Coal phase-out: A reality check for the 1.5°C target.

Going beyond the Suva Declaration

Pacific Climate Diplomacy Seminar Series
Lower Campus, USP
Thursday, 28 September 2017
Secretary General, PIDF, François Martel
Paris Agreement coming to town

“Holding 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 above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change”

“In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach a global peaking as soon as possible ..., and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of [GHGs] in the second half of this century”
Reality check – Pacific Islands

- Global 2020 emissions targets are not in line with either 2°C or 1.5°C pathways – more like 3.7°C
- Most larger emitters - no emissions reduction policies in place to deliver on their pledges
- GHG emissions continue to increase
- Urgency to close the mitigation gap
- Increasing existential risks for low-lying atolls and coastal areas
Current ambition not compatible to 1.5 degree target
Reality check – Carbon budget

• Only 5.2 years left with the world at 66% chance of remaining under 2.0°C (2015)
• 80% of known fossil fuel reserves need to stay in the ground
• 80% of all coal reserves
• 33% of all oil reserves
• 50% of all gas reserves
• Fossil fuel companies overvalued (Carbon bubble)

CARBON BUBBLE
Emissions from burning all known reserves of coal, oil and natural gas.

2.795 billion tons of CO₂

565 billion tons of CO₂

Remaing carbon budget
This is how much CO2 can be emitted until 2050 and still give a reasonable chance of staying below 2 degrees Celsius of global warming.
Coal in the Global Emission Equation

- Energy sector largest source of anthropogenic emissions globally (≈70%)
- ≈ 90% Energy sector emissions are CO₂ emissions (≈ 60% of global emissions).
- Coal ≈ 29% of the world Total Primary Energy Supply in 2014 but 46% of the global CO₂ emissions

Source: IEA 2016
The case against coal

- Dirtiest fuel for energy with strong negative impacts on climate, pollution and health
- Large consumption of scarce water resources
- Coal-powered plants account for 2/5th of global related carbon emission
- Marked by large corruption scandals in coal-plant contracts
- Economics of coal projects and investment worsening – risk of stranded assets
Good news - Renewable Energy is Cheaper than Coal

Source: Global CCS Institute for CCS numbers, Lazard for the costs of renewables
Good news - New Solar PV and Wind Generation exceed Coal and Gas in 2016

New energy build in 2016

Net addition (in gigawatts) of electricity generation capacity

In 2015 renewable investments in developing countries surpassed that of industrialised countries

Source: REN21/IRENA/WNA
Good news - Public Opposition to Coal!

Myanmar  Bangladesh  China  India  United States
South Africa  Japan  Turkey  Germany  Poland
Indonesia  Vietnam  South Korea  Philippines  Thailand
Kenya  Australia  Russia  Canada  Chile
Grassroots Protests in Australia
Coal production – peaking?

Global coal production

-6.2% In 2016

World coal production fell by 6.2%, or 231 mtoe, the largest decline on record.

An increasing number of countries are either closing down old plants or rethinking plans to build new ones.

64 GW of coal plants have been retired in the past two years, mainly in the EU and the U.S.

China and India have recently put 68 GW of planned coal-plant construction on hold.
World coal deposits
World Coal Reserves

United States: 237.29 billion tonnes
Russia: 157.01 billion tonnes
China: 114.50 billion tonnes
Australia: 76.40 billion tonnes
India: 60.60 billion tonnes
Germany: 40.70 billion tonnes
Ukraine: 33.87 billion tonnes
Kazakhstan: 33.60 billion tonnes
Colombia: 6.74 billion tonnes
Canada: 6.58 billion tonnes
Australia’s increasing coal production

Coal production levels
Australia’s coal production has increased over the past few years contrary to the trend of other developed countries.

COAL PRODUCTION FROM 2005-2014
For selected developed countries

GLOBAL COAL PRODUCTION FOR 2014

Source: Enerdata
J. Wang, 11/08/2015
Coal – CO2 emissions update
Coal Emissions Gap

Coal and the Paris Agreement CO₂ Emissions Gap

Approximate fraction of fossil CO₂ abatement gap
Coal 81%  Oil 12%  Gas 6%

- Projected change 2014-2030
- Paris Agreement compatible change 2030 compared to 2014
Existing and Planned Coal Capacity Exceeds Paris Agreement Targets

![Graph showing CO₂ emissions from existing and planned coal capacity against least-cost pathways.]

