

## CTF PRIVATE SECTOR PROPOSAL

<i>Name of Project or Program</i>	Philippine Sustainable Energy Finance Program (the “PSEFP”)
<i>CTF amount requested</i>	<ul style="list-style-type: none"> <li>➤ Investment – up to US\$8.75 million equivalent</li> <li>➤ Advisory services component – US\$800,000</li> <li>➤ Implementation and supervision budget - US\$450,000</li> </ul>
<i>Country targeted</i>	Philippines
<i>Indicate if proposal is a Project or Program</i>	Program

### DETAILED DESCRIPTION OF PROGRAM

#### ***Fit with the Philippines Country Investment Plan (CIP):***

This proposal consists of programmatic initiatives promoting market transformation and private sector development in the renewable energy (RE) and energy efficiency (EE) sectors. This is consistent with the Philippine’s Country Investment Plan (CIP) which was endorsed by the CTF Trust Fund Committee (TFC) on December 2, 2009. The Philippines’ CIP indicated that the development of renewable energy resources and energy efficiency programs were key strategic areas to apply CTF resources. The CIP allocated US\$30 million to IFC for these private sector initiatives. IFC’s first programmatic proposal (CTF \$20 million) under the CIP is targeted at advancing direct private sector investment in RE projects. The first proposal, approved by the CTF TFC on September 30, 2010, seeks to facilitate transformation of the private RE sector by establishing a series of direct project level interventions in the wind, biomass and solar sectors. These sectors had been underdeveloped but offer significant development potential in the Philippines. By addressing some of the early entrant barriers including higher costs and risks, the initial investments would help demonstrate that wind, biomass and solar projects can be successful in the Philippine context, thereby helping to reduce risk and improve the economic balance of future projects. IFC’s second programmatic proposal (CTF US\$10 million), the Philippine Sustainable Energy Finance Program (PSEFP or the “Program”), will be targeted at RE and EE advancement via private financial institutions. This second proposal is designed to address the barriers to private sector investment and increase the flow of capital to sustainable energy (SE) projects from Philippine financial institutions.

The Philippines ratified the United Nations Framework Convention on Climate Change (UNFCCC) in August 1994, and is designated as a non-Annex country under that Convention. It is also a party to the Kyoto Protocol, which it signed in 1998, and ratified in 2003.

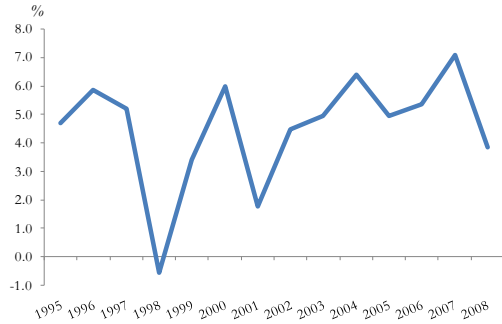
#### ***Country Context:***

The country experienced economic contraction in 1998 as an aftermath of the Asian financial crisis, after which the economy has performed reasonably well in the past several years. The year 2007 ended with the highest economic growth in decades, benign inflation, a strong balance of payments position, and an improving public sector fiscal situation. But this strong performance has not translated into poverty reduction. Between 2003 and 2006, poverty incidence increased from 30 percent to 33 percent despite average gross domestic product (GDP) growth of 5.4 percent. Both urban and rural poverty increased on average and only 4 of the 17 regions recorded improvement in the poverty headcount. Falling real incomes of families and compression of public spending contributed to the rise in poverty. There is mixed progress in achieving the

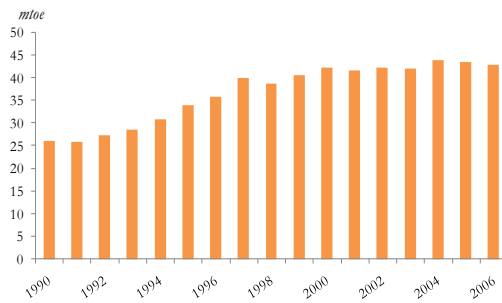
Millennium Development Goals (“MDG”s). It is therefore the aim of the Government of the Philippines (“GOP”) to include poverty alleviation as one of the outcomes of the CTF assistance.

