

Republic of the Philippines Commission on Human Rights

CHR-NI-2016-0001 In Re: National inquiry on the impact of climate change on the human rights of the Filipino People

Supplementary Statement of Resource Person, Laura Gyte

1. This supplementary statement is to provide the Commissioners with the information requested in questions following my presentation at the hearing on 11 December 2018.

1) Methodology for calculating costs of investment in fossil fuels

2. Our figures on the climate damage resulting from investment in coal plant in Asia are from the Oxfam research report “*The AIIB’s Energy opportunity: Background Research Report*” of June 2017, produced by the Stockholm Environment Institute for Oxfam. A copy is exhibited.¹
3. Figure 1 on page 3 of the report shows the expected climate damages in Asia per dollar invested for a typical, ultra-supercritical coal power plant (i.e. the ‘cleanest’ technology). Four estimates are given, corresponding to different estimates of the climate damages per tonne of CO₂ emissions published by the United States Interagency Working Group on the Social Cost of Carbon (US IWGSCC, 2015). (The details and limitations of these values are explained in the Methods section of the report starting on page 9). The report finds that for the ultra-supercritical coal power plant, every dollar invested could be associated with \$11 damage in Asia alone, and up to \$29 damage globally. These costs include things like lost harvests, and damage to property due to sea level rise.
4. The methodology to arrive at these figures is also set out in the Methods section of the report from page 9.

2) Cost of renewable energy compared to fossil fuels

5. I include here some further detail on renewable energy becoming increasingly cost competitive with fossil fuels reaching parity or cheaper, in numerous markets (developed and developing countries).

The global picture

6. According to IRENA, since 2014, onshore wind, biomass, geothermal and hydropower are now cheaper than new coal, oil and gas-fired power stations on a global level - even without financial support and despite relatively low oil prices.²

¹ https://d1tn3vj7xz9fdh.cloudfront.net/s3fs-public/file_attachments/rr-aiib-energy-opportunity-background-research-210617-en.pdf

² IRENA 2017, http://www.irena.org/DocumentDownloads/Publications/IRENA_REthinking_Energy_2017.pdf, p9 and figure 1.6 on p22

7. Solar is catching up fast. Since 2014 the average global cost of solar has come down by a third – meaning that in some countries, it is now a cheaper option to build a new solar power plant than a coal or gas one. According to Bloomberg, this is the case in US, Australia and much of Europe. IRENA says “*solar PV is competing without financial support even in regions with abundant fossil fuels (IRENA, 2016).*”
8. Bloomberg predicts that new solar will be cheaper than *new* coal in China, India, Mexico and Brazil by 2021 – and throughout Asia as a whole by the mid-2020s. And from 2030, wind and PV will start to undercut *existing* coal plants on an operational basis in some countries, like China and India, meaning that coal plants built now increasingly look like stranded investments as they would become unprofitable after only a third of their normal lifespan.³
9. In the last seven years alone, costs of key RE solutions have significantly reduced. Solar photovoltaic (PV) module prices dropped by over 80 per cent; while wind turbine prices decreased in price by 30 to 40 per cent. The global weighted average cost of electricity from solar PV fell by 73 per cent between 2010 and 2017 to USD 0.10 per kilowatt-hour (/kWh), while onshore wind fell by 23 per cent to USD 0.06/kWh (see International Renewable Energy Agency, 2018).⁴

Renewables in the Philippines

10. In contrast to global trends, where renewable energy generation already constitutes the bulk of power sector capacity additions since 2012, the Philippine renewable energy sector still has to play catch up. As of 2015, wind energy has only provided 216 megawatts (MW) of installed power capacity (Global Wind Energy Council, 2015); solar energy contributed 122 MW (International Energy Agency, 2016); and geothermal energy provided 1,870 MW (Bertani, 2015). These additions are still minimal compared to the extent of unexploited Philippine renewable energy potential (see Jacobson, et al., 2018).
11. Supporting a Philippine renewable energy transition also significantly reduces air pollution, particularly in the country’s major cities. The cost of pollution to public health are enough justification for escalating the energy transition. Recent estimates suggest that these health, environmental, and climate benefits would, in sum, save up to six times more than the additional costs associated with reconfiguring the energy sector, all while creating thousands of jobs in the process.⁵ A Stanford University study, for instance, notes that about 126 thousand construction jobs and another 102 thousand operation jobs where a person is employed for 40 consecutive years can be created with a 100 per cent renewable energy Philippines (Jacobson, et al., 2018). The same

³ BNEF 2017, <https://about.bnef.com/blog/global-wind-solar-costs-fall-even-faster-coal-fades-even-china-india/>

⁴ IRENA 2018 Renewable Cost Database, <http://www.irena.org/costs/>.

⁵ Jacobson, M, et al., 2018, 100% wind-water-sunlight energy for all countries, Excel Spreadsheet, <http://web.stanford.edu/group/efmh/jacobson/Articles/I/AllCountries.xlsx>

Stanford study mentions that a 100 per cent renewable energy-powered Philippines could lead to a cost of about one per cent of GDP avoided mortality and illness costs, or about USD 27.5 billion (Jacobson, et al., 2018).

12. Around five thousand air pollution deaths can be avoided every year with the transition. Already, the Philippines ranks second in Asia (next to Laos) in deaths due to household pollution with 85 deaths per 100,000.⁶ The plan pays for itself in as little as three years from air pollution and climate change alone. That said, a Philippine renewable energy transition also helps reinforce a number of Sustainable Development Goals, including: climate action; health and well-being; clean water and sanitation; sustainable cities; life below water; and others through reduced emissions from the generation of energy from fossil fuels.

3) Carbon majors transitioning into renewables investment

13. Whilst some of the respondent companies have invested in or opened renewable energy business, Oxfam is not aware of any major global fossil fuel company that has fully committed to the transition on a timescale compatible with limiting climate change to 1.5 degrees.

Signed:



Laura Gyte

Date: 18 December 2018

At: London, United Kingdom

⁶ [Philippine Daily Inquirer](http://newsinfo.inquirer.net/987262/ph-ranks-2nd-in-asia-pacific-in-deaths-due-to-household-pollution), PH ranks 2nd in Asia-Pacific in deaths due to household pollution, 07:22 AM May 03, 2018, accessed in <http://newsinfo.inquirer.net/987262/ph-ranks-2nd-in-asia-pacific-in-deaths-due-to-household-pollution>