CTF: APPROVAL OF IFC'S THAILAND RENEWABLE ENERGY ACCELERATOR PROGRAM

Comments/Questions from Donors

Donor	Comments/Questions	How comments will be addressed
UK: **Simon Ractcliffe**	1. UK would like to request further *justification of why and when subordinated debt would be required* (as per paragraph 19 of the private sector principles document).	1. We would like to make clear that at this point IFC does not expect to use a subordinated structure for CTF funds in the Thailand proposal. Concessionary senior loans are expected to be used to improve the returns of initial solar and wind projects that, as pioneers, experience higher costs and higher risks. The option to apply a subordinated structure is only retained to avoid coming back to the TFC for approval in the unlikely event that private sector lenders require an additional "risk cushion" beyond sponsor equity in order to support the projects anticipated under this program (potentially due to perceived technical risks, price risks or prolonged political risks – see 10 below). In such cases, IFC commits to structuring the CTF investment pari passu with the IFC investment (except for interest rate) to align interests and mitigate CTF risks.
	2. While it is clear that the IFC has considerable experience in developing markets, some of the assertions in the proposal are not well supported. For example, on page 8 under the heading Demonstration Potential at Scale it states "… so the initial projects supported by the Program will provide a demonstration effect and could *provide the impetus for a tenfold increase in projects*." Is there some analysis that supports this assertion?	2. The proposal states that the Program will attempt to provide a demonstration effect with transformational impact that *could* provide the impetus for a tenfold increase in projects. Market transformation is a well studied and documented phenomenon. The quantitative multiple provided (x10) is a non-quantified estimate based on IFC's understanding of the GoT's targets for growth in the sector (ie how much capacity they will provide regulatory support for), the level of interest in the sector observed by IFC, IFC's own potential for follow-on projects, the speed with which RE equipment prices have been reducing (particularly solar modules in the last year) and IFC's experience in other markets. The exact multiple is hard to predict ex ante and difficult to measure ex post due to issues of quantifying

		an appropriate counter-factual and of assigning causality with true certainty. Numerical estimates are therefore only indicative and the Program's focus is more on the transformation of the market to the point where concessional finance is no longer required (see below).
	3. It is clear that concessional finance is required to address the differential between conventional thermal power and renewable, however, is there any analysis that identifies that *point at which economies of scale will have been reached* and concessional finance is no longer necessary? Obviously it is not possible to know exactly where this point lies. What is the range of investment required to get to that point? *When in time could we expect to get to this point?* Will the current proposal bring us close to the inflection or are we still a long way off requiring considerably more concessional finance?	3. In this case concessional finance is not being applied to address the differential between conventional power and renewable but is being applied to address the differential between the required tariff to enable renewable projects to be economic in today's risk environment, and the current subsidized tariff currently being offered by the GoT. The desired transformation of the Program is to reach the point at which concessional finance is no longer needed and the incentives for renewable provided by the GoT are sufficient to enable sustained growth of these sectors. It is hoped and expected that the funding included in this Program will be sufficient to reach this transformation point. However, it should be noted that the basic economics of renewable energy projects are affected by four elements: (i) capital cost, (ii) cost of capital, (iii) quality of renewable resource, and (iv) price at which power is sold. The Program will influence (ii) – by establishing track record the cost of capital should decline, but (i) is also a key driver of when the market transformation point will be reached (and this is a function of international markets). Thus, while we expect to eventually reach a point of market sustainability through the CTF initiatives alone (by influencing the cost of capital and the IRR expectations of developers), the timing of the transformation point will be heavily influenced by if and how quickly the price of renewable technology equipment continues to reduce.
	4. Regarding the current political tensions referred to in the risk assessment, it is stated that the situation will be carefully reviewed, *what are the indicators that would satisfy a decision to proceed with the investment*.	4. See response 10 below. Prior to making each investment IFC would assess the political situation and

	5. The development impact section makes no mention of the likely impact on poverty. Are there any poverty reduction indicators? How many jobs are likely to be created by the investment? In which sectors? Will there be an impact on women? How many additional poor homes are likely to have access to electricity, at what cost? How many new businesses will this investment spawn? In which sectors? How many new businesses will receive power as a result of the investment. *Suggested the following indicators*: a. Job creation: Number of jobs created/MW b. High value jobs created: % jobs created with a salary>40% GDP per capita c. Gender equality: % of new jobs occupied by women d. Access to energy: % change in rural electrification e. Security of supply: change in annual hours of electricity supply interruptions. f. Market development: No of new local enterprises established (broken down by sector).	outlook in Thailand to determine if the project fundamentals were likely to be affected over the life of the project (eg. market demand for power, debt costs, security rights, etc.). IFC would only make investments if it were reasonably expected that the investments (and consequently market development) would be successful. 5. Below are additional development indicators and the targets expected to be achieved through the program. a. Job creation/MW: 14 persons/MW during construction 1.2 persons/MW during operation b. High value jobs created: 10% c. Gender equality 10%-40% of new jobs occupied by women d. Access to energy-45,000 individuals served (please note that the Program will not influence interconnection of new homes/individuals but will provide energy to the central grid that can be quantified in the number of individual equivalents served). e. Market development of new local enterprises (the number of companies are difficult to quantify): • Construction services • Engineering services • Operational support • Security • Logistics
Germany: **Annette Windmeisser**	6. The range of financing terms for the individual projects under the proposal is rather wide; would welcome a more detailed justification of these	6. At this stage of the Program's development it is not possible to know the exact terms necessary to make each project viable – the economics of renewable