Growth in energy use and the associated greenhouse gas (GHG) emissions have accompanied the economic expansion seen after the recovery from the Asian financial crisis (Figures 1 and 2). With the self sufficiency level at 56 percent, energy demand is met partly by indigenous resources including coal, natural gas, hydropower and traditional biomass energy. The Philippines is one of few countries in the world where RE accounts for the largest share (35%) of total primary energy supply (Figure 3). The Philippines’ primary source of electricity generation is from oil, gas and coal (63.9%), with geothermal and hydro contributing 18.4% and 17.5%, respectively. Solar and wind only account for 0.1% share to the generation mix. The country is experiencing regular rotating power shortages especially in the areas of Visayas and Mindanao, which is responsible for roughly 25% of the power consumption in the country.

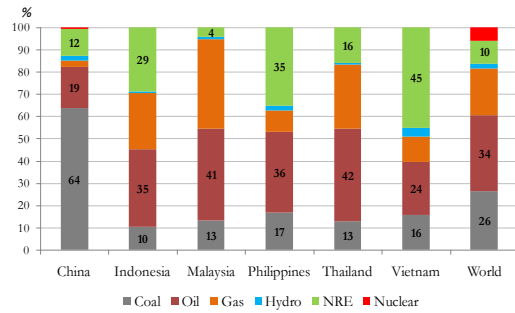
**Figure 1. GDP growth**



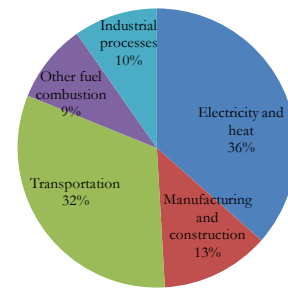
**Figure 2. Energy consumption**



**Figure 3. Primary energy mix, 2007**

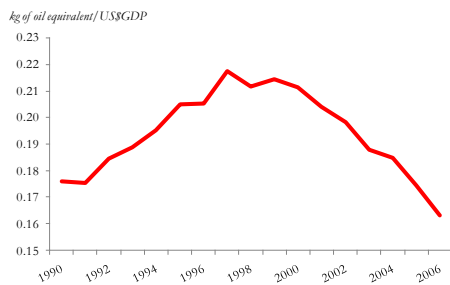


**Figure 4. GHG emissions by source, 2005\***

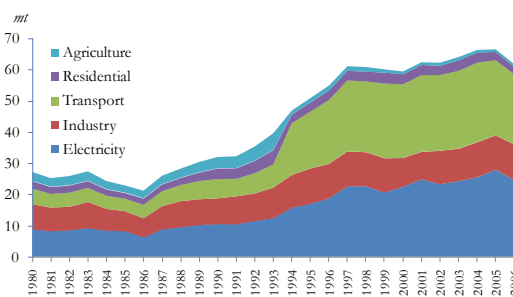


\*excludes land use changes, agriculture and forestry. Based from UNFCC definition of sources. www.unfccc.int.

**Figure 5. Energy intensity**



**Figure 6. CO<sub>2</sub> emissions from fossil fuels**



Source: World Bank, IEA and CAIT/World Resources Institute

In terms of overall GHG emissions, the Philippines ranked 39th in the world in 2005 with about 142 million tons of carbon dioxide equivalent (MtCO<sub>2</sub>e), excluding emissions due to land use change. The principal GHG emission source is the power sector (Figure 4). Overall energy intensity peaked in 1997 but has since shown improvement driven mainly by energy savings in the industrial sector (Figure 5). Energy intensity in 2006 is now below the previous lows recorded in the early part of the 1980s even as real GDP has more than doubled over the past 30 years.