- **Coal phase-out by 2050**
  - By 2030 OECD
  - By 2040 China
  - By 2050 Rest of World

- **No new (and a significant part of present) 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

Source: NASA/joeri Rogelj, GCPT, own calculations
Regional picture for coal
Coal hotspots – most action needed

- Where are biggest divergences between where we need to go and current plans?
  - Metric used is annual reductions needed from current policies in 2030 to a Paris Agreement pathway
- North America projected to decrease but not fast enough so is in top 3 regions.
- East Asia also projected to decrease but also not fast enough so is top region
Coal-power – cancellation high
New Coal plants – in the pipeline

REGIONAL BREAKDOWN OF COAL PLANT STATUS (GW)

- **US**: 287 (Operating: 287, Construction: 0, Pipeline: 0)
- **ROW**: 175 (Operating: 153, Construction: 22, Pipeline: 20)
- **EUROPE**: 209 (Operating: 200, Construction: 10, Pipeline: 10)
- **SEEA**: 161 (Operating: 116, Construction: 45, Pipeline: 0)
- **INDIA**: 213 (Operating: 167, Construction: 46, Pipeline: 29)
- **CHINA**: 921 (Operating: 775, Construction: 146, Pipeline: 134)
Not there yet - Conclusions

• Coal needs to be phased out to achieve the Paris Agreement Goal of holding temperature increase to 1.5°C above pre-industrial levels…. noting that currently temperature rise is already over 1°C
• Much faster and decisive action is needed to phase-out coal and prevent coal lock-in and the greater risk of stranded coal mining and coal power station assets and big amounts of already available stocks of coal.
• Current plans in most regions are not in line with Paris Agreement targets.
• Renewable energy is cheaper than any other form of energy
• Unlike other capital infrastructure related to coal and fossil fuel derived energy production, renewable energy infrastructure is scalable.
Pacific future reality
The Pacific’s call...

“I urge you, Mr Turnbull (Australia’s PM) ... to side with us in the Pacific against the proponents of coal and the climate change deniers in your own government.”

[PM of Fiji Hon Voreqe Bainimarama... Oct. 2015]

“We all know that using coal for energy is one of the biggest polluters in the world... we would expect the bigger countries like Australia to do the right thing.”

[PM of Cook Islands Hon Henry Puna... Sep. 2017]

“Australia is creating the cause of the possible demise of my people... there is strong resentment of Australia’s double standards...”

[PM of Tuvalu Hon Enele Sopoaga... Sep. 2017]
PIDF’s response

..call for: a new global dialogue in the implementation of an international moratorium on the development and expansion of fossil fuel extracting industries, particularly the construction of new coal mines, as an urgent step towards decarbonising the global economy.

[PIDF Suva Declaration on Climate Change – September 2015]

“The burning of Australia’s coal alone would be enough to tip global temperature above the 1.5⁰C target... Add to this the upward of 450 million tonnes in emissions as a result of shipping that coal to its destination countries, and Australia alone can guarantee we will bust that target. And this to the detriment of its small island neighbours. That is morally wrong and totally against the spirit and letter of the Paris Agreement.”

[PIDF SG François Martel – September 2017]

Calls for the implementation of an international moratorium on the construction of new coal mines

[PIDF Guidance Note for COP22]
Pacific drive - Phase out of coal

- Diplomatic and political leadership is needed that is not influenced by the coal industry and its powerful lobby.
- Advocate for a global moratorium on new coal mines and new coal investment – explore a Pacific submission to UNFCCC at COP24 in 2018.
- Develop combined multi-level informal diplomatic activity in the Pacific region and globally under coal to clean (use international fora – WB Small States Forum, G20, G7, UNFCCC COPs, etc.)
- Finalize and ratify a Pacific Climate Change Treaty for the Phasing out of fossil fuel in the Pacific – in line with NDCs and Paris agreement, keeping Pacific leadership after Paris 2015. (PICAN/PIDF)
- Lobby strongly on development partners and multi-lateral banks and institutions against financing of coal investment in developing countries
- Target P-SIDS diplomatic campaigns towards the 10 coal hotspots responsible for most of the pre-construction pipeline, and engage the UN agencies in scaling-up capacity to assess risk on coal investment and promote clean alternative, including through turning NDC’s into plans and strategies that contain coal peak and phase out approaches.
- Develop an Alliance with the Caribbean countries on climate action and phase out of coal – using the current hurricane disasters as legitimate loss and damage case.
Pacific drive – Phase out of coal

- P-SIDS diplomatic campaign to support high coal exposure countries to an accelerated rate of phase-out of existing coal-plants and coal production while making early commitments to a just transition for their labour force.
- Put strong emphasis in the arguments of importance of co-benefits in the narratives of the campaigns – health, low costs of renewable, reduce water impacts and achievements of NDCs.
- Promote the circular economy and support the business case for opportunities outside of coal including leveraging cities and other non-state actors leadership.
- Support the work and advocacy of the Carbon Pricing Leadership Coalition in setting up carbon and water pricing to increase the efficiency of climate action, addressing the asymmetry across different carbon-prices, and promote a regulated international market.
- Fuel and engage in global campaigns against coal with Civil Society, by providing country leadership support in the discourse and advocacy across international fora.
Vinaka vaka levu
Discussion/questions