South Africa, the G20 and Climate Change: from Brown to Green?

The G20 meeting which has just been concluded in Hamburg, dogged by protests, was originally intended by the German presidency to be a way of building momentum around climate action in the wake of the Paris Agreement; however, the election of President Trump, and his subsequent decision to pull the US out of the Agreement, changed the nature of the summit altogether. There was widespread trepidation that the political consensus developed in Paris in 2015 on climate action would be shattered by the US withdrawal. In an unprecedented development, however (foreshadowed by the G7 earlier this year), the G20 Communiqué made a distinction between the US and the rest of the G20 (the G19), noting the US withdrawal, but also clearly stating that the Paris Agreement is "irreversible", and reaffirmed their "strong commitment" to implementing the Agreement. Trump found no supporters even amongst countries traditionally hostile to climate action such as Saudi Arabia. Since the US last pulled out of a global climate agreement (the Kyoto Protocol, in 2001, during the Bush Administration), two things have changed: (i) global political will has strengthened dramatically to act on climate change, as some of the impacts are beginning to be felt, and (ii) the architecture of the Paris Agreement itself is more robust politically.

The Paris Agreement in 2015 was a landmark in the global effort to address climate change, concluded after more than two decades of painstaking international negotiations under the auspices of the United Nations Framework Agreement on Climate Change. One of the key features of the Agreement is its "bottom up" nature. Instead of prescribing what action countries should each take on climate change (one of the key sticking points of previous negotiations), the Agreement specifies a global goal which all countries will strive together to accomplish. This is in the form of a commitment to keep the global average temperature well below 2 degrees, and make efforts to strengthen efforts to limit warming to 1.5 degrees (considered the danger thresholds, over which climate change will have serious consequences). All countries also commit to making a 'nationally determined contribution' to this effort, decided by each country – the 'bottom-up' approach, as opposed to setting national emissions commitments centrally. This includes details on how their national emissions will be limited, measures taken to adapt to climate change, and in the case of developed countries, what assistance will be provided to developing countries to help them transition to a low carbon development path. Every five years, countries will jointly assess progress against the overall temperature goal under the auspices of the UNFCCC – to assess how countries are doing, and what the aggregate effect of their contributions will be in temperature terms. Countries then make further commitments, taking into consideration this global 'stocktake' - how the collective action of all countries matches up to the Paris Agreements goals, and what further action is required.

Since the scale of the actual commitments which countries make are up to the countries themselves, a lot therefore depends on peer pressure (from other countries), and political pressure from the public. The key question is what reasonable efforts should each country be expected to make to limit emissions growth and/or reduce emissions? This varies widely between countries – some have growing populations, and some do not have; some are very wealthy and some not; some have an abundance of fossil fuels, or of renewable energy resources, and some do not; and each country has its own challenges that it has to meet at the same time as tackling climate change. In addition, some countries bear a far higher share of responsibility for climate change than others. Making useful

comparisons between the efforts of different countries is complex. This is where Climate Transparency comes in.

Climate Transparency is an international consortium of researcher organisations and civil society groups in Argentina, China, India, Indonesia, Brazil, South Africa, Germany, France, Mexico and the UK. Their work is focused on the G20 countries, which between them produce 80% of global GPD (PPP), are home to two thirds of the world's population and produce more than three quarters of the world's greenhouse gas emissions. Every year, Climate Transparency produces the Brown to Green Report, coinciding with the annual G20 Summit, to track the progress that G20 countries are making in their efforts to address climate change.

The Brown to Green Report draws from a wide range of existing research and analysis from academic institutions, international institutions such as the International Energy Agency, the UNDP and the World Bank, and national sources, to compare the performance of the G20 countries in terms of a wide range of policy indicators. These include GHG emissions and emissions trends; GHG and energy intensity of G20 economies; progress in putting key policies in place to decarbonise their economies; assessments of sectoral policies in areas such as the promotion of renewable energy, carbon pricing, and the removal of fossil fuel subsidies; and for developed countries, the provision of international finance to developing countries to address climate change. The Report also contains a critical assessment of what level each countries' emissions will need to reach over the period to 2050 in order to meet the temperature goal of the Paris Agreement, using a number of different approaches to assess what the contribution of each country should be, and how this compares to current commitments made by each country.

The report and related resources can be found here, or download the full report here, and the South African fact sheet here.

G20 countries are on the whole taking action on climate change and putting in place policies to achieve long-term emissions reductions, but are not moving quickly enough, and their intended contributions to the global effort are on aggregate not ambitious enough to avoid dangerous climate change. At the same time, G20 countries are still investing in fossil fuel infrastructure and have not made sufficient progress in phasing out fossil fuel subsidies.

