



Raising The Philippine Coal Tax Makes Economic Sense

Sara Ahmed IEEFA Energy Finance Analyst

November 30, 2017

The Philippines' Department of Finance (DoF) appears committed finally to raising the country's coal tax—a move that could provide major economic, energy and environmental benefits. The current 20-year-old excise tax on coal is just Php 10 per ton—or about 20 cents per ton—making it essentially meaningless to producers while effectively encouraging energy policy that is harmful to the Philippines its 100 million residents.

Raising the tax would be a crucial first step toward accounting for coal's real costs, which have traditionally been ignored. A higher tax also would begin to level the playing field across the Philippines energy sector, where by virtue of the tax's de minimis value, coal has effectively enjoyed a government subsidy that has discouraged investments in wind, solar and other clean generation resources.

It is difficult to put a precise figure on coal's impact on health and the environment. But other countries offers some context: Coal-linked air pollution in China cut the country's gross domestic product by an estimated 6.5 percent (roughly US\$ 715 billion) in 2016¹. India spent an estimated US\$140 billion for health care costs related directly to air pollution in 2013 and 2014².

The Philippines government knows coal's effects are problematic; it currently is planning to boost spending on health care by Php 272 billion (US\$5.44 billion), and the Duterte administration has broader plans to invest Php 1 trillion (US\$20 billion) in public anti-poverty programs. Certainly at least a part of these funds could be raised via a more suitable coal tax, as Table 2 below indicates.

Even raising the tax to 100 Php per ton (US\$2) would bring in an estimated US\$30 million annually—money that could be earmarked for health care or any of a host of other quality-of-life initiatives. Funds from a higher coal excise tax could be used to

¹ <https://www.cnbc.com/2016/02/11/pollution-crisis-is-choking-the-chinese-economy.html>

² <https://timesofindia.indiatimes.com/home/environment/pollution/health-cost-of-air-pollution-8-times-spent-on-fuel-subsidies-in-india-report/articleshow/59807107.cms>

finance public-health programs, underwrite universal healthcare, pay for state-funded education, and speed the adoption of timely energy-transition projects such as the broad uptake of solar-powered pumps for irrigation.

Other problems posed by uncontrolled or poorly controlled coal consumption:

- Its affect on agricultural productivity. The country has a Php 260 billion (US\$5.2 billion) agriculture export industry that is threatened by coal-related air and water pollution.
- Its threat to safe drinking water, particularly in poorer communities already troubled by sporadic droughts.
- Its tendency to hurt labor productivity due to illness and other chronic coal-related health issues.

Further, the Philippines' historic reliance on coal has been of no help to more than a million households on the island of Mindanao that still do not have access to electricity. These energy-poor households are typically well removed from the main grid and would be better served by decentralized mini-grid solutions powered by renewable energy with batteries, systems that can be rapidly and cost-effectively deployed where needed.

Relying on the existing central-station, coal-fired grid to supply these households would be extremely expensive, dirty and would force the country to rely increasingly on imported fuel³. In addition, it would take significantly longer than more sensible approaches: Where building an import-coal-fired power plants can take up to 10 years to plan and complete, distributed-generation from solar and wind takes 12 months, at most, to come on line.

Coal Tax in Other Countries

India and Korea have led the charge. The coal tax in India is 400 rupees (US\$7 or Php 311) per ton, while in South Korea it is Php 1010-Php1265 (US\$20-US\$25) per ton. The Indian government sees the coal tax as a way to force producers and generators to internalize some of the costs formerly paid for by the government of India; the South Korean government is using the coal tax as a means to push the country to become a global leader in energy efficiency, as well as to reduce both pollution from and demand for an imported product. The South Korean government has another coal tax increase planned for this year.

³ Clean coal does not exist. Carbon capture and sequestration is uneconomical and technically challenging, especially in an era of cheap natural gas and renewable energy.

Would Raising the Coal Tax Also Boost Electricity Prices?

Opponents, including proponents of the 27 coal-fired power plants that were approved by the Aquino administration (2010-2016), will argue that raising the coal tax will result in higher overall electricity costs for the Philippines. This is incorrect. The coal tax is part of the operating cost, not the fuel cost so it will not be subject to automatic pass-through to consumers. A coal tax adopts a polluter pays principle, not for consumers to pay. Any increases in the price of electricity must be approved by the Energy Regulatory Commission (ERC).

Even a cursory look at recent developments in India, Chile and Mexico shows that this is decidedly not the case. Putting a price on pollution will incentivize cleaner energy infrastructure and expedite the transition from an overreliance on expensive imported coal toward cheaper options (refer to Table 1). In an increasing number of countries, renewable energy costs less than new imported coal-fired electricity, and a Philippines coal tax would incentivize energy infrastructure development nationally and expedite the country's transition from its current reliance on expensive imported coal toward cheaper, deflationary options (refer to Figure 1).

