

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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Q&A Transcript

A. FIRST ROUND Q&A

Maniego: Thank you, Ellie, for providing us with your guidance on crafting strategies for mitigating and managing climate impacts. We will now open the floor for a brief question and answer, although we have a more extended open forum later. We will appreciate it if you will type your questions in the Q&A rather than the chatbox.

My first question will be to Bert. You mentioned in your presentation that the baseload is only about 6,300 megawatts only, and we have more than a baseload for coal plants than the peak demand. But if that is the case, how come we are suffering from outages even during these times of pandemic when we are supposed to have lower demand? How can you reconcile this?

Dalusung: Well, it's ironic, Atty. Pete, but during our analysis of the outages, we also found that the performance of several coal-fired power plants has been unexpectedly unreliable. I'm calling it intermittent because we see outages similar to SUAL, up to 25 outages per coal-fired power plant. You're in the same period. As you know, these outages are random, and you cannot predict them, unlike, for example, the variable output of a solar power plant or a wind power plant. To me, that explains, we have to do more analytics on that, but the unreliability that we've seen is a partial explanation for that result.

Maniego: Sara, you talked about stranded cost, but Bert also, you spoke about automatic pass... fuel pass provision. How can their assets be left if these power plants are entitled to PPA and long-term PPA and the automatic fuel cost pass-through provision? The end-users will pay for it.

Ahmed: There are PPAs where there is curtailment, carve-out clauses where the utility company, so for example, Meralco, can buy less from the plant. So this means that for one thing, there's no pass-through in that sense because it's, you know, the cost of operating that, the cost of non-utilisation goes to the power plant owner. In terms of stranded cost, it's more of the capacity fee that's the one that's considered the stranded cost paid for by consumers at this point. However, the pass-through provision means consumers are paying for that volatility unnecessarily when it is feasible to lock in long-term contracts.

Maniego: Financial institutions and private entities are now responding to the risks associated with energy transition. What are the best practices from international experience which can be adopted here in the Philippines? Additionally, what steps are these corporate directors taking to ensure that they are meeting their fiduciary obligations in the environment sector of the country?

Mulholland: Jamie gave much information about what we see as best practice globally, and I would pull those strands together in four stages: educate, inquire, examine, and disclose.

Starting with “educate,” that is about getting informed, and so I cannot tell you how quickly this is moving even for those of us who work in this space, and so ask yourselves, do we understand? What are the possible future worlds for how the world is warming and how the disruption and transition can play out? When will we hit 1.5 degrees global average warming? What’s the difference between a 1.5-degree world and a 2-degree world? Do I understand what that means? What are tipping cascades that they’re now talking about that could suggest that we could get from two to four degrees warming without any further emissions? So really, it’s about getting informed because your investors and regulators understand this.

The next one is “inquire.” Ask management, and if you’re not satisfied with the answers, you might need to bring in independent expert advice. But ask management, are we assessing risks and opportunities on a forward-looking basis? Are we doing a scenario analysis that the TCFD recommends that Jamie mentioned? Are we doing the stress testing to check the risks and opportunities of our strategy and business model across plausible future worlds for how it could warm and how the transition could play out, including 1.50-aligned transitions, disorderly transitions, what are hothouse world scenario? And for this inquiry, there are two things where you can get ahead in the game.

One is climate risk stress tests that Jamie mentioned. So your bank’s loan books will inevitably get tested against shocks, these climate shocks. So are we doing this work ahead of the climate risk stress tests? And also another one to get ahead of the game is 1.5-degree Paris-aligned accounts. So investors are increasingly asking for this across many jurisdictions. So have a go, ask your management team to prepare some shadow accounts. What would our loan book look like if the world transitions to 1.5? We meet that warming goal and with a rapid and forceful transition. So that’s “inquire,” ask management.

Then “examine.” Critically test the assumptions that are used in risk management scenarios and your financial statement estimates. So ask management, are our shadow accounts process robust? What if it’s no longer tax deductible? Have we tested against the International Energy Agency’s net-zero by 2050 assumptions that scenario? So critically examine.

Finally, “disclose” to meet accounting standard guidelines and investor expectations. So educate, inquire, examine and disclose, and learn from your international peers, so you are ahead of the game. Over to Jamie, anything?

Maniego: Would you like to add anything, Jamie?

Sawyer: I will emphasise that boards need to be informed so that they can make sure the rest of the bank is taking the action they need to, and the **NGFS resources** are beneficial on that front to get best practice across the work, consolidated in one place so that you can all learn from it. And as Ellie mentioned as well, learn from your international peers too. There are great tools produced by, for example, Reclaim Finance in Europe that set out across several banks worldwide best practices in terms of certain types of energy policies, so that’s useful. And look at what other banks are doing in Europe to align themselves to the Paris Agreement. For example, the Terra approach of ING Bank in the **Netherlands** is one of the first that we’ve seen come out and be robust in a way that we need to all be thinking.

Lastly, Start now. It's much easier to be ahead of the game than be reactive when regulators start requiring you to do this - start early and inform, inquire, examine and disclose.

Maniego: I have a follow-up question. Based on the submission so far of the National Determined Contribution by most countries, do we have any chance of really mitigating global warming to 1.5 degrees Centigrade because most of these are still not sufficient.

Mulholland: I might have first go and then Jamie. I'm not a climate scientist, but I have seen climate scientists give their evidence to courts on what they think the most likely scenario is. Some climate scientists can say it's possible that we still can stabilise at 1.5 degrees. Others say our best option on the best available evidence is probably stabilisation is closer to 2 degrees. I don't know, but my job is to not; I don't have to know. My job is to look and think, well, what if it stabilises at 1.5 degrees? We're going to need to consider the risks and be resilient to them. But we also need to make sure that we're resilient to 2 degrees or be as resilient in a warming world.