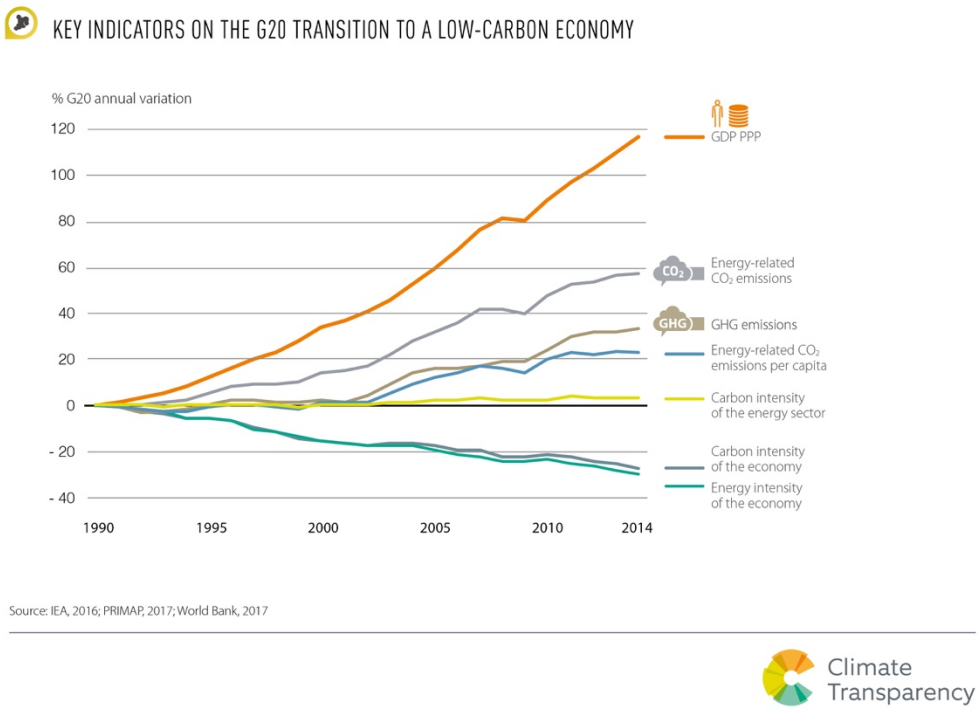

Figure 1 – Trends in key G20 climate indicators 1990-2014

There are some striking indications however that things are changing, as can be seen from Figure 1 above. From 1990 to 2014, G20 GHG emissions grew by 34%, but at the same time their economies grew by 117%, indicating a trend for emissions to decouple from economic growth as energy efficiency increases and more is invested in low-carbon infrastructure. Even more striking is that G20 energy emissions have stalled in the period 2014 to 2016, while economies continue to grow. Over the period 1990 to 2014, in the G20, both GHG and energy intensity (GHGs/GDP and energy/GDP) have consistently fallen.