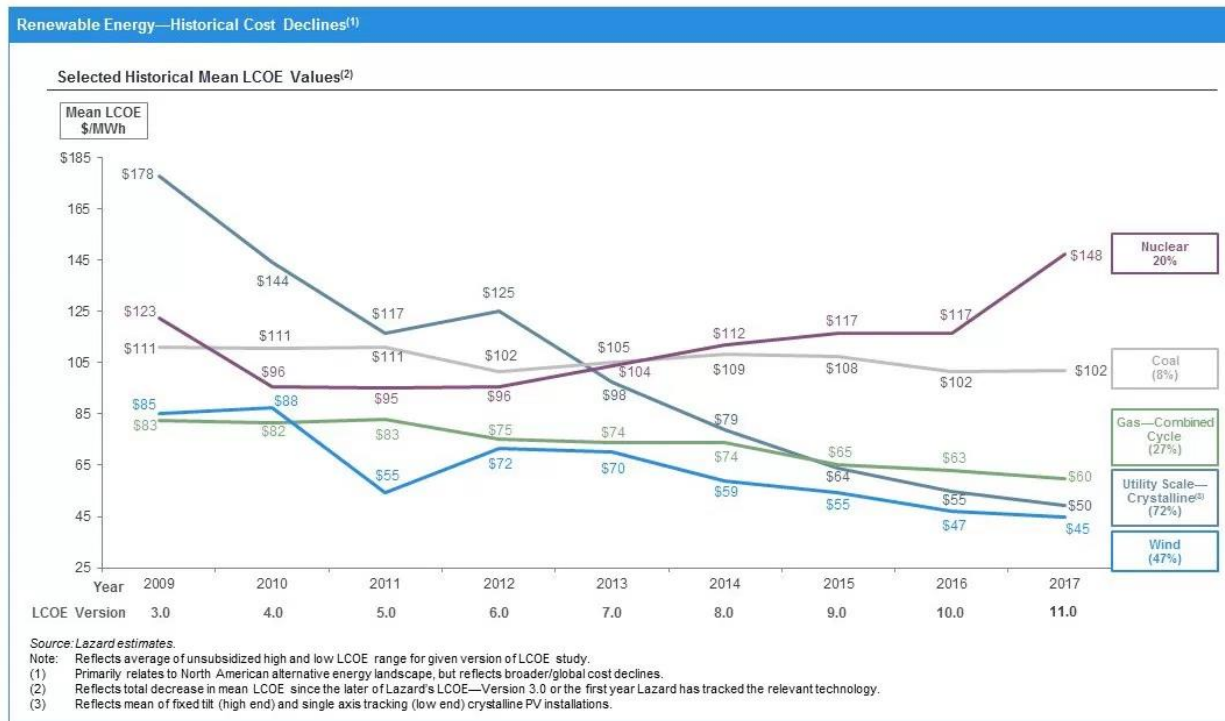
Lazard's latest annual Levelized Cost of Energy Analysis (LCOE 11.0) states that it is more expensive to operate conventional fossil fuel energy sources in developing countries like the Philippines than developed countries. Figure 1 also shows that new wind and solar are cheaper than new natural gas plants.

Table 1: Main Grid Electricity Cost Comparisons

Technology and Company	Price (Php per kWh)
Coal – Panay Energy Development Corporation	5.41
Coal – Masinloc Power Partners Corporation	4.98
Coal – Thermal Luzon Inc.	4.85
Geothermal – Energy Development Corporation	4.06
Geothermal – Energy Development Corporation	3.91
Solar – Solar Philippines	2.99

Source: IEEFA Report - "Carving out Coal in the Philippines: Stranded Coal Plant Assets and the Energy Transition"; Meralco; ERC; Solar Philippines as of August 2017

Figure 1: Energy Cost Comparison (US\$/MWh)



Source: Lazard's latest annual Levelized Cost of Energy Analysis (LCOE 11.0), 2017

The coal tax will definitely lower the load factors of coal plants because it shifts the dispatch merit in favor of natural gas as well as firm and variable renewable energy. This should incentivize distribution utilities like the Manila Electric Co. (Meralco), Visayan Electric Co. (Veco), and Davao Light to procure least cost electricity supplies instead of continuing to rely on expensive import coal fired power.

If there is any doubt this is possible, the energy transition examples set by India and South Korea are instructive. India, the second largest coal-producing, consuming and import market in the world, is moving aggressively toward renewables as part of its energy-policy modernization. Its shift over the past few years includes a US\$7 per ton tax on coal. The fourth-largest importer in the world, South Korea, which accounts for more than 10 percent of global thermal coal import demand, has recently imposed a US\$20-\$25 per ton tax on imported coal as a component of a program to achieve greater energy efficiency and less reliance on coal. South Korea is planning on increasing that tax this year and accelerate the closure of end-of-life coal plants.