Based on trend in emission growth, policy conditions affecting primary energy supply and demand, and estimated abatement costs, the GHG emissions reduction priorities are in the electric power and transport sectors which account for about 64 percent of total energy CO<sub>2</sub> emissions (see Figure 4). The National Economic Development Authority (NEDA) Board's Cabinet-level Infrastructure Committee has endorsed the high-priority interventions, include: (i) supply- and demand-side EE and conservation in power, industry, commercial, and residential sectors; and (ii) scale-up of RE such as wind, solar and biomass energy. The EE program of the DOE focuses on four main issues: (i) system loss reduction for electric cooperatives; (ii) rehabilitation of inefficient power plants; (iii) efficiency improvements in manufacturing plants, and; (iv) the creation of the Super ESCO. These interventions rely heavily on the active participation of the private sector, with the first and the last to be implemented in close coordination with the relevant government agencies and other development partners. This proposed Program will complement these ongoing activities to encourage transformation of the sustainable energy sector.

### Renewable Energy

GOP continues to promote power sector reforms, and development of renewable energy through private sector investment. In January 2009, the Renewable Energy Act of 2008 (the RE Act) became effective, which includes the establishment of a RE Trust Fund to be capitalized in part by levies on fossil energy use. The National Renewable Energy Board was established in February 2009 to attain the objectives of the RE Act. In May 2009, the DOE released the implementing rules and regulations of the RE Act and in July 2009, created the Renewable Energy Management Bureau (REMB). Specific rules for the RE Act relating to Renewable Portfolio Standard (RPS), feed-in tariffs and net metering for qualified end-users are expected to be released in early 2011.

RE's share is expected to decline relative to coal over the next two decades, even though RE capacity is expected to increase from 5 gigawatts (GW) of hydropower, geothermal, and other RE to a total of 12 GW (World Bank, 2009). Additional RE resources of about 5,000 MW may be commercially viable, but most projects face capital cost barriers and off-take risks. Small hydropower potential is estimated at 1,784 MW at 888 sites. Estimated GHG emissions reductions for this source are 2.7 Mt CO<sub>2</sub>e/y. Total biomass power is estimated by DOE to be 2,270 MW; development of 2,000 MW of this potential would yield GHG emissions reductions of 6.3 Mt CO<sub>2</sub>e/y. Wind power resources are estimated at 700 MW, which could deliver GHG emissions reductions of about 7.1 Mt CO<sub>2</sub>e/y. Potential GHG emissions reductions from solar power applications are estimated to be in the order of 2 MtCO<sub>2</sub>e/y.

The various RE resources have two common features compared to coal and natural gas based power: (i) RE resources are commercially available "at the source" which may not be near the large power demand centers, and; (ii) candidate RE power plants are generally smaller in scale, e.g., 50 – 100 MW per site, than coal or gas-fired power plants which are typically 200 – 300 MW per site or larger. Thus, RE power plants suffer some diseconomies of scale, higher development and initial capital cost, and higher initial cost of power production.

### Energy Efficiency

The Philippines has the highest price of electricity in South East Asia (second highest in Asia next to Japan) with a rate of US\$0.25/kWh (average delivered price to end-users). As such, EE presents one of the best opportunities for GHG emissions reductions in the Philippines because investments generally can be implemented more quickly than energy supply additions with relatively short pay-back periods, and reduction in energy end use has a multiplier effect on the supply chain. EE investments are typically 1/3 - 2/3 of the cost of centralized generating plants, and represent virtually permanent energy savings. A variety of technologies and applications are available, e.g., space conditioning and lighting in residential and commercial sectors,

municipal water pumping and street lighting, industrial sector co/tri-generation, and generic upgrades like variable frequency electric motors, high efficiency motors, etc. Although there is a strong business case for EE projects, EE financing is in its nascent stage in the Philippines due to lack of market awareness across various stakeholders (e.g. consumers, businesses, FIs, government) and lack of institutional capacity of FIs in identifying opportunities and assessing risk in this space. In addition, there needs to be work done on the enabling environment.

