February 23, 2012

Response of ADB to Germany on the Approval by Mail: Revised CTF Thailand Investment Plan

Statement on the Updated CTF Investment Plan for Thailand

There are no major objections against the CTF Update of the investment plan for Thailand.

We generally welcome the updated Investment Plan, but would like to receive few more pieces of information for clarification purposes.

The updated investment plan focuses on a clearly defined two-year time frame, while reserving the opportunity to request further funding down the road if implementation proceeds well. We welcome the introduction of such a clear planning horizon and the consequent reduction of CTF resource requirements to a realistically necessary amount. Since the newly proposed ADB tranche announces a rich pipeline of projects nearing readiness for implementation, and the IFC tranche is in progress already, speedy implementation seems possible.

The shift of resources from the public to the private sector is plausibly reasoned with the GoT's recent access to cheap public financing. Some remarks on the shift of resources towards private RE investment:

- It is not evident why additional financial incentives using CTF funds are required on top of the feed-in-tariff, which is also supposed to pay for the additional cost of introducing RE technologies. Given the private sector's apparent existing interest in solar projects, this tariff seems adequate to make projects financially feasible. The question is whether further reduction of first-mover risk could not be achieved more cost-effectively by offering advisory services, capacity building in the banking sector etc.
- ***Reply:***
- *Despite the existence of the tariff adders, RE development for electric power remains very low: as noted in paragraph 18 of the CIP Update (CIP-U), electricity has the lowest share of alternative energy development. The updated grid decarbonization objective noted in paragraph 19 and Figure 3 of the CIP-U shows the decarbonization objective requires a 25% decrease in grid intensity from present to year 2030. This is all the more challenging considering that alternative energy development as of 2010 was mostly in forms other than electricity (as explained in para. 18 of the CIP-U). The decarbonization goal requires that all future fossil power capacity additions be completely offset by zero-carbon electricity, in addition to which an additional 25% decrease in GHG intensity is required. The case for agressive expansion of RE for electricity generation is quite clear.*

- *Though existing tariff adders (feed-in tariffs / FITs) may be attractive conceptually, these can not be readily monetized by many project developers to finance the implementation, as well as enhance the feasibility of the project; otherwise there would be no need for concessional financing provided by CTF. Those developers which can finance from their own balance sheet can move forward, but obviously very few RE projects for electricity generation have proceeded on this basis. In addition, without a roster of completed projects with demonstrable market development impacts (e.g. establishment of business models, lowering of entry costs, etc.), first-mover risks with respect to project implementation, technological risks due to resource intermittency, and the relatively high capital cost of equipment will continue to be present within the market. As such, it would continue to be difficult in scaling-up and replicating RE projects.*
- *We agree that developers may need technical assistance and other advisory services as necessary on a project-by-project basis, as noted in Table 6. However, this may not be the most cost effective or most efficient solution, since the RE market requires increased participation and investments founded on market transformation which cannot simply be provided by capacity building and the mobilization of advisory services.*

- The intended investment in significant additional solar resources plus the expected subsequent scale-up imply significant additional cost to the GoT (or the consumers of electricity) who has to finance the feed-in-tariff. We miss an estimate of this implied cost and a statement by whom this cost will be borne.

Reply:
GOT will cover the feed-in-tariff directly (but ultimately the consumers will pay through taxes on gasoline and possible future adjustments to electricity prices).

- Given the strong arguments for the urban transformation programme in the former IP we would be interested to see whether GoT is concretely planning to proceed with this programme from budgeted own funds.

Reply:
We appreciate this comment, and would like to note that in the original CIP the urban transformation component would have achieved only 1.18 $MtCO_2e$/year. The RE program being supported by ADB is expected to acheive about 1 $MtCO_2e$/year in direct reductions; with replication and scale up of 3x, the GHG reductions would exceed the entire reductions envisioned under the IBRD projects in the original CIP.

<u>Specific Comments on the Proposal</u>

- **Potential for GHG Emissions Savings**
  As the direct GHG reductions are lower under the updated investment plan

regarding the direct reductions from CTF funding, a comprehensive strategy on monitoring and evaluation should be included within the investment plan with focus on the predicted leverage effects and correspondent GHG reductions.

