

2nd Philippine Wind Stakeholders Meeting – Summary of Discussions
Quantum Leap in Wind (QLW) Power Development
Technical Assistance
27 November 29, 2012, ADB Headquarters

The following are the agreements and some highlights from the meeting:

- 1. Presentation by Mr. Rommel Reyes of NGCP, participant in the technical training on wind power development given by the Centre for Wind Energy Technology (CWET) in Chennai, India in September 2012.**
 - a. Mr. Rommel Reyes' presentation highlighted the following points:
 - i. Cost of wind energy generation in India is about half of Philippines' approved FiT. He offered the opinion that this is because they have their own turbine manufacturers;
 - ii. The RE potential of India (different forms of RE vis-à-vis achieved)
 - iii. The importance of wind forecasting to reduce issue of variability and intermittency
 - b. Based on the presentation, there were discussions with regard to the needed ancillary capacity for RE:
 - i. Ms. Ma. Rosario (Chari) Venturina of Trans-Asia Renewable Energy Corporation (TAREC) questioned the 1:1 stance of NGCP with regard to the needed ancillary capacity per MW of installed RE. She stated that such a stand has created the wrong impression that all ancillary capacity is being secured to protect or assist RE. Mr. Nicky Villaseñor of Philippine Hybrid Energy Systems, Inc. (PHESI) said that the same impression exists in the off-grid areas.
 - ii. NGCP responded that they have changed their stance on the needed ancillary capacity but they need data and information to fully appreciate the impact of wind energy's entry into the grid. There is a need for a grid flexibility analysis. This will help to answer how much spinning reserves are required. Question to be asked is, for 5%, 10%, 15% and 20% RE, how much reserves are required for each case.
 - iii. There was, nevertheless, a general agreement that the misconception held by the general public that each MW of variable RE requires a corresponding MW of ancillary/regulating capacity must be corrected. Such an effort should be coordinated with the Department of Energy (DOE).
- 2. On updating the Philippine Wind Energy Roadmap**
 - a. Mr. Carlo Borlaza, of the ADB's QLW Team proposed a framework for the updating of the Philippine wind energy sub-sector roadmap of the National Renewable Energy Plan. The framework was based on a template developed by the International Energy Agency and presented at ADB last October.

- b. The framework calls for the creation of a steering committee and a technical working group who will manage the updating process, the timelines and the role/level of involvement of each stakeholder. Four key steps were identified in the framework: i) Scoping & objectives, ii) Change assessment, iii) Solution assessment, and iv) Report development. The goal is to develop a roadmap that reflects the shared long-term vision of the stakeholders, is flexible and shall remain relevant (the updating process to be kept alive).
- c. Ms. Venturina of TAREC commented that the framework may be too academic and that it would be better create working groups to come up with case studies that can provide numbers that banks can work with – they should be able to see how many pesos is needed for how many megawatts, multiplied by how many projects. Even just indicative numbers would be okay, but the roadmapping exercise needs to produce cases that can be quantified and then the rest of the stakeholders can be asked to weigh in.
- d. A participant agreed, stating that this will lower the cost going forward. If developers see a long-term program (beyond the current 200 MW installation targets), then they can factor that in their business planning and that will make things more economically feasible in their own evaluation; they can evaluate this at portfolio level instead of on a per project basis.
- e. Mr. Carstensen of UPC remarked that what is needed is an entity like ADB that has credibility to carry over the long term plan and make the long term plan sustainable, thus he is very interested in supporting QLW's activities.
- f. Mr. Bo An of ADB stated that the process involved in developing the roadmap is just as important as the final document. The process of getting all stakeholders working together to find a solution is important.
- g. From the discussions, it is clear that there is no single right approach; we need to get to various scenarios—top-down, bottom-up, side-ways, etc. In order to accomplish this, we then need to figure out which constraints need to be moved. The steering committee and technical working group for the wind roadmap updating should also be formed and convened at the soonest;

3. Updates on the Feed-in-Tariff eligibility guidelines

- a. Mr. Ronaldo (Bubut) Angeles of the Department of Energy shared that the Feed-in-Tariff eligibility guidelines have been endorsed to the DOE Secretary Petilla, and DOE is targeting to publish the guidelines 45 days before February 2013 (to enable identification of eligible projects before the election ban).