Other end-use efficiency options include fuel switching from captive diesel-fired generators to advanced biomass power and cogeneration plants (combined heat and power plants, or CHP), including micro-turbines and small-scale combined cycle gas turbines. Tri-generation plants which provide combined cooling, heat, and power may be an attractive option, e.g., for hospitals, hotels, and office buildings. Efficiency gains of 30 – 40% can be realized vs. systems with separate power generation and boilers for process heat and/or steam. Scale-up of these distributed generation (DG) systems can be achieved via modular expansion. These technology options are supported by RE Act of 2008 provisions for net metering, but are constrained due to limited natural gas transportation infrastructure, and economic practicalities of transporting biomass to point-of-use.

CTF funding will help build capacity in local FI as well provide unavailable long-term funding and risk mitigation instruments to enable FI's to process SE deals. Capacity is being built currently in three leading Philippine FIs through IFC's first Sustainable Energy Finance (SEF) program started in 2008, delivered primarily through advisory services with some important, but limited progress in actual SE investments of less than a year. Notwithstanding there is still a significant lack of expertise in originating, assessing and financing SE projects in general among the Philippine FIs and the CTF funding will allow for building capacity, and increasing more access to finance available in this sector. This Program may give investment support to FIs currently included in the SEF Program as well as reach out to additional Filipino FIs not yet lending in the SE market.

### ***Market Drivers and Barriers to Market Transformation***

From IFC's experience in the implementation of Sustainable Energy Finance program, the core market drivers for investment in sustainable energy are: (i) high electricity prices with the imminent risk of power shortages; (ii) increasing interest in renewable power generation; (iii) sophisticated and competitive banking sector seeking new areas of growth; (iv) emerging local energy service industry; (v) government's initiative and active promotion of policies to achieve energy independence by increasing the use of indigenous and renewable energy resources, and (vi) increasing the use of alternative fuels as well as enhancing energy efficiency and conservation programs.

Despite these drivers, the following barriers to the development of the SE market have been identified through IFC's experience from the implementation of complementary programs in the Philippines, and thus, the need for additional intervention.

- (i) Lack of availability of suitable financing and capability of local FIs to process SE deals: Prior to IFC's SEF, there were no FIs who were formally targeting sustainable energy projects. Most lack expertise and suitable financial products in originating, assessing and financing SE projects.
- (ii) Commercial strength of projects developers: Many project developers, particularly of the small and medium scale renewable energy projects, do not display the necessary financial and commercial acumen to scale up their business. They lack the relationships with the banking sector to structure more sophisticated and bankable projects.

- (iii) Lack of implementing rules and regulation for sustainable energy projects: Several laws have been enacted but the regulatory and policy frameworks are not yet in place.
- (iv) Steep learning curve for end-users of energy efficient and small scale renewable energy equipment: Most consumers are aware of the problem and are starting to research different investment options, but support is needed to help them make the right choice and to commit to invest.

In order to ensure the catalytic role of the Program, we have initiated and maintained dialogue with numerous development partners, including IBRD, ADB, and a number of the bilateral donors. These discussions were used to identify the role we could play to support and complement the on-going work by the different organizations. The constant coordination and dialogues ensure that all are aware of this Program and its goals. Furthermore, the Program will leverage on IFC's experience in implementing SEF and build on the existing relationships and facilitate the involvement of the private sector in the development of SE projects. IFC's SEF Program is considered to be the most comprehensive program to address financial sector barriers, and bring local FIs, end-users, project developers, service and technology providers and regulatory players into the development of a sustainable energy market.

