November 8, 2015

APPROVAL BY MAIL: LIBERIA: RENEWABLE ENERGY ACCESS PROJECT (SREP) (WORLD BANK)

Comments received from Switzerland

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER

State Secretariat for Economic Affairs SECO
Economic Cooperation and Development
Infrastructure Financing

WB / Liberia Renewable Energy Access Project

Questions (Q) & Comments (C)

1. Consistency with endorsed SREP Investment Plan and comments made along with the endorsement
    a. (C) The proposed solution of a mini grid with hybrid small hydropower and diesel only is inconsistent with the endorsed IP, where diesel was qualified as "last resort" only, notably taking into account the "difficulties and extremely high costs" of supplying diesel in remote areas.
    b. (C) The proposed financial plan with a $25 million SREP contribution and (only) $2 million from IDA is inconsistent with the endorsed IP, where the WB contribution for the mini-grid component was set at $8.5 million.
    c. (C) The project is consistent with the endorsed IP in as far as it proposes a mini-grid with small hydropower focused on major population centers in Lofa County (WB part).
    d. With regards to the stand-alone systems:
        i. (C) The project seems inconsistent with the endorsed IP, in as far as the stand-alone systems are not "anchored" to the mini-grid(s) with solar PV, which was a well appreciated proposal in the IP as it assured the economic integration of off-grid customers into the technical and commercial set-up of the mini-grid and thereby assured maintenance and operation support as well as the possibility for future upgrading of the systems by competent operators.
        ii. (C) The proposed pico-PV products refer to the lowest-cost alternatives of solar home systems which is inconsistent with the SREP objectives of scaling-up RE also for productive uses. In the endorsed IP the stand-alone systems were not defined as pico-PV, leaving the possibility to also introduce larger systems which respond to the SREP criteria. The nationwide market promotion also seems inconsistent with the IP.
        iii. (Q) In the case of the proposed deployment of pico-PV products, how are the maintenance and replacement issues addressed?
        iv. (Q) What is the commercial set-up of this program? Are the customers/beneficiaries paying for their access? And how?

2. Responsiveness to the recommendations made by SECO/Switzerland along with the endorsement of the IP
    a. (C) The project is not responsive to the recommendation that the MDBs should increase their commitments to permit a higher impact from the SREP contribution. In this case the WB contribution was even reduce by 76.5%, which is inconsistent with the WB's general claim to scale-up its commitment to address Climate Change.
    b. (C) Although it respects the restriction not to use the SREP contribution to fund fossil-fuel fired power generation (which is the only thing the WB proposes to finance), the project is not responsive to the recommendation that emphasis should be put on maximizing the output of the RE component(s).

c. (Q) Where can we find details about the estimated investment costs, broken down at least to the level of the different power generation units, the distribution grids and the connections to customers?
d. (Q) To what extent does the proposed project respond to the recommendation to put emphasis on relevant capacity building and know-how transfer at the stage of procurement and project implementation?

3. Project description (questions)
    a. (Q) What is the actually targeted installed capacity and output of the mini-grid in MW and MWh/y? (The description 1-2 MW is very vague as there is actually a 50 or 100% difference between the two).
    b. (Q) How much of these (installed capacity/output) are hydropower, diesel and solar PV (in the alternatives where solar PV was added)?
    c. (Q) When and by whom will the adequate business model regarding ownership, operation and maintenance be defined?
    d. (Q) Why is the proposed promotion of pico-PV/stand-alone solar systems not concentrated on Lofa county where it could be complementary to the mini-grid development as hinted in the IP?
    e. (Q) It is mentioned that the SREP grant funding will be crucial to lower the high upfront costs of hydro-based RE generation so that end-user tariffs are more affordable. What are affordable tariffs? What tariffs were used for the economic and financial project analyses?
    f. (Q/C) Why is the proposed $3 million SREP support “crucial” to strengthen the incipient commercial market for pico-PV in Liberia? We do not remember that this was communicated in that way in the IP.
    g. (Q) Who would finance the proliferation of diesel-based electricity in Lofa county, in the absence of SREP support? How would this be compatible with the “extremely high cost” of supplying diesel to these remote areas and the low purchasing power of consumers there? Is diesel subsidized by the Government of Liberia?

4. Appraisal of the project (Table 1 in Annex 2 p.27 of PAD and same table in Annex 7)
    a. (C/Q) The capital expenditure of $19.0 million for the proposed first alternative “hydro + diesel only” is lower than the aggregate funding of $22 million ($20 million SREP grant + $2 million IDA loan). What is the logic behind this overfunding by $3 million (or 15.7%)?
    b. (C) The figures in the table clearly show that alternative II with 2 MW hydro, 1.1 MW solar PV and 1.5 MW diesel allows a reduction of the LCOE without CAPEX (i.e. the operating costs) by 47.3% (from 23.7 cent to 12.5 cent per kWh) whereas the additional CAPEX is only $2 million. In other words, a $2 million (or 9%) higher capital expenditure allows to half the operating costs of the project.
    c. (C) Given that the $20 million SREP grant essentially covers CAPEX, the consideration of LCOE including CAPEX is less relevant for the project appraisal than the LCOE excluding CAPEX, from the standpoint of Liberia. Even without making an investment calculus, the marginal investment of an additional $2 million to reach alternative II and cut the operating costs in half looks economically highly attractive.
    d. (C) As the difference in operating costs between alternatives I (hydro + diesel only) and alternative II (hydro, solar PV and diesel) is primarily due to a much lower diesel consumption which is substituted by solar PV, alternative II would also produce significantly better results in terms of SREP outcomes, including the co-benefits of lower/avoided CO_2 emissions.

e. (C) The consideration about higher project risk due to the pioneering of a substantial (MW size) solar PV component seems of the same (ultra-conservative) mindset as the affirmation that a diesel backup is required in case of the failure of solar PV. This mindset will not lead us on the way to a green economy but hinder its very inception. On the contrary, SREP was designed to allow the calculated taking of risks with the objective to demonstrate that (proven) RE technologies can be scaled-up in low income countries. To remove the solar PV part, because of conservative risk considerations and favor the continued use of diesel generators seems unresponsive to the SREP objectives.
f. (C) Instead of requesting a diesel backup as a default for solar PV generating units, the WB and Liberia should explore the possibilities of modern technologies for centralized storage of solar power. Such storage units in concerned larger communities would probably make the diesel backup obsolete.