	concessional terms, as well as the finance market. More specific information (para 19 of CTF Financing Products, Terms and Review Procedures for Private Sector Operations). If confidentiality agreement is required to share this information, suggesting to have a joint confidentiality agreement for all MDB's to be prepared by the Admin Unit/MDB committee.	energy are both technology specific (eg wind vs solar) and significantly site/project specific (depending on quality of natural resource and other factors). The terms and structure needed to encourage a sponsor to undertake a project are specific to each case and are subject to negotiation. The 12-18 year tenors are typical for renewable energy projects. The base pricing is 100 bp flat but this rate is not expected to be offered to all clients (and IFC has committed in the proposal to ensuring the total programmatic subsidy is capped at 40%). In general Thailand's financial markets are both liquid and price competitive making the long term sustainability of the sector highly probable under the current tariff regime once pricing of global RE equipment markets improve (as discussed above); however, the current economics are not sufficient for these early projects, which aren't making a sufficient return to compensate sponsors for the risks they take as an early market entrant (eg. some technology risks like the level of degradation of the solar panels in a given region, price risks and even political risks – see 10 below). The base pricing is expected to be necessary in some projects in order to make a material difference in the sponsor IRR such that it reaches a level that makes the project viable and worth undertaking.
	7. More *detailed information on the base-tariff* as well as the assumptions on which the long-term and short-term expectations for both the solar sector and wind sector concerning regulatory support are based.	7. End-user tariffs in Thailand have historically reflected the full cost of power, allowing the sector to achieve full cost recovery and profitability. Both wholesale and retail tariffs are made up of a base tariff and a fuel transfer or "Ft". The base tariff reflects the system's fixed costs and is reviewed intermittently with the most recent reviews in 2000 and 2005. The Ft reflects the system's variable costs (mainly fuel) and is adjusted every four months. With the creation of the additional renewable energy adder tariffs in 2006, the additional cost of the adder tariff payments are included in the formula for calculation of the Ft and are passed through to consumers. Currently the standard wholesale base

		tariff is ThB2.93/kWh or US$0.09/kWh for peak hours and THB1.12/kWh or US$0.034/kWh for non-peak. The fuel transfer tariff currently is ThB0.93/kWh or US$0.03/kWh. The renewable energy adder tariffs vary in length and size depending on the technology and are received in addition to the base tariff and Ft. Solar projects receive an adder of THB8/kWh for 10 years and wind projects receive THB3.50/kWh for 10 years. These adder amounts may be changed in future if the amount needed to induce private sector investment changes but for individual projects the adder amount is committed to contractually for the entire 10 year period. Like other governments the GoT is managing the impact of the cost of the adder by controlling the number of licenses for projects it issues.
	8. A more detailed explanation as to the basis of the *assumptions concerning the demonstration potential* would allow us to feel more confident about the potential of a CTF support.	8. See responses to questions 2 and 3 above.
	9. Given the current unstable *political climate in Thailand*, would be interested in reasons of WB and IFC to selectively re-engaging in particular with CTF financing. Apart from context as to other measures that are being undertaken in order to off-set the dampening effects of these political tensions on the investment climate, would be interested to learn about possible attempts to overcome obstacles for implementation.	9. The World Bank's draft Country Partnership Strategy aims to help Thailand weather the short term impacts of the ongoing global economic crisis and help the country address the medium and longer term underlying disparities which have fueled political tensions and hampered competitiveness. Prior to the crisis, the World Bank and IFC's Country Assistance Strategy had focused on knowledge-based services and investments in support of improvements in Thai competitiveness. In response to the crisis and the protracted political tensions which have had a dampening effect on private investment, the World Bank and IFC have decided to re-engage more actively, including with selective financial support. IFC's strategy in Thailand rests on three pillars: (a)