Copies of the presentations can be viewed and downloaded at:
<http://i-windenergy.com/QLW-Philippines-Stakeholders>

Further information on the Quantum Leap in Wind Technical Assistance in the Philippines can be found at: <http://i-windenergy.com/QLW-Philippines>

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List of Attendees

Name	Company
1. Magbanua, Gerry	Alternergy Phils.
2. Arsenio, Lou V.	Archdiocese Of Manila Minstry On Ecology
4. Lequigan, Don	Archdiocese Of Manila Minstry On Ecology
3. Torres, Jojie	Archdiocese Of Manila Minstry On Ecology
5. Castro, Peter	Coastalpower Devt. Corp.
6. Cruz, Rustico Noli	DBP
7. Angeles, Ronald	DOE
8. Velasco, Rico	DOE
9. De Vera, Miguel	EDC
10. Ng, Keith Khadine	EDC
11. Santos, Aloysius	First Gen
12. Vega, Carlos Juan Paolo	First Gen
13. Ranola, Romeo	First Maxpower Int'l Corp
14. Paderna, Francis A.	First Maxpower Intl Corp.
15. Laron, Ferdinand P.	GIZ
16. Haihong, Yu	NGCP
17. Reyes, Rommel	NGCP
18. Venturina, Rosario	NREB
19. Villaseñor, Iii, Nicanor S.	PHESI
20. Panes, Danilo	Trans-Asia R.E Corp
21. Pena, Gabriel	Trans-Asia R.E Corp.
26. Goco, Renato	UP - College Of Engineering
22. Carstensen, Troels T.	UPC Asia Corp.
23. Payumo, Antonio	UPC Renewables
24. Tagum, Mark Anthony	UPC Renewables
27. Chingcuanco, Divina	USAID
25. Gutierrez, Lily L.	USAID
28. Shah, Jitendra	ADB
29. An, Bo	ADB
30. Cleto, Maria Lorena	ADB
31. Almera, Jeffrey	ADB
32. Borlaza, Carlo	ADB

Meeting Notes and Discussions

Agenda Item	Discussion Points
Welcome Remarks	
OAS presentation of Solar Roof Set-up	Technical aspects of the solar roof set, how much of ADB's power needs is met by the solar (3.5%), maintenance issues
Site Visit to Solar Rooftop	
Updating the Philippine Wind Roadmap – Carlo Borlaza, ADB, Quantum Leap in Wind (QLW) Technical Assistance	Copy of presentation available for download at: http://i-windenergy.com/QLW-Philippines-Stakeholders
Presentation of CWET trainee: Rommel Reyes from NGCP	<p>Copy of presentation available for download at: http://i-windenergy.com/QLW-Philippines-Stakeholders</p> <ul style="list-style-type: none"> - Indian Wind Energy Sector – cost of generation, about half of Philippines' approved FiT. He offered the opinion that this is because they have their own manufacturers - Also talked about their potential (different forms of RE vis-à-vis achieved) - Conclusion was emphasis on the importance of wind forecasting to reduce issue of variability and intermittency - Ms. Rosario (Chari) Venturina of TAREC questioned the 1:1 stance of NGCP with regard to the needed ancillary capacity per MW of installed RE) - Mr. Reyes responded that NGCP has changed its stand on this issue. Instead of this general assumption, they have to base the proportion of ancillary capacity on the wind data. - Ms. Venturina: can we say up to 10%, no need for immediate backup as long as there is good forecasting? - Mr. Reyes agreed. - Ms. Venturina said RE developers are hit by the wrong impression that all ancillary are secured to protect or assist the RE component of the system, which is wrong. She stated: "Fact is you don't have available ancillary even for conventional power plants, so why should RE be at the back? Why should RE developers be blamed for the additional ancillary when you provided this for the non-RE without talking about passed-on cost". Ms. Chari requested that these issues be clarified when making presentations to the public because the public knows that they will carry the additional cost. - Mr. Reyes agreed that there is a certain level before you need to add ancillary service but it depends largely on the characteristics of the wind resource for each area. - Mr. Nicky Villaseñor of PHESI agreed. He stated that some still insist that for every KW of RE there must be corresponding ancillary capacity. Although there is now a retraction of this idea, this mindset remains particularly for the off-grid RE. He suggested that a statement be issued to correct this. - Mr. Reyes: for this we can coordinate with DOE. For off-grid areas,