***Program Summary:***

The Philippine Sustainable Energy Finance Program will comprise both an Investment and Advisory component to support the scaling up of EE/RE projects in the Philippine's large corporate, SME, commercial, residential, municipal and microfinance sectors. The specific sector focus will be tailored to meet the partner FI's strategic initiatives and portfolio concentration. The Program is designed to complement the sustainable energy finance work done by IFC in the Philippines with direct funding (2008-2009) and with GEF funding (2009 – 2012). These existing programs are at initial phase of deployment and therefore it is early to report complete results..

The proposed Program will complement the ongoing SEF programs in the market<sup>1</sup> by: 1) accelerating the uptake of EE financing through targeted advisory services to FIs to deepen their understanding of the SE market, 2) expanding support from EE sub project financing to RE subproject financing and 3) reaching deeper going deeper into the market by partnering with the second-tier banks.

The Program will continue to address existing market barriers through both advisory services and investment as a means to catalyze market transformation. The Program seeks to contribute to market transformation by building the capacity of financial institutions, and providing appropriate financial products, thereby fostering mobilization of private financial investment in sustainable energy projects while simultaneously increasing demand through end-user knowledge management and support; all of which should result in reduced GHG emissions, improved energy security and economic development in the Philippines. Building on the lessons learned, the proposed Program will offering both Advisory Services and financial investment products: Risk sharing facility (RSF) with banks that have sufficient liquidity, or senior loans.. There will be a step up in market development activities by providing advisory to selected service and technology providers; and conduct market awareness activities in order to promote development and implementation of sustainable energy projects specifically in the following sectors: EE in commercial, industrial, electricity distribution, water supply and distribution, and wastewater treatment; RE; and Carbon Finance through Clean Development Mechanism (CDM).

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<sup>1</sup> Annex D provides an overview of existing sustainable energy initiatives in the Philippines

Based on the experience of IFC working with the current partner FIs, the sectors identified to have high potential in implementing SE projects are the following:

- Commercial sector: buildings, malls, hotels, hospitals and schools.
- Industrial: cement, semi-conductors, electronics, food and processed meat/seafood, beverage, ceramics, pharmaceuticals, personal care products, agro-industries, and pulp and paper, distribution utilities.
- Renewable energy: off-grid RE, captive and grid-connected biomass, biogas, solar, mini-hydro and wind.
- Others: power and water distribution utilities, local government units, microfinance.

The Program's advisory services component will help advance the investment component by supporting market development activities (promoting knowledge and technical expertise on the end user side), and capacity building for participating FIs. Lessons learned and experience of sustainable energy financing will be shared across the relevant stakeholders particularly the local financial sector, as well as with other countries in East Asia.

### **The Investment Component**

Through the Program, IFC will offer the following products: (i) Risk Sharing Facilities to two to three commercial private banks to address the barriers mentioned earlier and catalyze uptake and scale-up of EE/RE projects in the Philippines, and/or (ii) Line of Credit to support to 1-2 commercial private banks for on-lending to EE/RE projects.

IFC has had experience with risk sharing schemes in Eastern Europe and particularly in China where the model has been proven to be very effective in mobilizing existing financial sector liquidity while at the same time providing the extra risk cushion to financial institutions that allows them to enter into a new business line. Both in Eastern Europe and China the availability of donor funding ready to take a first loss position under a structure similar to the one described above proved to have a crucial role in engaging local banks and allowing them to set up large-scale financing facilities for EE. Another significant benefit of offering risk sharing to banks is that it creates efficiency in the use of CTF funds and IFC's own funds through maximum leverage. The Advisory component will support FI's capacity in entering into this new business.

The RSF will provide a risk protection mechanism that encourages the FIs to introduce new lending products and at the same time minimize its risks while it builds its capacity to underwrite these loans and establishes a track record of performing projects. Specifically, the RSF will allow the FIs to:

- Reduce economic capital required to hold financial assets (i.e. EE/RE loans), making these loans more attractive than they otherwise would be;
- Increase capacity to originate new assets; and
- Offer loans with tenors of five years and up.