We need to make sure that we are resilient for all of these outcomes and do scenario analysis and stress testing. The only thing that I wouldn't bet on is that I wouldn't bet against policymakers trying. And I wouldn't bet against governments trying. So I think that the policy and regulatory environment will increase, so I would not bet against people trying because this is us trying to save a safe space for humanity to thrive, so that I wouldn't bet against that. Jamie?

Sawyer: I agree with what Ellie is saying. I am also not a climate scientist; it's not my place to say that. Still, from the IPCC report that came out recently, one of the most hopeful things I found is that if we get to net-zero emissions, hopefully, we think the planet will be kind to us. Warming won't increase significantly beyond that. The idea is to get to that net-zero position as soon as possible to try and control that further temperature rise.

Maniego: We have a question here from Romy Aquino; I think this is addressed to Bert. There were reports that the unusual level of higher outages of even new coal plants is partly because several new plants are from China, unable to generate the rated power on which the baseload contract is given. Is this correct?

Dalusung: Okay, let me answer that in two parts. The first part is that any power plant that connects to the grid will be subject to testing and commissioning. And it is the result of testing and commissioning which determines the parameters that would be used to dispatch that power plant. So if the power plant registered 100 megawatts, it presumably would be given a capacity of 100 megawatts. So if they cannot reach the capacity, then testing and commissioning will bear that out.

The second part is, are they unreliable? So far, Atty. Pete, we were just not prepared to see the amount of unreliability that we are seeing. So we haven't gone farther than documenting the actual performance. I guess that should come further. The KEEP report says that the ICSC will continue to have the data science team look into these matters and do more evidence-based. I'm not prepared to link that with, say, the type of origin of the equipment. We're not yet ready to do that. What we've done so far is identified that the coal-fired power plants, which caused the brownouts or rotating brownouts on 31 May, 1 June—all four of them have been experiencing similar rates of outages as what you've seen in that slide. Unreliable? I call it intermittent.

Maniego: Not only the teenager coal plants but even the new coal plants?

Dalusung: Surprisingly, that's what we also found out, Atty. Pete, even the new coal plants with the high, presumably the latest technology is also experiencing the same unreliability.

Maniego: But it's possible to answer the question because I think you can get the data, for example, from WESM?

Dalusung: It is, but what we need to do is to link that with the, say, who was the EPC contractor, where did that technology is from? We're still, you know, we just moved to five-minute trading intervals in our WESM, so we're just getting a handle on how to deal with that data. But I think I assure the participants here that that's something we want to get to the bottom of. Is it—is there a relationship between the origin of the equipment, for example, particular brands or whatever. Is there a relationship between those and the unreliability that we've seen?

Maniego: There is another question from an anonymous attendee. In this time of the pandemic, we consider 3 Cs—COVID, connectivity, and climate. We are in ancestral domain areas. We find this input irrelevant. Is there any way we can see an institution that can help us?

Dalusung: Well, you know, I don't know what the question is. But let me tell you that Congress has an effort to have IPs be the first stop in applications of service contracts. That will render our Renewable Energy Act ineffective. In the same manner, I think that NREB—I was representing NREB in that hearing—said that we are concerned, we share the concern of the IPs, and we'd like them to understand the development of renewable energy better. I think they'll find that they support the types of energy sources and renewable energy sources we're talking about if they are proactive. Then long-term benefits will accrue to them. But they have to be fully... I guessed when I was looking at the acronym EDUCATE. That would be my first step for them. We have to educate them on the process and on the benefits that they can have.

Maniego: I think we will move to distributed generation like microgrids. That would benefit the ancestral domain communities. In the remote areas, they can use indigenous sources like solar and wind, and small hydro, micro and even biomass, so I think that is what they can do. They can ask for incentives for microgrids in these ancestral domains where most of the RE sources are. Geothermal and hydro are in these ancestral domains. Of course, when there are sources of the new power installed in this area, they are entitled to incentives also.

Dalusung: Yes, ER 1-94 and all of that. Share in the proceeds for the payments for the service contract, for example.

Maniego: Based on the talks of Jamie and Ellie, it seems that the funding for fossil fuel plants, especially coal, is getting to be narrower and narrower. But yet in Asia, I think even in the Philippines, we have... Before the moratorium, we still have a standing contract for about 5000 megawatts. And it's also projected that in Southeast Asia and even in China, the most extensive growth will still be in these fossil fuel plants and coal plants. Isn't that the case? How come this is still happening?

Dalusung: Well, I think a lot has happened in the last few months. You know that ICSC is a part of a regional activity called CASE (Clean, Affordable, and Secure Energy), and Indonesia is a part of that regional program. And what has Indonesia announced? A plan for net-zero. That means that the coal supply of the Philippines, which is primarily Indonesia, is already implementing a program or will implement a program to transition away from that fuel source. So we're the importer. We have to be concerned. I think our government has to take this into account; I'm sure they are. So that is something that we need to do, and we do the plans locally, and we also look at what's happening around us, particularly in our region. Everyone is looking at net zero. Vietnam has a very successful solar rooftop program.

Maniego: Anything to add, Sara, Jane or Ellie, on why coal still seems to be the preferred option for many countries?