		Broadening its economic competitiveness by supporting the transition to a high-skills based and services oriented economy, strengthening Thailand's physical infrastructure, and removing distressed assets from the banking system; (b) Promoting inclusive economic growth by providing opportunities for populations outside the main urban economies, particularly in Thailand's north-east and southern provinces, to participate in and benefit from Thailand's economic growth, with a focus on agricultural linkages, increasing access to formalized finance, and expanding access to infrastructure; and (c) Supporting environmentally and socially sustainable growth through energy efficiency, cleaner production technologies and processes, pollution abatement, and development and commercialization of renewable energy. The CTF fits with the World Bank Group Strategy for Thailand because it will: (a) promote private sector investment in the renewable energy sector; (b) support less carbon-intense economic development; (c) provide rural employment during construction and operation; and (d) support rural infrastructure development feeding power directly into the rural distribution system. The current political tensions in Thailand will have unpredictable impacts on the Thai economy. While political violence has been contained to specific sections of the capital, there are signs that the crisis has affected demand for tourism and urban services. An escalation of violence, a deepening of the political crisis, or a broadening of the geographical impact will inevitably slow economic growth and therefore reduce growth in demand for electricity in the short term. The political crisis came subsequent to the design of the CTF program and IFC will need to respond as we go

		along on a deal by deal basis. However, CTF is likely to be a key risk mitigator for private sector investors that are hesitating to invest in Thailand's renewable energy sector. IFC will use its judgment to determine if investments should be temporarily halted; however, the lead time for constructing renewable energy projects warrants that, at least for the time being, IFC, with the support of CTF, should continue to promote the development of wind and solar projects with the expectation that within 24 months (when political tensions will hopefully have subsided), these projects will be supplying electricity to meet the growing demand for power.
Japan: Keisuke Sasaki	10. Provide additional information on the recent market situations of the Thai renewable (wind and solar) project financings. Understand that feed-in tariffs are designed to make projects financially viable, and some regional and international banks are keen to arrange commercial renewable projects with a support of this feed-in tariff mechanism. Also noted that ADB has recently approved solar power projects in Thailand. In order to avoid market distortions, would like to better understand *the current market situations and project deals recently arranged and being arranged by commercial banks*.	10. The Thai feed-in tariffs or "adders" are designed to make projects financially viable. To date, the adders provided for biomass have been sufficient and investment has occurred. This has not been the case for solar and wind projects. The Thai debt market is liquid and local/development banks are indeed keen to finance solar and wind projects but this alone does not make projects happen – they must also deliver sufficient equity returns to enable project sponsors to proceed and to date this has not been the case. Rather than distorting, therefore, this CTF program is designed to support and enhance the GoT's feed-in regulations to enable initial projects in solar and wind. With some track record in the sector (which would result in lower costs of capital) it is expected that further concessionary support will no longer be required after these first projects and the feed-in tariffs will be sufficient on their own (if technology costs also decline, the rate of such transformation would be even faster). While there is beginning to be some activity in solar and local banks are becoming comfortable, they are entirely inexperienced in wind and have not entered the market at all. For solar, to date only three projects have or are in the process of being financed: i) a 6MW project which IFC and the government of Thailand

	11. *Based on the updates of the Thai renewable (solar and wind) project fi*nance markets mentioned above, would like you to elaborate more detailed scope of the renewable projects under this Program, which would require CTF concessional financings but would not distort the market conditions.	Fund (GoT fund) financed through equity (accepting below market equity returns to enable this initial pilot project to happen); ii) one potential project is being financed on a corporate finance basis instead of project finance (meaning the lenders are not assuming the risks of the project); and iii) a larger project (which ADB recently announced its board approval of) which IFC is also cofinancing and in which use of CTF is being discussed as an important enabler. Although this Program is not yet approved (and so access to CTF remains a risk for this client), the CTF component, which was first explored with the client during market scoping for the Thailand CIP, is a key element of the project's viability and the client's decision to move forward with the project. This latter project has not closed its financing and the ultimate decision to proceed has not yet occurred. 11. The case above is an example of a project that can attract financing but only on terms that make the returns unattractive to a sponsor and which ultimately discourage development. While the feed-in tariff is expected to be sufficient to promote long term sector viability once the cost of capital declines to date it has not been sufficient to attract sizable early entrant investments in wind and solar. In Thailand's current investment climate the CTF is targeted at improving low equity returns for initial projects. However, should the market risk perception change, or lender appetite for wind be different than solar, it may be required that CTF's scope be expanded to also cover attracting financiers. Because CTF funds are not being used in projects that would otherwise happen without the CTF funds there are no market distortions. If during the life of the CTF program, wind and/or solar projects become viable without CTF, IFC would release any uncommitted CTF

		funds back to the CTF Trust Fund. IFC is currently reviewing 2 potential solar projects and one wind project for CTF financing.