	<p>it is weak grids. So it is possible that there is still 1:1 relationship. But again, it will depend on the wind and load profile of the area.</p> <ul style="list-style-type: none"> - Mr. Villaseñor: yes but have to change this automatic assumption. - Mr. Haihong Yu, NGCP: off grid is different from what Mr. Reyes is discussing. I support that we don't need 1:1 (and there was no categorical statement from NGCP about the 1:1 requirement), but we need more data and information so we can fully appreciate what the impact of wind power entry will be. Right now capacity is still very small. But off-grid is a totally different story because the demand is very small so NGCP doesn't have much experience. Perhaps we need to study case by case, need load profile and what kind of RE we can use and what kind of storage system we can use. - Mr. Reyes stated that during the early stage, forecasting is needed in preparation for more wind farms. But the industry needs to start early if we are expecting more wind farms. - Mr. Villaseñor agreed and said his only issue is that the things said about on-grid are automatically applied to off-grid so if there are new findings such as those discussed by Mr. Reyes, these should also be conveyed to all concerned so that any wrong perceptions will be corrected - Mr. Reyes agreed - Another participant asked about wind turbines in India - Mr. Reyes recounted that when they visited the 7,000 MW facility there was a mix of old and new turbines. - Mr. Reyes proceeded to give background of NGCP studies: process involves analyzing variability of the load, including wind or solar as negative load, considering what the net resulting variability is. Thus, he said, it really depends on load variability: they use the SD approach, the 3sigma. - Mr. Troels Carstensen of UPC stated that he doesn't agree that you can forecast without wind farms. He said that he doesn't know of software that can predict based on 1 month of data; software available all needs a minimum of 1 year of data. So forecasting isn't something you can do when planning a wind farm. You NEED a wind farm to forecast. - Mr. Reyes agreed, saying that if you use software to predict, but data will differ from what is generated by an actual wind farm. But we have to start somewhere. Developers cannot rely on data from existing wind farms for new installations in other locations. - Another participant: regarding software – asked if there are specific forecasting tool in India used for operating plants? - Mr. Reyes responded that there is the one he had discussed earlier, from 3tier, which is a forecasting company that can provide that forecasting service. - Mr. Carstensen mentioned other options for wind forecasting services. Instead of ADB putting up wind masts, it might be cheaper to avail of these services. However, the really accurate software is not commercially available; they belong to major generating companies and cost millions of dollars to develop. - Mr. Reyes mentioned that he will attend a public consultation on
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	<p>amending the Philippine Grid Code to incorporate variable renewable energy. The public consultation will be held tomorrow, 28 November 2012, at 9:00 am at the Energy Regulatory Commission where these issues will be discussed further</p>
<p>Update on installation guidelines – Mr. Ronaldo (Bubut) Angeles, DOE</p>	<p>Director Marasigan had assigned Mr. Bubut Angeles to update the group on Feed-in-Tariff eligibility guidelines.</p> <p>Mr. Angeles said that the guidelines have been presented to the new DOE Secretary, as was WEDAP's proposed first come first serve approach for eligibility. They have also set a target for identifying pre-eligible projects before February 2013. They will be applying for exclusion or exemption from the election ban but just in case they are targeting this deadline. There is a target for publishing FiT eligibility criteria 45 days before February (which is around 15 December 2012) but this is just a target – no assurance that they will meet this target for publishing the guidelines.</p>
<p>Open Discussion</p>	<ul style="list-style-type: none"> - Ms. Venturina commented on the flowchart for wind roadmap updating that Mr. Borlaza had presented. She said that, as of now, there are over one thousand MW service contracts approved. She suggested that what we need is an idea of HOW MUCH POTENTIAL the country has - if we use 10% of the old 77,000 MW estimated potential, that would be more than enough. We now know cost of implementing wind projects. There should be a session to decide on target for MW that we can put up within, say, the next 10 years – based on what is REASONABLE. This would make big difference for the industry. Developers are now elbowing each other to get into the limit of 200 MW because DOE approved more than 1,000 MW worth of contracts but are now setting a limit. Even in the existing roadmap, they had targeted more than 1,000 MW by 2015. Thus, she said the roadmapping activity should involve FIRST working on the long term perspective or at least identify what is doable in the timeline being discussed so that people will be clearer about the timing. She said developers can have so many potential projects but with so much uncertainty about what they can actually do, they end up not doing anything. She stressed that the sense of continuity is what is so important for developers since it is a matter of them spacing themselves against the target. - Another participant agreed, saying that this will lower the cost going forward. If they see long term program of more than 200 MW then they can factor that in their business planning and that will make things more economically feasible in their own evaluation; they can evaluate this at portfolio level instead of a per project basis. - Mr. Carstensen agreed. - Another participant weighed in on prioritizing roadmapping steps, given that developers need to see master plan for MW so that they can schedule their investments. He pointed out that now NGCP can have a loop on necessary support developers need, so NGCP can also make their own procurement for ancillary. These are the first two issues that need to be solved, next is the issue of