Ahmed: I think there is an inherited bias when it comes to procurement for baseload. But now, considering that there are technology shifts of volatility, especially for importing countries, it's apparent that lock-in has been quite detrimental to the economy, especially during the pandemic. And I think the lessons coming out of coal procurement are lessons to be taken into account when looking at LNG, especially CCG (Combined Cycle Gas) turbines. We're looking at 20-25 year lock-ins, the same volatility. And all this while there is increasing competition from low-cost domestic renewable energy and future storage options. So I think there's a lot to be learned, as Bert mentioned. The last year has been a wake-up call to our power sector and our system overall.

Maniego: The last question to Bert, and then we'll move on to the next segment. I hope all of you will stay for the open forum. So for Bert, I am the Finance head of Lumino Capital Group. It's a start-up biomass project on the island of Mindanao. Did the National Renewable Energy Board make any recent actions to help investors concerning biomass fuel production? The fuel supply's essential too, but it seems that we are getting hit with bottlenecks in securing the desired permit and licenses.

Dalusung: Yeah, quick answer to that, as far as NREB is concerned, no recent actions. But I'm happy to tell you that I am part of the company that developed the largest pure biomass power plant in Mindanao—the Lamsan 15-megawatt Biomass Power Plant. Now, what are they doing? They're doing a mix of biomass to gather rice husk and all of the other feedstocks. But they are also doing Napier grass farming and harvesting. They have a mechanised system. I understand that they have operational 300 hectares of Napier grass farm with mechanised planting and harvesting in Mindanao. And they have the space for up to several thousand hectares. So this is already happening in Mindanao. I'd be glad to share the information with the gentlemen and happy to provide, link them up to the other developers that may collaboratively work with them on their project.

Maniego: Thank you, Bert, thank you, Ellie, thank you, Sara, and thank you, Jamie, for your presentations and participation in the Q&A. Would you mind staying on for the open forum?

Now to moderate our next segment, I'll pass the floor to Nazrin Casto, the Branch Manager of The Climate Reality Project Philippines and a Climate Vulnerable Countries Support Program Fellow. Nazrin?

B. SECOND ROUND Q&A

Castro: The first question goes to Bert and Sara. The KEEP report, as you've asserted Bert and Sara, that we already have too much of the wrong supply. Second, as the Department of Energy has said, the system urgently needs to be more, there should be more flexible generation. And third, as data showed clearly, the coal plants have proven unreliable, whether old or new, with the relatively new one not being able to operate since January of this year. But Mr Francisco, Ed, also mentioned earlier that the only challenge or problem is not enough renewable energy proposals reaching their desk, so there is a **shortfall**. Can Bert and Sara expound more on our need for flexible generation and the oversupply of coal in the pipeline? Let's start with Bert.

Dalusung: Yeah, I was very, very happy to note what Usec Wimpy Fuentebella said. He spoke about Green Energy Auction. He also discussed removing the fuel price pass-through and so on. I think these are two recommendations in the KEEP report, which the DOE is now actively doing. Moreover, I believe that in calibrating, for example, insulation targets, I'm sure DOE will consider not just RPS but the requirements of the DUs themselves. So, very happy to note the very positive response from the DOE.

Ahmed: I agree with Bert's feedback. And also, to note that knowing we're thinking about shifting to renewables and a low-carbon transition, it's a resilience opportunity for the Philippine context. We have extreme weather events, having large plants can be risky. It may be best to have distributed plants and a modernised grid to absorb these smaller renewable energy systems just because, again, we're an archipelago with extreme weather events hitting us. Also, with these economic disruptions, COVID seems to be never-ending, and the start-stop, we need a more flexible system, as Bert highlighted during his presentation. Note that a low-carbon transition in the Philippines is not... or will receive low-carbon co-benefits. Still, the main driver would be a more cost-competitive and resilient system.

Castro: Our next question, I believe, is coming from Undersecretary Wimpy's reaction, but I would like to ask Jamie and Ellie, also Bert and Sara, about this next question. How can renewable energy ensure energy security and self-sufficiency in the Philippines? Do we need to avoid foreign interference in energy planning? Are energy transition and acceleration beneficial from a purely economic standpoint, even removing the climate in the Paris Agreement lens?

Dalusung: Let me have the courage to take on that. Let me make a bold statement here. I think that with the recent actions of the DOE on the green energy auction, on levelling the playing field by removing that pass-through, and the most recent transmission development plan, I think we're moving into a situation where renewables can prove that they are truly competitive. The field was levelled where renewables can be truly competitive. There is a need for the grid to adjust because you'll have more variable generation and so on.

Still, this problem has already been solved in other countries. Through new technology, machine learning, advanced data analytics, they can solve these problems. So I am excited at the opportunity with the recent. Every one of us is holding our breath for that Green Energy Auction, Undersecretary Plus, we know that this time, it's our turn to prove, as renewable energy developers, for example, we present that in the NREB, thanks to the DOE,

we can confirm that we are truly competitive. We will have the reliability expected of good power plants connected to the grid.

Fuentebella: If I may add, for NREB, I think NREB should also have that subgroup for renewable energy financing because there is a gap that keeps on coming up. There are very few RE loan applications reaching the desk of the bank. That's contrary to what we are receiving. So there is an alignment, and that is a gap that we need to address. Because I know many RE committed plants and RE renewable energy indicative plans that have failed to secure bridge financing or some levelling of financial closing.

Castro: Please feel free to use the raise your hand function for panellists if you have additional questions. Can you share your recent experiences in the Philippine banking perspective on loans for solar farms? Would 50% financing suffice? Is bridge financing through foreign funds an option? Would the WESM or retail electricity contracts be recognised as a basis for payment?