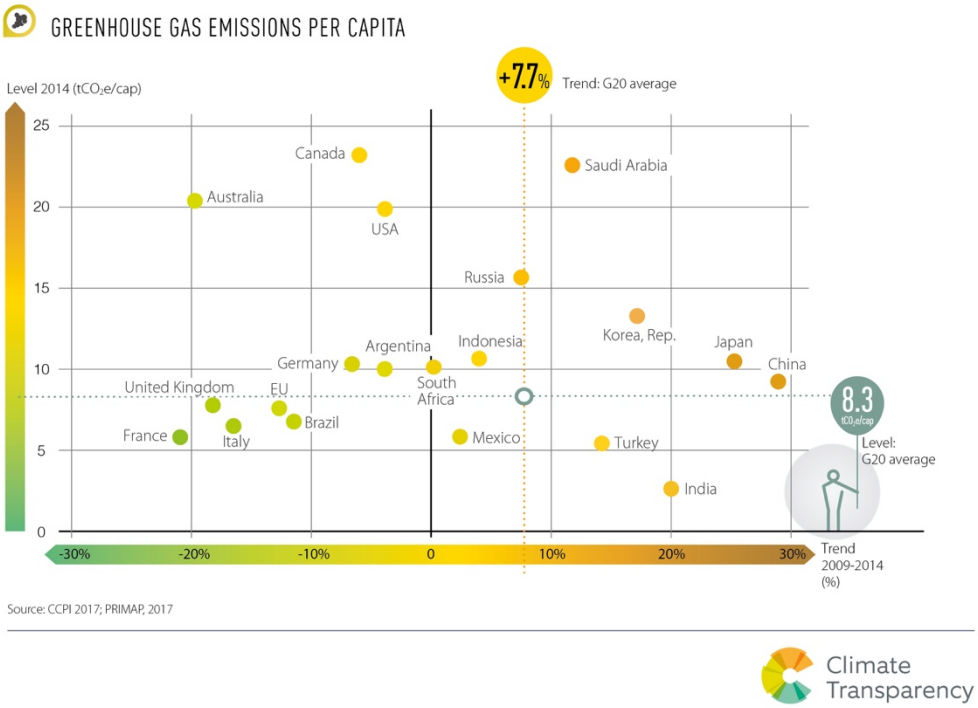

Figure 2 – GHG/capita emissions for G20 countries (2014) and their rates of change (2009-2014)

One of the most interesting aspects of the Report is the view it affords of South Africa's climate change efforts in relation to other G20 countries. Key findings for South Africa are:

- South Africa's international commitment to reduce emissions is inadequate in relation to the Paris Agreement goal;
- South Africa's coal use is the highest in the G20;
- South Africa's use of renewable energy is amongst the lowest in the G20 (second lowest), but the renewables programme (REIPPPP) is changing this;
- South Africa is rated internationally as an attractive destination for investment in renewable energy, but the standoff between Eskom and government on the latest round of REIPPPP contracts is leading to a loss in confidence amongst international investors;
- South Africa's climate policy, and particularly its role in international climate negotiations, are well-regarded.

South Africa's GHG emissions comprise 1.1% of global emissions, but our GDP is only 0.6% of global GDP (PPP). South Africa's emissions per capita is above the G20 average, as can be seen in Figure 2, whereas our development level (measured by the UNDP's Human Development Index) is below the G20 average.

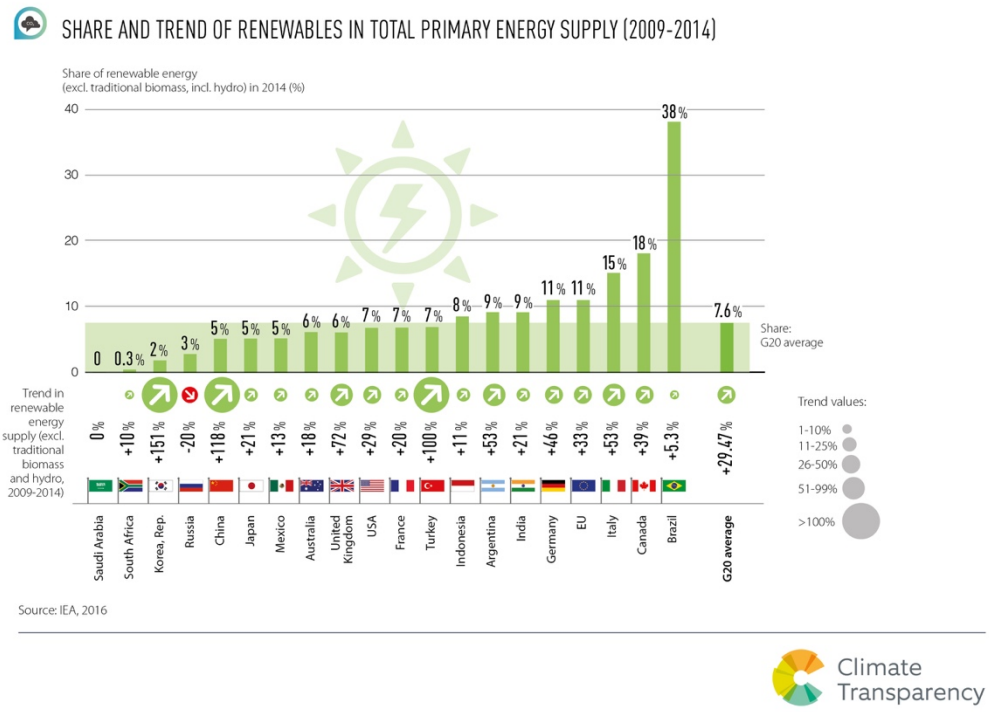

Figure 3 – Renewable energy as a share of total primary energy supply (excluding traditional biomass use) for G20 countries (2014)