	<p>transmission line.</p> <ul style="list-style-type: none"> - Mr. Borlaza agreed. Said framework is not fixed, just a guide but the key is SHARED LONG TERM VISION. Not just government or developers' vision. Also need to consider what the government is willing to commit politically. - Ms. Venturina disagreed, saying that in order to come up with a case that can be discussed, they need to provide numbers that banks can work with – they should be able to see how many pesos is needed for how many megawatts, multiplied by how many projects. This will give banking sector an opportunity to participate, instead of talking about an academic exercise coming from all directions. Developers will then be able to look at what it will cost. She stressed that what is needed is initial costing and initial estimates so that cases can come out of it and then bring in stakeholders to look at these initial numbers so they can give opinion, and then adjustments can be made to the numbers. She stated that no one will make a decision without numbers. Even just indicative numbers would be okay, but the roadmapping exercise needs to produce cases that can be quantified and THEN they can ask the stakeholders to weigh in. She doesn't think that we can start from an academic model - Mr. Borlaza responded that we are not advocating academic model for roadmap. We are also doing financial feasibility studies for target areas but we also believe that this exercise of developing long-term vision is important, but it really depends on the need of the specific focal country. This can just be a starting point. - Ms. Venturina still felt that the approach described by Mr. Borlaza would be a sub-optimal one. She suggested that we put together a technical working group that can work on the numbers and quantify what's at stake, and then stakeholders (banking entities, developers, NGCP, government, aid agencies etc.) can weigh in and expand the long term vision - Mr. Antonio (Tonito) Payumo, UPC explained that Ms. Chari is advocating a bottoms up approach in setting targets: coming from developers themselves and based on their internal resources, determining what can be rolled out within the next three years and then consider what can be done after that, given their resources... starting from there and then building on that and THEN coming up with master plan target, instead of target setting and then scrambling to hit the targets. - Ms. Venturina clarified that she is suggesting that we start with a top number and then get the opinion of people who will make that top number doable. - Mr. Carstensen remarked that what is needed is an entity like ADB that has credibility to carry over the long term plan and make the long term plan sustainable, thus he is very interested in supporting QLW's activities. - Mr. Bo An of ADB and member of the QLW Team said that he is happy to be gaining a bigger understanding of the industry's concerns. But most important is government side. ADB comes here to get stakeholders working together; government side has its
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	<p>own concerns connected with the FiT such as how to mobilize the resources to finance this. But the stakeholders can discuss these issues together. As for the roadmap – just as important as the final document is the process involved, getting all stakeholders working together to find a solution.</p>
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