Francisco: Generally, of course, WESM, we don't consider... Because that's the spot market, so that's not the contract. That's why I agree with Undersecretary Fuentebella that we need contracts. Because otherwise, there's too much risk, there's too much volatility. Now, the question about bridge financing. Remember a few years back when the DOE changed rules for granting... when the FIT came out. They would only grant FIT when it was already constructed. And then basically, you're asking the banks to finance this; why would the banks finance if wala kang FIT? So if it doesn't pass FIT, then we have a stranded asset. So there has to be a give and take also. That hasn't been solved, so we need a contract.

On bridge financing, whether it would be 50% or 70%, it's not the bridge financing itself, it's the contract because unless it's a 100% finance, you will ask a bank for investment, but if there is no contract, then I guess that's the issue, number one. And then second, we can always naman size the debt, as long as there's a contract. If it's profitable, it could even be 70-30, 70 debt. I guess it depends on what kind of contract you have—if you have a PPA, we'll look at that. So size is not a problem, we can amortise that, but it's more we don't do, I guess merchant off-take. That's why our experience now is when some of these big solar farms are talking to Meralco for CSP.

Still, they feel like they're going to win it; we're even providing the bid bonds in helping because those are large enough that they'll have contracts. But if you're asking us to finance something in greenfield, tapos, it's not talking to a DU or anything; that's a little harder. So I guess just so you know where we're coming from, remember, our revenues are capped; the profit is really to the sponsor. You also have to protect the bank. What is the bank there for? We want to get paid, so you have to give us the contract, but it cannot be a contract contingent upon completion, and then you ask us to finance you before that.

One strategy is you fund 100%; once you have the contracts, we can refinance them. That's another model that I did for some projects. Finance it 100%, and then we'll refinance it; we'll try to lever it as much as possible because there's already cash flow. Back to you, Naz.

Castro: Thank you, Mr Ed; how about Ms Jo Ann? Would you like to add anything?

Eala: Yes, I agree on a lot with the answers of Ed. I guess we're on the same boat, so there is indeed much value in the contract. There were a couple of bidders, those who were running after FIT, whom we have discouraged. Unfortunately, practically all of them backed

out. They appreciated the advice because imagine talking about stranded solar had they pursued, then they would have had.

We know of stranded coal, but stranded solar, we didn't want that. We value a lot of contracts, the PPAs, and, on top of that, we also, as mentioned earlier, do have a technical team whose services we provide for free. They are an external team, IAC consultants, who do what we call the TFE (Technical Financial Evaluation). Clients sometimes hate it because we tell them the truth. No, the projections are wrong, all-in costs will not be at this level, so it will not be viable. Therefore the cash flow projections are off, you will not be able to pay your loan, and therefore we cannot approve it the way you want it done or the number of years within which you want to pay. I guess after some time; people do appreciate the fact that you better hear the truth. At the same time, the project hasn't been started yet, so you know very well that you will get into financial trouble.

We do have a bad reputation when it comes to telling the truth; I'm putting it in a way that people can understand. Still, we'd rather be the messengers of the truth. We have indeed seen through a lot of renewable projects, even as small as a biogas facility, become successful, and that is because, I guess the lesson here is that first, you have to make sure where the cash flow will come from and the assumptions that you will use. Because the projections that you're using come from a technical provider only without you verifying it, and you're the project owner, it's hazardous. So not everybody can give you free technical consultations; I happen to be with a bank with that much support. Still, not everybody can do that for you.

My advice is to make sure you have that source of money that you can use to pay your loans, make sure the projections are verified, make sure that all the assumptions are well thought of, including the life of the loan, the life of the project, and the cash flow that you will derive from it. And that in the end, you will realise a lot in the contract that you will have. To where and to whom you will sell the power, or if it's your own, how much savings will you generate? So many other things fall into it, but those are the more essential highlights. Thank you.

Fuentebella: I was going to highlight that there's that gap. We have global financing facilities. These are the requirements, which are more or less the same as ordinary loans, or how they evaluate ordinary loans. It's indeed a challenging task for the Green Force, DOF, BSP group and us in the Department of Energy, writing that chapter for energy financing because we have to, as our panellist from BDO mentioned earlier, there should be a give and take.

If we keep on focusing on contracts, that was what the DOT pushed for 2018 policy for Competitive Selection Process distribution utility, that's where they will buy it; 2019 policy for NGCP as system operator to have contracts for ancillary services, which initially they refused to comply with, now they're complying with it. So we're pushing for that, but still, there is that gap because if we want to transition, there's something's got to give. So we are going for the contracts, but at the same time, how do we evaluate all those other projects that can be selling to the whole, say, electricity spot market, which admittedly some of them do not accept.

Dalusung: With specific reference to the standard solar, I think it is worthwhile for all of us to review the current operations of operating stranded solar plants because some did not

get FIT, depended on WESM revenues, and are still working today. And remember, WESM rates today are very high.

The DOE has been implementing the market mechanisms. For example, recently, the EW Enhanced WESM Design Operation removes, among others, moving to a five-minute trading interval and removing automatic nomination of [inaudible] of coal-fired power plants. What does this mean? It means that all of the fully contracted coal-fired power plants now do not have any guaranteed first slot in our merit order. It means that they may be curtailed despite being 100% fully contracted. Why will they be curtailed? Well, you know, if you have a drop in load as what we've seen, they have been curtailed. That's something that we've already seen from the pandemic.

