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## Review of PAD on Philippines Renewable Energy Development Project (PhREDP)

This note summarises the comments from a review of the draft PAD for the Philippines Renewable Energy Development Plan (PhREDP) received on 4 July (document not dated).

### Overall rationale and project summary

The proposed REDP expands the Government of Philippines' (GoP) EC-PCG facility (Electric Cooperatives Partial Credit Guarantee), which has become a successful program by leveraging on private sector investment financing. However, by the end of 2013 the capital of the facility is expected to be fully committed. Rather than continue with the direct financing support previously provided by the Rural Power Project (which closed in 2012, with reportedly mixed results), the REDP proposes to backstop an expansion of the guarantee scheme provided by EC-PCG by providing a \$44M guarantee facility from the Clean Technology Fund (CTF) to EC-PCG<sup>1</sup>.

As the CTF Guarantee would be contingent finance in the form of call-able cash, it can be leveraged in the same manner as other cash in EC-PCG-owned accounts (currently \$16M), eg at an initial five times leverage<sup>2</sup>, over \$440-million in total investment could be supported and with reflows it is stated that a total of \$500-million should be achievable<sup>3</sup>. The proposed project will therefore greatly expand the capacity of the EC-PCG program to back private sector lending to electric cooperatives and renewable energy generation investors. Support is proposed for projects in two areas:

- o Loss reduction in EC's networks
- o Investment in new RE generation, principally expected to be small hydro generation projects embedded in the EC's distribution networks

The GoP has put in place a FiT scheme for renewables which, for RoR hydro is at a level of 5.90 Php/kWh (roughly 14.4 USc/kWh). It is not clear whether this price is indexed. However, the REDP is aiming to target projects that are not eligible for FiTs and is therefore not dependent on future FiT levels.

The scheme appears to be well focused in terms of the targeted projects (EC's loss reduction and small hydro generation), leveraging existing successful financing approach (backstop guarantee to EC-PCG leveraged as other liquid assets), supporting and promoting existing private sector involvement, and working through existing institutions. An important factor is the observation that "...a much more transparent and accountable EC sector is emerging..." which the PAD notes

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<sup>1</sup> EC-PCG cash will be first loss; the CTF Guarantee will be second loss, and will only be drawn upon in the event that EC-PCG's cash (in escrow) is insufficient to pay a call.

<sup>2</sup> The limit could be raised to 8 times if the default rate remains low, still below the Basel-III limit of 9.5

<sup>3</sup> The guarantee only covers 80% of regular principle and interest payments

*"...amounts to a revolution in the Philippines rural electricity sector ...", and which the  
"...PHRED seeks to reinforce and accelerate."*<sup>4</sup>

The principles of the scheme are supported by a reasonable assessment of the risks and returns to the various parties including the CTF.

This review therefore mainly focuses on identifying whether there are any risks which may have been not identified or insufficiently taken into account.

## **Discussion of risks**

While the overall focus of the arrangements is on private sector players, it should be noted that the ECs are regulated on a non-profit making basis with limited ability to self-finance (eg by accumulating assets, equity investments) and operating at very low margins<sup>5</sup>. The risk of a default is greater than if they had a profit-making mandate and a growing equity base. Risk of default is partially mitigated by the observation that their borrowers are expected to make reasonably high returns (on average over 18% EIRR<sup>6</sup>) and the arrangement and management fees are slightly on the high side to provide a small cushion. Nevertheless, there is the possibility that an individual EC could be exposed to poor cash flow from financing below average return hydro projects.

The FiT regime appears to offer attractive tariffs to eligible projects. The PAD does not state whether these would remain as attractive over the project lifetime by being indexed. Although projects under this scheme are assumed NOT to be receiving FiTs but to receive on average a lower tariff around 5.3 Php/kWh<sup>7</sup>, there is a possibility that the FiTs would be viewed as a benchmark price and other tariffs adjusted proportionate to the FiTs. This of course depends on the terms and conditions in the RESC, which we have not seen.

However, in many other countries around the world, it has been observed that FiT levels have been reduced over time, and this could happen in the Philippines. The current FiT price levels are not excessive but could possibly be a little high, as is the case in other countries with setting of the first FiT prices, that are then subsequently scaled down. While it is certainly not best practice that already committed FiT eligible projects have their prices reduced, this has nevertheless happened in a number of countries, and it certainly applies to new projects in many countries. There is thus a risk that future prices for small hydro could be reduced with consequent impact on project returns and the sustainability of cash flows, especially for the more marginal projects. Apart from the risk to default by individual borrowers, lower prices could reduce the demand from potential investors.

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<sup>4</sup> PAD p11, 12. Note also that in case of a default by an EC, lenders are protected by NEA step-in rights

<sup>5</sup> Operating margins are 1%, PAD p2

<sup>6</sup> Loss reduction investments in networks apparently make "modest financial returns", p12

<sup>7</sup> It is not entirely clear what is the basis for this assumption. Elsewhere, eg para 31 on p41, it is assumed that embedded generation projects would be attractive to ECs if they had a 25 year levelised cost of Php 3.5 – 4.5 /kWh, well below the assumption in table 7-6, and also implying that there is no or little (less than inflation) indexation of prices over time

The project assumes that projects would be financed on an 80/20 D/E ratio with tenors of 10-12 years, and that this is acceptable to AFIs. However, on page 43 (para 37) the PAD indicates that the "... needs of a small RE project which are typically 12 - 15 year tenors, leverages of up to 90/10 (especially for EC sponsors who have difficulty generating retained earnings to use as equity because of the tariff regime they operate under)...". The PAD thereafter seems to assume that there will be sufficient demand on terms of 80/20 and shorter tenors. This point should be clarified, ie that the expected demand will arise on the proposed terms, or para 37 clarified. The guarantee put option may be a useful way to bridge the gap. It would be helpful if it was clarified whether this was an approach already tested out with the lending banks or at this stage just a possibility.

The PAD suggests that ECs may reduce their average cost of supply by contracting with small hydros. In para 26 of annex 6 (p75) it is not clear why it would be advantageous from an EC's perspective to contract with FiT projects (given their relatively high price), and indeed does the EC pay the FiT (or is this cost somehow socialised?).

The results and sensitivities on p84 (table 7-4) are reasonably robust. The 1% loss rate is stated as a severe downside case ("which we believe is unrealistic"). It would be helpful to have some reasons why this is the case, to support the view that this is a worst (and very low probability) case.

## **Conclusions**

The project structure is very attractive and well suited to the context and objectives; the aims of promoting private sector investment, strengthening the ECs, providing adequate returns to investors and limiting risks to the IBRD.

Overall the returns are adequate and the risks well managed. The weakest point is the slim margins for the ECs, their non-profit status, and the possibility that some below average return projects could put at risk the sustainability of an individual EC's cash flows.

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## **Minor comments**

Table 7-5 on p84 (items I and ii) is not consistent with the text just above

On p86 table 7-6 tariff inflation (indexation?) is shown as 1% pa. Is this an assumption or is it in some regulation? Is this also the case for FiTs? Is it real or nominal?

The UK's carbon shadow price of \$25/tCO<sub>2</sub> could be considered high, though the WB has used \$30/tCO<sub>2</sub> elsewhere

System loss reduction is assumed 0.6% on p84 para 12 and 0.7% on p85 para 15

Table 7-9 p87, what is a 'Bought down' tariff? If this is the same as a levelised tariff, the latter term is more familiar.

What is the significance of quoting this over 25 years? Isn't the relevant tariff the one required to service the loan?