Reply:
The funding proposal to be submitted pursuant to CIP-U endorsement will include appropriate project-level results indicators.

- **Cost-Effectiveness**
  According to the revised IP, cost-effectiveness is comparable to before. Given that the RE programme is set to target (among others) the more expensive solar and wind sub-sectors, we would like to see some more evidence of cost-effectiveness. In particular, the targeted scale-up by the private sector builds on the existing feed-in tariff required to make solar/RE investment financially feasible. This feed-in-tariff has to be financed. Is there explicit strong commitment by GoT to provide this tariff for potentially significant solar installations from own funds or by recovering it from consumers?

Reply:
The GHG reductions shown in Table 4 of the original CIP included some de facto replication and scale-up, as the IBRD investments via Specialized Financial Institutions envisioned $400 million of private sector participation. IBRD projected a total of 1.6 MtCO2e/y reductions by 2022, and noted the replication and scale-up potential as the balance of the AEDP objectives, i.e., 5608 MW – 700 MW = 4908 MW. As shown in Table 5 of the CIP-U, the replication and scale up potential is estimated as an additional 6500 MW given the very high potential for solar power.

As noted above, GOT will directly cover the cost of the feed-in-tariff and will continue to maintain the tariff in order to ensure that long-term targets contained in the AEDP, in particular for solar, since the technology has been expected to comprise the majority of future RE capacity additions. More detailed evidence of cost-effectiveness can be developed at the project level after the CIP-U is endorsed.

- **Development Impact**
  According to the revised IP, environmental and public health co-benefits of waste-to-energy and other RE projects are expected to be at least as high as co-benefits of the former IP. It should be noted, however, that particularly waste-to-energy projects also hold environmental risks which should be carefully mitigated.

Reply:
These project-level specifics will be adequately addressed through application of ADB environmental and social safeguards and enforcement of GOT environmental standards.

- **Additional cost and Risk Premium**
  First-mover risk and technological risk due to intermittency of solar and wind resources (combined with high capital costs) are named as the main risks. However, given the long pipeline of far developed projects mentioned above, it is not quite clear to which extent CTF co-financing is necessary to fuel implementation of these projects

Reply:
As noted above, the FITs (and potential carbon finance) are not readily monetized as project finance. The RE projects for which ADB has already closed financing did utilize concessional cofinancing. GOT and ADB believe that mobilizing additional concessional funds will be instrumental in moving the RE power market forward, especially considering the updated grid decarbonization objectives and current status of RE for electricity generation noted above and in the CIP-U (paras. 18 and 19, and Figure 3).

Within the updated investment plan risks are addressed, e.g. limited know-how for wind and solar technologies as well as the lack of adequate risk management instruments, which lead to the reluctance of financing by commercial banks. According to the updated IP these risks shall

- be faced by technology and know-how transfer and technical assistance. No further information is provided on how and by whom this can be fulfilled. These aspects should be addressed in more detail.

Reply:
The need for tech transfer and technical assistance is noted in Table 6 as varying from project to project. The project-specific needs will be addressed as necessary at the project level, going forward after CIP-U is endorsed. Participation from commercial banks is a very important objective and requirement for ADB's projects. CTF funding and ADB's participation will help to mobilize funding from the private sector and all projects will comprise a substantial participation from commercial banks. After a number of renewable energy projects have been successfully implemented on a project finance basis with participation of local banks, the banks risk management will be more experienced and confident to invest in renewable energy projects without additional financial incentives.

- Since measures on **energy efficiency** are no longer foreseen within the updated investment plan, further information should be included on how investments in energy efficiency can be further serviced with public financing etc.

Reply:
IFC's programs include EE investments and there has been no change in EE investment interest from the original CIP. ADB's program will focus on RE projects.

- The **revision of the Renewable Energy Plan** by the Department of Alternative Energy Development and Efficiency including the doubling of solar energy shares is strongly recommended.

Reply:
We agree with this observation, which supports the need for CTF and other concessional finances to accelerate and deepen RE market transformation.