But what if renewable energy capacities continue to grow? We've seen Ayala, etc., all of those having additional capacities. Even if you have a fully contracted coal plant, there will come to the point, and it will not be far when it has to be curtailed more and more and more. This is why we're saying there is stranded asset risk despite having 20 or so many years of baseload contract. If you are not dispatched, even if your client pays you, you now owe the market for energy delivered to their customers. And therefore, there is now a liability. And I wonder, has the coal plant considered the potential for those liabilities? Have their banks considered the possibility for those liabilities? When you take a holistic view of the current situation now, then merchant solar.

For example, there is a view that merchant means you will not get any sales. That's not true. Under our system, solar is a priority dispatch. In other words, they will indeed be dispatched, and they will surely be paid but at the merchant price. Now, what if, given the current falling cost of solar, that merchant price is enough to pay bank loans? I'm asking the question, have you made that analysis? It's not that a solar merchant plant will have zero revenue. No, they have sure revenue; you don't know the price. But what if that price, depending on the analytics and so on, tells you na baka naman mabayaran pati loans. Is that not an option for the banks, or what kind of middle ground can they be prepared to take? I just wanted to put those out because we won't fund merchant solar every time I hear. Well, what if merchant solar will surely pay you under the most reasonable and realistic assumptions.

Castro: I want to throw it to Jo Ann and Ed. Would you like to take that question if that specific assessment has been done?

Francisco: We've done that analysis in the past; we haven't done it recently because I guess now the WESM prices have gone up. But in the past, I remember when I think PVC, the prices were so high and then the average WESM was, I forget, three or four pesos, and then the breakeven cost was six pesos. So it wasn't that far. So, we know that when you say it's merchant doesn't mean it's zero; it means it's WESM. But at that time, when you're looking at the average prices, it was not going to make money, and that's what happened.

We have not looked at it now if WESM is abnormal because we know that prices are high. We don't know if that will happen in the future, but since there is no floor for WESM, correct if the effective cost is six or five pesos... Of course, we're hearing Leandro Leviste talk about three pesos and everything reaching grid parity, but you're really in the scale. But for the smaller solar plants right, if you need five to six pesos to break, that's the challenge. But don't worry, we've looked at it, but we need I guess we need the floor also, and WESM doesn't give us a floor to date. Joanne, maybe you can share your views.

Eala: Thank you, Ed. My experience is that we have lent to a client who has WESM as their source of loan repayment. Still, I tell you. First, that client has a backup facility, meaning a backup source of cash flow. So, it is not comparable, meaning if it were a client who doesn't have any other sources of revenue that we have financed. The client's cost was, if I recall, 5.75, but at that time, also, WESM was hovering at around four. So, we wouldn't want to foreclose on the solar plant.

With the track record of the client and other possible sources of revenues, we know that the client will make good on the commitment we lent to the client. I cannot say the name because of confidentiality. They are doing pretty well now, of course, but see the solution. It is not purely na we'll take our chances. Because remember, WESM is a market, as Ed was saying; there's no floor price. Where will the money come from?

Remember that banks like BPI and BDO also are listed companies that are owned by the public. So, suppose we get into trouble because of lending left and right without considering those who may not be able to pay. In that case, we will forgo our responsibility to the public as well.

Maybe another institution can take it. I don't know if others would have guaranteed facilities to take on a loan that would turn sour because WESM prices dropped. But suppose you talk to a private bank with its responsibility to its public stakeholders. In that case, there are certain limitations on what we could pay. That's it. Thank you.

Fuentebella: Ma'am, do you have a figure in mind? What should the floor price be as far as WESM prices are concerned?

Eala: Well, it's always a question of breakeven. Remember, at the end of the day, we try to estimate how much the solar company would derive its revenues, net-net. How much would they be able to sell their electricity for, netting out all the costs? You have your cash flow, and you have you, say like a quarterly amortisation or even a monthly amortisation that you have to pay.

We have to have that on hand, and if WESM prices will not give them sufficient money to pay for that monthly amortisation, that's a problem. So, for that particular client, for instance, his breakeven cost is something like 5.75, then the WESM prices will have to be above that. They have to consider possible other expenses that may have to be added to that breakeven production cost. What if it's six, then I'll tell you now, at least six or a little over to give them some margin for their businesses to thrive.

But that is hard, that would mean like Undersecretary, you were mentioning, in other countries, they do have subsidies. That is where the government now takes its role. But there will be market intervention to protect these RE producers, not just solar but all of these RE producers we would like to assist, and we'd welcome that. I'm sure Ed would also appreciate that because if there can be a mechanism whereby financial assistance can be given to these RE generators, that will ease their pain, making it more feasible for them to have WESM. If WESM drops, then there's a mechanism whereby government subsidy kicks in. That would work. But of course, first, we'll have to refine the numbers, but yeah, the concept alone is a possible solution.

Ahmed: I think it's clear that we need supply, and we need the correct type of supply and the finance. We have a financing gap. We see that PPAs are shorter-term. Plants, merchant

plants, you know, need some surety for the banks. So, banks, it's clear that you won't take a pure merchant price without some underlying contracted revenue source. So, that's all clear.

I think one opportunity that our colleague from BPI flagged is the use of a guarantee. However, we know that going project by project for a guarantee is quite a tedious task. Perhaps an opportunity because we need to unlock the power of the spot market; it does have its uses to maintain system stability. Whenever one needs power, you can buy it from there. Perhaps, a guarantee that is within the spot market system for merchant plants.

That way, they have their minimum price, whatever that is, to be determined by the regulator, DOE, and feedback from the banks. But maybe this is something that we can look into as we're looking at financing options because that way it allows the market to function, brings in that financing secured surety, but also doesn't support specific players; instead, anyone can have this opportunity, and that's what we want to do. We want to bring in new participants to the market. We want to encourage new recognition that, you know, renewables have a role to play in our system. We need to sort of transition the financing along with the technology.