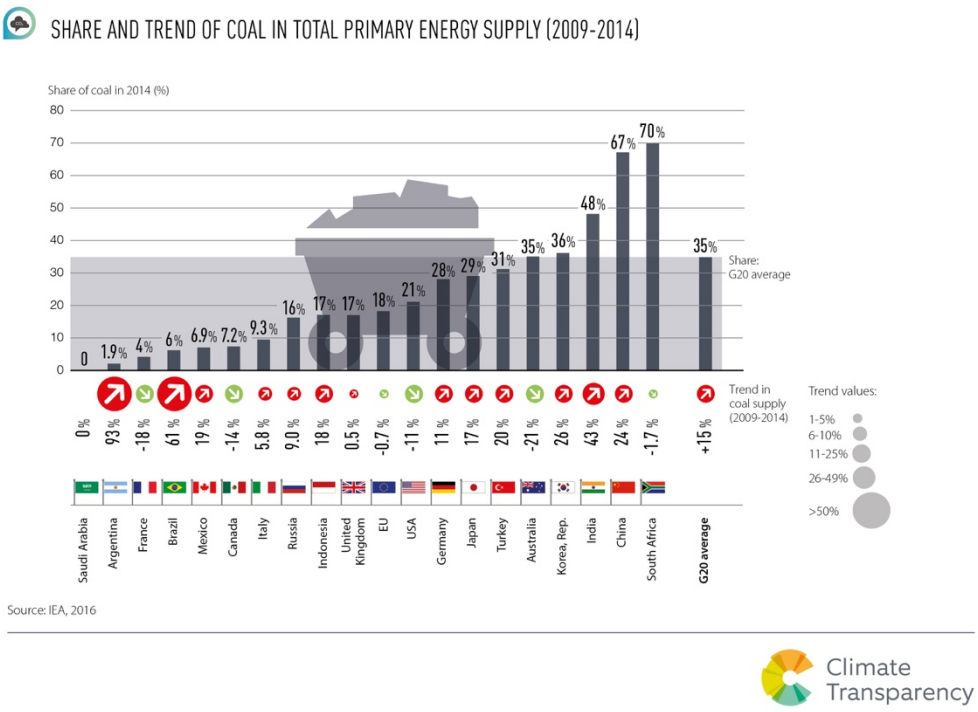

Figure 4 – Coal use as a share of total primary energy supply (excluding traditional biomass use) for G20 countries (2014)

This is primarily because of South Africa's historical dependence on coal, and in fact, as a percentage of our primary energy supply, South Africa's coal dependence is the highest in the G20 (see Figure 4), and also has one of the lowest shares of renewable energy of G20 countries (see Figure 3), as of 2014. Since the REIPPPP was only beginning to have an impact on South Africa's energy mix, next year's report should reflect an upturn in South Africa's use of renewable energy.

South Africa does not compare well on other indicators of energy efficiency and intensity, primarily because of our legacy of very low energy prices. Interestingly though, for the last few years, South Africa's emissions are no longer growing, and our economy's emissions intensity is dropping. South Africa's climate policy is well-regarded in the report, and South Africa rated as an attractive destination for renewable energy investment in 2014. Up until recently South Africa's investment attractiveness for renewable energy was ranked medium to high, due to the successful design and implementation of the REPPPP. However, South Africa's attractiveness has dropped with the credit downgrade, and particularly with the uncertainty surrounding the standoff between Eskom and government on the signing of the latest rounds of power purchase agreements. The Renewable Energy Country Attractiveness Index is available here.

South Africa's current Nationally Determined Contribution (NDC) is rated as inadequate by the Report, based on an assessment by Climate Action Tracker, an initiative of Climate Analytics, Ecofys, The New Climate Institute and the Potsdam Institute for Climate Impact Research which use a variety of metrics to assess the adequacy of countries' NDCs against the global temperature goal agreed in the Paris Agreement. By way of comparison with other G20 countries, South Africa is part of a group of countries whose NDCs are rated "inadequate" - Argentina, Australia, Canada, Japan, the Republic of Korea, Russia, Saudi Arabia, Turkey and the USA. Other G20 countries' NDCs,

including those of our BASIC partners India, China and Brazil, as well as our fellow developing countries Indonesia and Mexico, are ranked “medium” (minimum level necessary to keep us under 2 degrees). Details on Climate Action Tracker’s analysis of South Africa’s NDC is available here.

Overall, challenges remain for South Africa, in implementing our climate policy, addressing the legacy of our energy- and emissions-intensive economy, including our continued high dependence on coal. South Africa clearly needs to shift development paths, and make extensive use of our abundant solar and wind resources, which are now cheaper than fossil fuels. Despite the US’s exit from the Paris Agreement, the rest of the world has reaffirmed the importance of implementing the Paris Agreement. South Africa, as well as other countries, will be required to implement its NDC, and will very likely be required to do more in addition to this. Climate Transparency will hopefully aid in promoting a ‘race to the top’.