

## More Risks or More Opportunities?

# DOMESTIC AND INTERNATIONAL ENERGY TRANSITION IMPLICATIONS ON THE FIDUCIARY RESPONSIBILITIES OF CORPORATE DIRECTORS IN THE PHILIPPINES

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## Transcript

### Highlights of the Report Analysing Energy Transition Risks In The Philippine Power Sector

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Energy affects all sectors. In our pandemic times, in light of the report of the IPCC, the key attributes that we are looking for are reliability, cost, and sustainability—and these are analogous to resilience, affordability, and being carbon-free.

As the report states, the ICSC continues to do new studies on the various evidence presented in the report. There is no empirical evidence that current coal power assets have low reliability and high cost; it provides both the rationale and urgency for the energy transition in the Philippines.

Finally, international finance and insurance providers have started to impose sustainability requirements in their transactions, and I believe Sara will be discussing this in her part of this presentation.

I want to present information on the actual performance of the SUAL Coal-fired 650 megawatt power plant, the second unit, which is the largest unit in the Luzon grid; it's a coal-fired power plant and the largest unit in the country.

The Y-axis will be generated and what we did was we got the hourly Wholesale Electricity Spot Market data from March 2019 to June 2021. This is the chart showing precisely the performance of this coal-fired power plant.

I want to point out that cycling means it was moving up and down, increasing capacity, and decreasing capacity, essentially almost following the load, which is uncharacteristic of what the largest baseload coal-fired power plant should do. You normally would expect it to operate at a sustained steady rate.

We're pointing out that there were three periods when we'd had one-month unavailability, eight months availability. After that, several week's unavailability and if we count the outages—14 in the period and each of those outages shown in this chart.

I want to tell you that this is not a one-off in our coal portfolio. We've seen other coal-fired power plants exhibiting similar unreliable performance.

So while coal is not reliable, it is the dominant power supply source in the Philippine power grid, accounting for almost 55% of generation in 2019. In other words, coal is more significant than all of the additional supply sources combined.

Coal power costs are very volatile, as we've seen. We have the cost of coal generation from the most extensive distribution utilities in Luzon, Visayas, and Mindanao. Meralco is the orange curve; you would see that it went as high as over 7.50 pesos per kilowatt/hour in February 2019. Veco approached the same level in May 2020. We see very volatile coal generation costs passed on to consumers, and the reason, of course, is simple: because fuel costs are very volatile.

This is a chart on the Newcastle Coal Index standard in all coal-fired power supply agreements in the Philippines. Note that between March to June this year, 60% increase in the coal price index based on regulatory practice; this cost will be directly felt by our consumers of the utilities buying from these coal-fired power plants.

The critical aspects of the Energy Transition Analysis Report are presented here. I will focus on the first, second, and fourth aspects. The transformation and materialisation of energy transition risk in power generation depend on regulation and the extent of the risks sharing improvements in Power Purchasing Agreements.

When we talk of regulation in the Philippine power sector, we are looking at the competitive selection process required by the Energy Regulatory Commission for all contracts of distribution utilities when they procure power.

The first point, and probably an essential point, is a bias for baseload power supply as proven by the excess capacity that we've seen in Luzon, Visayas, and Mindanao. There is a need to improve electric distribution utility capacity to do least-cost capacity expansion studies. Because if you cannot contract for the right amount of baseload, there is probably a more difficult underlying problem in the planning process.

The second is to recognise the benefits of an optimal mix with flexible generation, renewable energy supply, and local energy resources. Finally, it has been proposed by the Renewable Energy Coalition to have an unsolicited proposal option for Renewable Energy given its peculiarities and how difficult it is for them to participate in the traditional competitive selection process.

Another critical point is the power purchase agreements. What I've shown here are industry practices, like automatic fuel price pass-through, automatic fuel consumption allowances increasing the cost of the fuel over the life of the contract, mandatory energy offtake even in disruptive events, and if you look at the particular coal pricing formulas, very poor selection of benchmark parameters in pricing formulas, leading to higher actual payments.

A quick background on the determination of the required baseload capacity. Note that in the context of the power sector, baseload is not the same as 24-hour delivery. Baseload refers to the minimum capacity needed by the power grid at any given time, the minimum. In other words, you have to look into the demand profile and determine the lowest points, which sets your baseload capacity. Thus, an examination of the hourly load curve is needed to determine the optimal baseload capacity requirement.