Castro: The next question is, the trend now is the investment from coal and non-construction of new coal-fired power plants. There is a growing shift to fossil gas-fired power plants in the Philippines. What's your take on this? What is now the position of the Philippines with regards to RE improvement in transition, Usec Wimpy?

Fuentebella: What we just said is that baseload, we have too much in the system. We emphasise that they need flexible plants even for the distribution, utilities, the buyers, and especially the system operator. As far as the system operator is concerned, it's around 15% off, for example, Luzon demand. That's already 1,500 Megawatts if you're talking about 10,000, and that's not even the peak which is sometimes twelve. So 24/7, you need that for ancillary services, and sometimes there's a campaign that will be more expensive.

It's more expensive if we don't have power; that's the bottom line. What we are saying is that everyone should comply with the obligation. In complying with the obligation, the system operator, the buyer, and the distribution utility, also the buyer, should be able to forecast what they need. In forecasting, you see the baseload, which is the bottom of your demand, that's the 24/7 requirement, and then you have around 12 hours demand on top. That's the flexible plant that you need. LNG, hydro, geothermal can answer that, and it can also be wind or solar with battery. So, any RE with a battery can provide that requirement.

We are saying: coming up with the terms of references in compliance with the Competitive Selection Process. They should be the ones to say that we need this and that the plants will bid the lowest price. But first, they have to be responsive to the demand. So, if my peak is at night and I'm bidding with a solar plant, it's not responsive because we don't have the sun at night. It's that the terms of reference for the CSP come from the buyer. So that's where the discipline comes in.

Mulholland: I'm not an energy expert to advise on or even have views on the right technologies. But as an adviser to clients who need to assess their energy package and provide finance for their energy package, it's about spotting the right trends and developments that will help those make the right mix. One is the Paris goals and the role for gas. If previously, we thought that there was, you know, gas was that transition fuel.

Experts tell us that gas, based on the emissions and the methane that comes out in the production process and the whole life of these assets, might not be the transition fuel.

It's about asking: What assumptions are we making about the role of gas as a transition fuel? I thought Sara's comment earlier, particularly around learnings in the last 12 months on the commodity prices for coal within the pandemic. So, that could be relevant for LNG. So again, that's another trend or developmental learning. What would that mean in the position of banks, insurers, and investors for these energy sector assets? Another one is the IEA. It's the International Energy Agency and what they're saying in terms of natural gas. Intensive upstream production and whether there should be that production and the commerciality of those resources. So, it's really about looking at the trends, the developments and then figuring out what's relevant and reasonable. I think that there's much information out there that's rapidly shifting by the day.

Castro: My next question is from Bruce Rodriguez of ABS CBN. I want to throw this to AG Lyn Javier. How many losses are we looking at in stranded assets with the current power generation landscape to our banking officials, regulators, and experts? How soon should the industry act to minimise such losses?

Javier: The BSP, along with other regulators across the globe, would like to further enhance their data capture on the exposures of banks in this space. We have captured that banks' exposure to the power industry comprises around 10% of the total loan portfolio, about 10 trillion. That exposure is not disaggregated whether investments or loans for renewable or coal-related projects. So, that's the next step. What we wanted to pursue is to capture disaggregated data on the power sources and the loans extended by the financial industry.

How soon should we transition to renewable energy? The soonest possible time. Kat mentioned that we dream big and set bigger ambitions and objectives in this space, which should accelerate our reaching our zero-carbon goal.

Sawyer: I just wanted to add in respect of stranded assets, companies that are going to become left to an extent need to be thinking about how they're going to wind down their operations and also transition their businesses into sort of low-carbon operations rather than existing and carrying on as they are, which could lead to stranded assets. If they aren't going to transition their businesses, they need to wind down their businesses eventually.

For the banking sector, they need to be looking at it now. They need to be reducing their exposure to assets that can become stranded. And whether that's divesting or working with those companies to transition their businesses, that is also a way they can do that—which is just a flag as well that the sooner they start doing that, the sooner it's an opportunity for the banks because they can help those companies transition by providing transition finance as well. So, although there are risks to be mitigated, there are many opportunities to be had.

Francisco: Yeah, I was going to ask, Naz. I forget, maybe Jamie or Albert; what country was it when I read, was it just yesterday or the day before that there was a plan by the government plus an ECA to purchase the coal plants basically and retire them. Was that the Philippines? So that's another way of reducing stranded assets. So that is what we would welcome, right?

Fuentebella: I don't think it's the Philippines po.

Francisco: Not the Philippines? Maybe I was reading an international magazine. But that would be a great idea. To support what Jamie said, that's why I think BDOs and BPIs have stopped lending, let's say to coal because, as you guys know, maybe international, remember, you have longer loan maturities, right? If the real life of the plant should be 15 years, you'll lend 15 years.

Remember, when we were doing coal financing in the past, we were doing shorter tenors because we were still very conservative. If we just let this runoff our balance sheet without new loans, it would possibly affect only 5 to 7 years, and our coal exposure will go down to zero. So that's an active way of managing it—by not adding anything on and just letting it expire, I mean pay off, that will happen.

As a recent example, when the government bank wanted to divest coal, there were no takers because the private banks don't want to lend. So they're stuck. In reality, you can't force a loan default if they are paying, but if someone wants to pay off, you cannot just force anybody to buy them right. That's the problem unless you sell them and sell them at a discount. That might cause a problem because it's become sort of an implication that this is a bad loan, but in reality, it's current. So those are just some of the dilemmas we are facing now, real examples.

