

October 29, 2012

**Comments from Switzerland on the SREP Investment Plan of Maldives**

Dear Patricia,

Please received attached our list of questions, comments and recommendations regarding the SREP Investment Plan for Maldives.

Could you please distribute this list to the representative of Maldives and the SREP subcommittee members, prior to the meeting.

Thank you and best regards  
Daniel Menebhi

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## **SREP Investment Plan for the Maldives**

We thank the Government of Maldives (GoM) for a well prepared Investment Plan. We understand and value the efforts that were made to produce a document that addresses the needs of the country, was well consulted with stakeholders and is consistent with the strategies already pursued.

We have the following questions (Q), comments (C) and recommendations (R):

With regards to the general investment plan:

1. C: We welcome an investment plan that obviously tries to accommodate the needs of the largest possible group of stakeholders (Greater Male region; Outer islands) and proposes to support several technologies in RE (Waste-to-Energy; solar PV and small scale wind power), using different instruments (technical assistance, investment grants, guarantees for feed-in-tariffs). We are somewhat concerned that the complexity of this investment plan could be a challenge.
2. C: We noticed that the overall leverage factor of SREP funds is rather low (4.6) in relation to other SREP IPs, we have endorsed. There is a certain lack of ambition in this plan, notably with regards to the funds sought from/promised by the MDBs.
3. C: At the same time the leverage factor of private sector funds is rather high (1.58). As private sector funding predictions are less reliable than MDB's, this bears the risk that the SREP IP for Maldives could face financing constraints and therefore not be (fully) implemented.
4. Q: We noticed that the SREP program, which is estimated to take 5-6 years to implement, is by far the largest endeavor to transform the Maldives's energy sector. Yet its impact on fossil fuel consumption is estimated to be at best a 6% reduction. How is this compatible with the GoM's target to be carbon neutral by 2020? Are there projects/programs not mentioned in Appendix 3, which could justify a vision of carbon neutrality in 2020?
5. R: Since the tourism sector generates almost twice as much emissions (32%) as the power sector (18%), the GoM should give particular attention to engage the tourism sector into its strategy to scale-up RE. This can be done by incentivizing investments into RE but also by penalizing investments and operation of fossil fueled systems.
6. R: In general the fossil fuel subsidies should be gradually phased out along with the introduction of incentives for RE.

With regards to the Waste-to-Energy projects:

7. Q: The proposed 4 MW WTE generating facility on Thilafushi island, to be financed at the rate of 25% by SREP (USD 5 million contribution), is part of a larger scale waste management solution (collection/processing/disposal) for the Greater Male region. This larger project is conceived as a public-private partnership (PPP). How far advanced is the conclusion of this PPP? Is it assured that the generating facility will have a steady supply of waste through the implementation of the larger waste management system in time? What is the plant foreseen to be paid per ton of incinerated waste? By whom?

8. Q: The proposed incineration based WTE/desalination projects on the Outer Islands seem at the lower limit of economic feasibility in terms of size (20 to 50 tons per day). Do you have a feasibility study which you could share with the committee for such a project?
9. R: In the case of the Outer island WTE projects, we recommend to focus on one of the larger projects. The funding for the larger waste management component of this/these project(s) must be assured.

With regards to Solar PV and (small scale) wind projects/programs:

10. Q: Has a solar resource mapping for the Maldives been done and are the described potentials consistent with this mapping?
11. Q: According to the IP, it is possible to feed solar PV generated electricity into the Male grid, amounting to 20-30% of peak time demand without significant investments in systems upgrading. On what is this estimate based? What investments would be needed for a larger share of solar PV generated electricity? What is the potential of distributed solar PV generation at Male island (i.e. without the need of subsea cable connections between the islands)?
12. Q: The part of solar PV generated electricity on islands close to Malé, which require island interconnections via subsea cables concerns just 4 MW of installed capacity. How does that compare to the cost of laying the subsea cables and linking the grids? How will this/these(?) interconnection(s) be financed?
13. Q: As a mitigation measure against corrosion, the use of marine grade equipment is mentioned. To what extent have the additional costs been considered in the appraisal of the cost of solar PV generated electricity?
14. C: We noticed that the percentage of SREP funding is particularly high in the component concerning the electrification of 10 small electricity consuming islands (46% of USD 26 million). While these projects will improve access to energy for about 11'000 islanders, the main transformative impact of this component will be the demonstration effect. This could also be reached with a smaller number of islands.  
R: A higher participation of the MDBs and/or other development agencies should be sought for this component or its scope should be reduced, so as to liberate SREP funds to invest into the Outer island solar and wind investments under FIT (concerning 30 islands with large or medium electricity consumption), which will impact energy security for about 86'000 people and where the transformative impact will be bigger. We thus recommend to move USD 6-8 million from the "small power station RE" component to the "outer island solar and wind investments under FIT". This would assure proper funding of this component and increase the chances to attract private sector investments, which is critical for its success.

Berne 29<sup>th</sup> October 2012