This is the curve of the Luzon load profile, the first quartile. In other words, this curve defines what would be the lowest 25% of all of the registered loads in these hours per year. So the red one was the year in 2019. The lowest point was between the period 3 AM to 4 PM or 4 AM, 6310 megawatts. Usually, that should be the proper amount of baseload capacity in the grid. But what we have is 10,813 megawatts from coal, natural gas, and geothermal. Over 4,000 megawatts have more baseload capacity than what we need.

Let's compare that to the peak demand of the grid, which is around 11,000 megawatts. We're practically at the peak demand level as our baseload capacity. The speed of the energy transition will be driven by a combination of endogenous and exogenous factors. Ten factors have been identified here.

The first is the rate of technology innovation in power generation. We can see the high efficiencies, the lower cost of solar panels, on-shore wind and off-shore wind; we can see it here—dramatic price declines, effective Levelized cost of electricity from solar, wind, both off-shore and on-shore. These declines will continue. The report lists divestment, restrictions, and cost of capital from the capital market and financial regulatory policies.

Per year, we've identified important policy announcements that show that international agencies, for example, NBIM divested from Aboitiz Power to reduce exposure to coal assets. 2018, AC Energy sold its stake in the GN Power Kauswagan's coal-fired power plant to its partner.

More recently, in April 2020, Ayala Corporation, through its subsidiary AC Energy, is driving the energy transition in the Philippines with a divestment plan by 2025 and a complete coal exit by 2030. We are seeing that these are happening both from international players and our own local power companies.

Carbon pricing and air pollution policies have been growing. World Bank reports 61 carbon pricing initiatives, consisting of 31 emissions trading systems and 30 carbon taxes. I hope you can see that in the part where we have Southeast Asia, the yellow indicates that they are considering similar carbon pricing initiatives in Thailand, Vietnam, and Indonesia while the Philippines remains grey.

No carbon pricing is still being considered, but I hope, given the increased pace of actions of the DOE towards the energy transition, this will also be considered by our energy management. I'd like to point out, and this was what I was referring to earlier, the Department of Energy (DOE) and National Grid Corporation of the Philippines' (NGCP) recent actions towards accelerating the energy transition in the Philippines.

Geothermal biomass now is open for 100% foreign ownership. The DOE is a member of the National Renewable Energy Board, seeking to extend this initiative to solar and wind. In the latest transmission development plan, there is an interconnection of Visayas to Mindanao that is expected to happen next year, followed by the expansion of crucial island interconnections. We see competitive renewable energy zones, innovative grid development and demonstration for the first time, now part of the transmission development plan.

Excellent actions by key government agencies will help us move towards more renewables in our power grids. Further, the more volatile fossil fuel prices are, the more we accelerate the energy transition. As we've seen and I have shown here the trends in coal, gas, and oil prices from the time we signed the Electric Power Industry Reform Act (EPIRA) to the time we signed the Renewable Energy Act in 2008, until now, always, volatile costs of fossil fuel prices.

Even in the last few months, towards the end of the chart on the right, you will see, as stated earlier, a 60% increase in coal prices in the Newcastle Coal Index between March to June this year. So volatility continues; this will serve as a primary driver to our energy transition. We need proactive policymaking to minimise stranded cost risk and ensure a least-cost power system.

The first point is to fast-track auctions to ensure new capacity decisions are cost-competitive and complementary to grid flexibility. The next proactive measure is to enforce mandatory removal of coal pass-throughs. Because as I mentioned earlier, first, the bias for baseload and acceptance of pass-through is a standard feature of our Power Purchase Agreements.

Improve tariff setting to ensure least-cost and flexibility, then build on the current moratorium of the DOE by implementing a permanent moratorium on new inflexible power.

This is not without basis. As a member of the technical working group of the National Renewable Energy Board, our analysis in the simulations for the National Renewable Energy Plan stated that we do not need baseload capacity anymore. We need it, but we have more than enough of it. Our future additions to the grid must be low-cost renewables and flexible power generation.

Finally, increase clarity on who pays for stranded asset risks, which is relevant to the proposal. The DOE has released the guidelines for the Green Energy Auction, basically using the available mechanisms now but with the pricing determined through the auction process. The first auction round procedures are expected to be released in August. The guidelines call for an ARP annual auction round, not later than August of every year.

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