Fuentebella: We have to remember just about a stranded asset; we have to remember, that's why I mentioned foreign interference, but I don't mean that in a wrong way. I'm just asking Filipinos, who are we trying to please here? Because as far as our country is concerned, this is our level of emission. As far as stranded assets are concerned, we already experienced the BNPP. The Bataan Nuclear Power Plant, when I was born, it was already being constructed. Then it became stranded, and the government used taxpayers money to pay for that until 2018. Because our decisions at that time were not scientific or evidence-based. We kept relying on some studies made by non-Filipinos or those who are not accountable to pay for this.

Yes, it is a noble intention of taking care of the planet. However, we have to use acceptable software and zero coal as far as running on software, whether internationally accepted. I cannot see it as far as my stint in the Department of Energy is concerned. I cannot see it. What I can see, what we can see is a 35% share of RE by 2030 and a 50% share of RE by 2040. So as far as our country is concerned, let's make it science-based, evidence-based, and remember that we are victims of climate justice. That's why we are vulnerable.

Under the international agreements that we entered into, the big emitters of GHG are supposed to give more to the victims. We signed it, and that's why we're talking about it. But remember the numbers, please remember the numbers, and as banks, as financial experts, we have to have this goal first. If you embrace the Philippine Energy Plan, those are the targets. How do we meet that, and how do we address the lower costs for consumers? And that's where the numbers will come in.

Ahmed: To build on what Undersecretary I was saying that the main point would be that those equipped to manage the risk should address the risk. It can't be to consumers or the public. So, when it comes to standing, this is where the data the analytics certainly are essential. The other point is that the new shifts in the DOE with the pass-through, that being removed, and then the curtailment clauses we see mean, if they don't have any use at a certain utilisation level, they don't have the capacity fees. So, these are all improvements to procurement that would support the country in not having stranded assets because then

investors, developers could make better decisions this way. One thing to note when it comes to the Philippines' shift is undoubtedly not on decarbonisation. It'll be on economics and the access to capital.

The cost of capital is part of something that the international community also has to support with is relatively high, for renewables. So it can translate to higher cost unnecessarily and so the guarantee that we had discussed previously on for the merchant plants, reduced cost of capital in general, all of this has to come into play for us to take advantage of new technology or low-cost technology that's relatively new.

Castro: We're nearing the end of our Q&A; this is for BPI and BDO. Are there any plans to allow individuals and citizens to gain agency by having viable and palatable personal green loans? I think this is more for solar house/household solar roofing. Are there any programs also to extend to the household level?

Fuentebella: Even when I was in the Housing and Urban Development Coordinating Council, there is that window with the Pag-Ibig Fund of home improvement. So that is what we are also trying to tap into in providing funds. Because we have just spoken to the Department of Finance and sponsored a meeting, I wouldn't say the international participants or organisations participate there. Still, I think it will be apparent that it can be coursed through the Pag-Ibig Fund, so that's where they can have that window. But it exists already, although there may be better options.

Eala: We have developers who will have low-cost housing facilities with solar on the roof, and we've been supporting them. They've been winning awards because of coming up with these solutions. We also have personal loans, which was incorporate solar. These are evaluated on a per-project basis, and again, the solar technology providers are pre-evaluated by the bank. So, once we tell you that yes, you passed, you can borrow for your solar on your roof. We would have known already that the solar providers have a good track record and could meet the projections that are being promised to you. So we have them on the side.

We'll develop a more extensive set of solutions in the coming years because these are done on a per-project basis. There's more to come on the retail side because we recognise this is a much better time to do solar. Because if you tried to do it, let's say five or seven years ago, prices would have been so impractical. The cost of solar then does not even give you a payback of five or seven years as promised by the providers. The payback period was taking something like nine or even ten years. But now, the payback period has just dropped significantly because solar facilities have gone down in terms of the cost of setting up. So, it is a much much better time to go into.

Francisco: These are done more individually, not as a portfolio or not an approved lending program. Let's say just for solar roofs because it's more challenging. It's a case to case basis. There might also be an opportunity for portfolio insurance or a tie-up with an ABB or ECAs to do something for the households. Because I remember a few years back also I was working with the IFC for a rural electrification corp or even for ESCOs, because even for these energy efficiency projects unless we have a big ESCO whose guarantee means something, it doesn't mean much if someone says it's going to improve if you have no backstop. I suppose that's what the banks were looking for. We've been willing to look at some initiatives to work with what foreign companies have done abroad so that we can bring it to the grassroots and make it easier.

If you remember, even that's why for project finance, let's say an individual or a developer comes to us, if they are going to borrow just less than, I'll use a number, maybe let's say 4 million dollars. It's not worth doing project finance for a 4 million dollar project for all the effort, all the advisers, and all the time you will spend. We're going to look like that's a corporate loan and just demand, you know, the traditional security, which is not cash flow lending, which is unfortunate which is not what you want to hear. But then it's not worth our while.

If it were maybe a billion, at least billions of pesos, then it's worth our while in spending all this time, and you also have with all these consultants. But if it's a small project, that's just going to get looked at, as you know. Even the foreign banks are not going to look at it. So while we will try to look at it, generally also, there are no thresholds. Maybe that's why going back to the earlier question.

We do not see many loans. Maybe there are many applications, but then, in reality, they do not even pass. Not to insult anybody, but they don't even give basic financial feasibility because it's a dead-end at the start. But they insist on presenting it, right? Because it's so enviable. So that's why maybe we don't even consider that, or we don't even see enough loans. Because there have to be specific standards like what Usec said, so that's what we're not seeing, but that's where also we have helped with the DBP, for example, because they're more developmental even if it's a minimal loan, they'll spend more time on nurturing that, right? Because they have different care than we do in the private banks. Thanks, Naz.

