and emissions increases have picked up speed again. Total deforestation increased almost 30% in 2016 from 2015 with more than 50% in the

Amazon region. This goes in the opposite direction of Brazil's commitments under the Paris Agreement, which include a target of zero illegal deforestation in the Brazilian Amazonia by 2030. Early estimates for 2017 give hope that at least in the Amazon deforestation has declined again, however uncertainty about other regions and observation of increased fires are a cause for concern.

Budget cuts of 50% to the Environment Ministry, 70% to deforestation monitoring authorities, and other areas raise issues of concern around the Government's ability to adequately monitor deforestation, and this has been seen in the increase in deforestation. Not only has the Government reduced the enforcing capacity of authorities but it has also started to reverse land use policies already in place, regularising more illegal land-grabbing practices and removing protection from national forests.

Given the key role of the LULUCF sector in Brazil's NDC and the huge importance of its forests for environmental services, biodiversity, and carbon sequestration, the Brazilian government urgently needs to strengthen mitigation action in this sector—instead of weakening it.

South Korea: Coal shutdown scaled back, much work still to do

The South Korean government recently released a new 15-year "Plan for Electricity Supply and Demand" that confirms President Moon Jae-in's stated intention to increase the share of renewable electricity generation—a positive sign that his government is willing to take more climate action.

Under the plan, South Korea aims to expand the share of renewables in 2030 to 20% of generated electricity, building on the 10% share by 2024 currently targeted by the renewable portfolio standard. However, South Korea's power generation mix will remain heavily dependent on thermal coal, which will still account for more than a third of generated electricity in 2030.

If fully implemented together with the expected lower level of electricity demand, these announcements would lead to emissions reductions that are still a way off from meeting the level of South Korea's Paris targets. The mitigation commitments themselves are also still very weak, and domestic greenhouse gas emissions are projected to more than double in 2030 from 1990 levels. They are already above 1990 levels and, in a country with some of the fastest growing emissions in the OECD, the South Korean government still has a lot of work to do.

Indonesia – Coal plans cause increase in emissions and risk stranded assets

Indonesian energy policy is out of step with global trends where renewable capacity additions have overtaken coal. Indonesia's new updated energy plan, released in 2018, foresees overall lower capacity additions than previously, but still adds 27 GW of coal-fired power in the next ten years and only 15 GW of renewables over the same period. Planned capacity additions for both gas and renewables have been slashed in favour of coal, and most of the planned renewables come in well after 2020, while a significant share of the planned coal will be commissioned in the next five years. Over the past five years, Indonesia's coal capacity has already increased by 13.6 GW compared to 1.8 GW of renewable energy. By continuing on this high carbon path, Indonesia is risking significant stranded assets in both domestic coal production and coal power plants.

Indonesia's emissions have increased at a faster rate between 2012- 2014 than previously. Whilst there has been a peak in forestry-related emissions, mainly from peat fires, there has been a rapid upward trend in energy-related emissions, linked to a fast- increasing energy demand and continued dependency on fossil fuels.

Chile – Progress on coal-phase out but still more work to do

In early 2018, Chile announced that it will not build any new coal-fired power plants and will phase out the existing plant stock—which makes up 44% of electricity generation—by 2050. This is in line with current trends in Chile, where coal-fired power plant permitting has stalled in recent years in response to comparatively low costs of renewable energy. Chile's revised energy sector planning,

published in December 2017, already reflects this change, with no additional coal plants added beyond those under construction today. Renewables, in contrast, are expected to account for 56% of electricity generation in 2030.

The changes in the energy supply sector are substantial compared to previous assessments, and are linked to the increasingly lower costs for renewable energy in Chile, particularly solar, in comparison to coal (Ministerio de Energía 2017b; IRENA 2015). Current solar PV and onshore wind costs in Chile are as low as USD 0.03/kWh to USD 0.04/kWh (IRENA 2018).

The updated scenario under implemented policies also represents a significant downward shift from earlier estimates, projected emissions in 2030 are now 28% lower than previously projected. If Chile follows this scenario, it will achieve its 2020 pledge and come close to meeting its unconditional NDC target, which is in itself "Highly Insufficient" and instead consistent with warming between 3°C and 4°C.

Argentina – Policies under revision taking the right direction

Argentina is currently revising its energy planning and, in December 2017, released a new set of energy scenarios, which would lead to significantly lower emissions—if additional measures are implemented—compared to current policy projections. With the lower end of the scenarios, assuming a more modest growth of energy demand and optimistic assumptions on renewable and nuclear additions, Argentina could even overachieve its unconditional climate target (NDC) submitted under the Paris Agreement.

Since 2015, when President Mauricio Macri was sworn into office, Argentina has shown significant positive developments in the climate arena by adopting policies such as the 'Biofuels Law' and the new 'Renewable Energy Law,' and implementing a carbon tax in December 2017. Argentina is one of the few countries we have assessed that has increased the targets in its NDC since the adoption of the Paris Agreement.

International Maritime Organisation

The International Maritime Organisation (IMO) has reached an historic agreement on a climate strategy after 20 years of being charged with the issue. The agreement includes the *aim to reduce total annual GHG emissions from international shipping by "at least 50% by 2050 compared to 2008 whilst pursuing efforts to phasing them out as called for in the Vision as a point on a pathway of CO_2 emissions reductions consistent with the Paris Agreement temperature goal".*

With this agreement, the IMO has acknowledged that GHG emissions must be phased out completely to be in line with the Paris Agreement. The hope is that this will spur investments in zero carbon technologies for shipping. This stands in contrast for example to ICAO (International Civil Aviation Organization), which only has agreed on an aspirational target for carbon neutral growth to be achieved mainly through offsetting emissions in other sectors.

Opinions differ on whether a reduction of 50% from international shipping by 2050 is fast enough to be in line with the Paris Agreement temperature goals and we note that the agreement states "*at least 50%*"; an acknowledgement that more may be necessary. CAT has not yet assessed the target in detail.

The Climate Action Tracker is an independent science-based assessment that tracks the emission commitments and actions of countries. It is a joint project of the following organisations:

Climate Analytics

Climate Analytics is a non-profit institute based in Berlin, Germany, with offices in Lomé, Togo and New York, USA, that brings together inter-disciplinary expertise in the scientific and policy aspects of climate change with the vision of supporting science-based policy to prevent dangerous climate change, enabling sustainable development. Climate Analytics aims to synthesise and advance scientific knowledge in the area of climate, and by linking scientific and policy analysis provide state-of-the-art solutions to global and national climate change policy challenges. Contact: Dr. h.c. Bill Hare, +49 160 908 62463

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