In addition, Singapore is introducing a SG\$ 10 to SG\$ 20 (US\$ 7.5 to US\$ 15 or Php 376 to Php 751) per ton carbon tax by 2019, stating that there is no evidence that a carbon tax drives companies away. Energy firms in Singapore even said such a tax

should be “high enough to spur a change in behavior”⁴.

Table 2 below illustrates the impact of a coal tax on coal fired power and tax revenue⁵.

Table 2: Effect on Coal-Fired Electricity Prices and Potential Tax Incomes

Coal Tax per Ton (in Php)	Potential Tax Income (in Php) for Infrastructure
100	1.5 Billion
150	2.25 Billion
200	3 Billion
250	3.75 Billion
300	4.5 Billion
350	5.25 Billion
400	6 Billion
450	6.75 Billion
500	7.5 Billion
550	8.25 Billion
600	9 Billion
650	9.75 Billion
700	10.5 Billion
750	11.25 Billion
800	12 Billion
850	12.75 Billion
900	13.5 Billion
950	14.25 Billion
1000	15 Billion
1050	15.75 Billion
1100	16.5 Billion
1150	17.25 Billion
1200	18 Billion
1250	18.75 Billion
1300	19.5 Billion
1350	20.25 Billion
1400	21 Billion
1450	21.75 Billion
1500	22.5 Billion

⁴ <http://www.scmp.com/news/asia/southeast-asia/article/2117133/no-evidence-carbon-tax-drives-companies-away>

⁵ The Philippines imports 15 million tons of coal per year (80% of coal requirements), 95% of which comes from Indonesia. Source: IEEFA Report - “Carving out Coal in the Philippines: Stranded Coal Plant Assets and the Energy Transition”; Meralco; ERC; Solar Philippines as of August 2017

Renewable Energy Transition Is Under Way

The transition away from coal can also be seen by looking at the major investment and insurance firms, which increasingly are pulling their money from coal and putting it into renewables.

All told, major insurers have divested an estimated \$20 billion from the coal sector and are in some cases ceasing to underwrite coal projects entirely. For example, Lloyds, the U.K. financial services and insurance company, has signaled it will cease investing in coal companies from April 2018.

BlackRock, the world's largest investment group with \$US5 trillion of assets under management, is increasingly acknowledging the potential risk of stranded assets in the coal sector. The global head of BlackRock's infrastructure investment group stated that "anyone who's looking to take beyond a 10-year view on coal is gambling very significantly." Unfortunately, existing Philippine power purchase agreements (PPAs) on coal fired power plants last for 20 years, double the length advised by BlackRock and others.

Storebrand, Norway's largest private pension fund with US\$80 billion under management, this month dropped 10 coal companies from its investment portfolio. Among those dropped were Eskom Holdings Ltd, Polska Grupa Energetyczna, Uniper SE, Genting International Plc, Tenaga Nasional Berhad, Kyushu Electric Power, Origin Energy Ltd, EDP Energias do Brasil, RWE AG, and Power Assets Holdings Ltd. Storebrand's new criteria includes restricting investments in companies involved in the construction of new coal-fired power plants, all because of their risk of becoming stranded assets. The Philippines has 10,423 megawatts (MW) of coal expansion in its current pipeline. This is on top of a total of 7,419 MW of existing coal-fired capacity. Stranded cost in the pipeline is equivalent to Php1 trillion (US\$20.8 billion), to be paid for by the Filipino people and industry.

Conclusion

The Philippines could be a major beneficiary of the current global shift to clean energy, but current policy perpetuates a subsidy for coal producers that is masked in the guise of helping the poor. This is a misguided approach that is badly out of touch with current global energy-market trends.

The Department of Finance's effort to press polluters to clean up after themselves should be fully supported by policymakers and advocates across the country—for economic reasons but also because it is the right thing to do.

By taking assertive action through enactment of a higher coal tax, elected leaders in

the Philippines are in a position to drive the country's electricity-generation sector toward cheap, reliable, domestic and sustainable power generation. Raising the coal tax to a meaningful level will send the right policy signal to investors and energy industry executives, encouraging investment in affordable and reliable power infrastructure, building diversity of electricity generation, and baking in long-term energy sector price deflation.

IEEFA's report on "Carving out Coal in the Philippines: Stranded Coal Plant Assets and the Energy Transition" can be found at:

<http://ieefa.org/ieefa-report-philippine-banking-sector-risk-ill-advised-us21-expansion-coal-fleet/>

Contact: Sara Jane Ahmed, IEEFA Energy Finance Analyst, sahmed@ieefa.org