Castro: Thank you, Sir Ed. Unfortunately, that's all the time we have for the Q&A, but I would like to challenge all our reactors and presenters.

I have one last question, and I would like you to think about it while we have a group photo. So, the question is for everyone. How should corporate directors, the banking and financial sector, and the whole business community respond to the latest IPCC report, warning us of more severe, more frequent, and irreversible climate impacts? What does this entail for them, considering that they are also one of the most affected sectors and are expected to help turn the tide to prevent further global warming and climate change?

Ahmed: I think the main point that I got from that report was that a 1.5-degree threshold would be reached ten years earlier than expected if we don't do something about it. So, this means for developing countries like the Philippines. We have to seriously or take seriously those physical climate risk assessments that the BSP is working on. Because real estate, you know, various assets and industries will be disrupted in that risk. This also means that there's probably more opportunity and reason to invest in resilience, so climate-resilient infrastructure.

So yeah, there are both risks, but there are also opportunities that come out of it. But it's clear that you know, we are seeing we need to be planning for worst-case a lot sooner than expected. But this also doesn't mean that the fight is over. You know we see massive shifts, especially in the international investor front. BlackRock major asset owners are pushing to be 1.5 degree-compliant. So, this opens up investment opportunities for domestic companies and banks here to attract that investment capital.

Mulholland: With my mentors and colleagues, we wrote a client update on what the IPCC report means for corporate capital markets and government decision-makers. I'll send that to you, but my three quick takeouts: Reaffirms the why for your net-zero strategy. Physics

aside, it will drive accelerated action to reduce emissions. And the third one is it reinforces the need to consider climate risks on a forward-looking basis because historical experience has limited analogues.

Sawyer: It's pretty clear that the IPCC report is the direction that governments worldwide are going to be moving in. Do the bank directors need to look at what does that mean for them? How will that increase the risks on the bank, whether that's from the transition or the IPCC report saying how bad those physical climate risks are going to be. What risks does that bring, or what does that mean in terms of your financing and your portfolios and the opportunities you can seek to realise some value from that and drive the transition and help everyone get towards 1.5 degrees?

Fuentebella: Secretary Cusi emphasizes information-based decision making. Sa kahulihulihan, kailangan ang babantayan natin ang interes ng bayan. Tayo ang biktima, ayaw naman natin na tayong gastos nang gastos dito. Napakalaki po ang kailangan na pera para mag-transition. Kaya kailangan galingan natin sa pakikipag-usap at hindi lang tayong bigay nang bigay.

That's our strategy, and it should be information-based. We have to work together, and we have to be very efficient. Please read the Philippine Energy Plan or participate in crafting the Philippine Energy Plan so that all these inputs can be plugged in. As I mentioned earlier, by 15 September, we have to submit the 2020-2040 PEP. By next year, lagyan na natin ng chapter for energy financing para ma-address yun mga gaps na identify natin sa pag-uusap na ito.

Javier: I think the report highlights the role of the board of directors and the need for them to take immediate action. The timing is now, as you know, because consumers and preferences have shifted already. As you should review your strategies, you think about the sustainability agenda as well. This is not just to promote the long-term interest of the financial institution but also to contribute to the sustainable and inclusive growth of the economy. We're not just talking about stranded assets. We're also talking about the physical risk impact of climate change on our balance sheets. Thank you.

Eala: I do appreciate that there is such a thing as a PEP because if we do not plan how to phase out coal and phase in renewables and at the rate that we're going with only 35% seen by 2030—it scares me a bit, admittedly. I see the same crucial importance of the PEP and synchronising, orchestrating that whole plan in the country.

Now on the corporate directors' side, and everybody else is active in the sustainability front, of course, we know that contribution-wise, the Philippines has a very insignificant impact, but we are indeed among the top victims, as mentioned earlier. So, we need to do our share, even on a micro basis mentioned earlier by Usec, good energy efficiency and renewable energy, and at the same time as I was emphasising to be aware of the climate and environmental risks because we happen to be here in the Philippines, exposed so much to all of these hazards.

We have to hold on tight. We are in the middle of a pandemic that will not stop regardless of whatever climate risks or environmental risks are happening. So, it's all happening simultaneously, and we have to hold each other and work on this together and just come up with a grand plan that we can all support.

Francisco: My suggestion is because I'm on the management side, di ba, mostly. So, as directors, whether independent or not, you can require management to present their standards, right? Of course, what we learn in the ICD because I'm an ICD Fellow, we set the strategy they implement.

Review the strategy and bring it up and then remember another thing, another practical thing. We need this yearly renewal as independent directors in the banks. Therefore, make it a particular topic to talk about stranded risks or all these emissions risks. That way, you have management and the rest of the board and the owner so that you're not in trouble. Get a good speaker so that they will, you know, who walk the talk who will scare everybody so that we will revise our loan standards, our underwriting standards, what our timelines are.

At least you have the chance to influence it at the board level, and then you will cascade it down to the CEO di ba the way you thought. You cannot go down directly to the line management because then you're violating governance policies. But bring it at the board level, especially since some of you are lead independent directors. Use your influence to do that. Get a shakeup at the board to question all of this. That way, management will be forced to listen. It's just a tip because I'm on the receiving end.

Castro: We are providing an exclusive briefing for those interested private companies. The KEEP report officers will be available to hold the briefing. We'll be happy to reach out to you also after this webinar. Thank you, everyone.

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