Eligibility under the Program will encompass both RE and EE projects. Eligible renewable energy projects will include, among others, small-hydro power generation, solar PV projects, wind power projects, biomass power/cogeneration projects and waste-to-energy projects. Eligible EE projects will include, among others, upgrades in transmission or distribution systems, upgrades of existing manufacturing facilities, cogeneration/tri-generation projects, retrofit or upgrades of energy-related equipments such as boilers,

furnaces, air-conditioning, refrigerators, variable speed drivers, motors, and lighting. The condition of receiving concessionality will depend on the following factors: i) eligibility criteria of the asset portfolio; ii) portfolio ramp-up period; and iii) number of sub-projects in the portfolio. The concessionality is mainly aimed at helping the bank to absorb some of the up-front costs they have to incur to start this new business line.

Note that final agreement to provide CTF financing to any FI is subject to full due diligence and approval by an internal IFC Approval body as well as IFC's Board, per the CTF private sector guidelines. The terms of each individual CTF transaction will be reviewed and approved by a separate Investment Review Committee which is independent from and different than the Investment Review Committee responsible to review and approve the terms of the IFC investment. All projects financed under the Program will be required to meet the MDB environmental, social, governance and other compliance requirements as well as all the requirements of the Philippines.

The selection of partner FIs will be based on the FIs being financially solvent and eligible for MDB financing. The MDB team will also ascertain whether the FI has the ability to support this new business line on a sustainable level going forward and have sufficient internal resources to work with the MDB team to design an investment and advisory services program. The MDB teams will conduct sponsor reviews to make sure that the selected FIs are institutions with acceptable reputation and risk profiles. The MDBs will also review the FIs portfolio and growth strategy to decide if EE finance would fit with their client base. Finally, the selection process will assess the FI's level of commitment to enter into this new sector of EE financing and resulting selected FIs will have demonstrated ability and willingness to promote this product across the Philippines market.

### **The Advisory Component**

The Program will include an advisory component which will be designed based on IFC's previous experience in the Philippines as well as other markets and complement other ongoing activities in the SE market. The advisory component of the Program will be structured to support both the financial institutions and the end-users, including energy efficiency equipment vendors and energy service companies (ESCOs) or environmental services companies. This feature will aim to make the Program attractive to FIs, particularly since most of them do not have extensive experience in SE financing. At the same time the advisory component will strengthen the long-term impact of market transformation by strengthening local capacities of technical service providers, market awareness and know-how.

The objective of the advisory services component is to support the implementation and scale-up of SE projects on several levels:

- Capacity building for financial institutions to build profitable portfolios of sustainable energy projects. This will comprise training on energy efficiency and renewable finance techniques; technical and financial evaluation; risk identification, allocation, and mitigation; credit analysis; marketing; support with financial product development, and portfolio reporting.
- Conduct of sector studies that would help FIs identify relevant target segments, and guidance in marketing efforts to relevant end-users.
- Support end-users and project developers to undertake energy audits, feasibility studies, and evaluate different alternatives; and
- Support awareness raising, dissemination of information and lessons through conferences, seminars and workshops, as well as media promotional campaigns. Business associations will be also involved.



- Capacity building for local technical service providers including ESCOs, and training institutions that serve SMEs.

### ***FI Capacity Building***

Based on partnership agreements and client needs, IFC will provide partner FIs with support in the following activities:

- i. *Strategic planning and direction setting* - IFC will guide and support the partner FIs in developing their strategy for the implementation of the SE program. Assistance will also be provided in setting up the core team, internal structures and systems within the FI.
- ii. *Market identification through provision of scoping studies* - IFC will provide information and undertake detailed research to profile target segments, identify potential borrowers, profile projects, and define risks. IFC has already collated some significant information on various segments pertinent to FIs' areas of interest.
- iii. *Support in deal origination and development of project pipeline* - IFC will assist and provide advisory services in the identification of potential deals in the FI's chosen sector. In coordination with the FI, IFC will engage with a selected number of clients to help the FIs go through the whole deal origination and closing processes. This will also include assistance in the identification of sources of deals in the market (such as energy service companies (ESCOs), equipment vendors, end-users, utilities, etc.).
- iv. *Development and marketing of financial products* - Leveraging from the implementation of the SE finance program in the Philippines and other regions, IFC will help partner FIs develop specific financial products for their chosen sectors. IFC will likewise provide assistance in marketing these products to potential clients via several communication channels such as one-on-one client presentations and client events.
- v. *Capacity building* - In order for the Program to be sustainable within the FI, IFC will help design and implement appropriate training programs for FI Core Team and staff to ensure program continuity and replicability. Capacity building activities may include the following: potential deals identification, product development, marketing, loan and credit evaluation, risk management and policies, carbon finance aggregation and bundling, etc. Other capacity building topics shall be determined through training needs assessment with partner FIs. In the Philippines, this has included cost-sharing a full time specialized staff to provide on-the-job training to the FI's team. A key lesson that we have learnt from prior programs, is to clearly define the mentoring role that IFC will play with the partner FIs.
- vi. *Relationship brokering* - IFC will assist FIs in identifying potential partners for the development of their SE pipeline. These relationships may be formed for a variety of reasons like (but not limited to) : client referrals, deal origination, technical assistance and marketing and awareness.
- vii. *Knowledge management, communications and process documentation* - To ensure project sustainability and replicability, IFC may also support partner FIs in putting in place a sound communications plan and in documentation of new program processes arising from the SE partnerships. These documents contribute to the creation of operations manuals for each FI.
- viii. *Project monitoring and evaluation* - IFC will provide assistance in monitoring the development (technical aspect) of projects in the FI's SE pipeline. Development and dissemination of software tools to evaluate sustainable energy projects will also be done.
- ix. *Ensure smooth end-of-partnership transition* - To ensure a smooth transition at the end of each partnership, IFC will support the FI in creating an appropriate end-of-partnership turnover plan.

### ***End-user, Project developer, Service and Technology Providers Support***

Brokering partnerships between financial institutions and project developers is an integral and essential component of IFC's approach to sustainable energy finance. Preliminary studies and interaction with select service and technology providers showed that there are only a limited number of entities that are capable of handling SE projects, therefore reducing the volume of deal origination. To ensure sustainable deal flow in the market, the Program will engage end-users, project developers, equipment vendors, and energy service companies to develop the necessary awareness and capacity to expand the number and quality of sustainable energy deals originated. A key lesson learnt from prior programs is the important role building project pipelines plays in encouraging full commitment from FI partners to invest in the program and mobilize internal resources. IFC will provide a select number of entities with support in the following activities:

- i. IFC will support partner FIs with training in project development, evaluation and financial packaging to ensure understanding of the processes in any of the identified SE sectors (energy efficiency in commercial, industrial, electric cooperatives, water supply and distribution utilities, wastewater treatment; renewable energy; and CDM project development). Best practices will be documented and will help in demonstrating successful cases for SE projects which will eventually lead to increased recognition of the financing opportunities by the local FIs and end-users.
- ii. Facilitate linkage or broker relationships among service and technology providers and end-users as well as between appropriate partner FIs for the development of bankable SE projects. These relationships may be formed for a variety of reasons like (but not limited to): client referrals, deal origination, technical assistance and marketing and awareness.
- iii. Conduct knowledge sharing activities that will leverage the experiences gained by IFC in SE projects in other regions, IFC will organize or take part in events catering to service and technology providers on the business benefits of SE. Knowledge sharing sessions may also be conducted on deal origination and project development.

### ***Market Awareness Raising***

Reducing perceived risks in the implementation of sustainable energy programs, monitoring project successes and disseminating information in a targeted and focused manner will encourage more widespread adoption of sustainable energy practices in the country. To create a sustainable market for SE finance, it is essential to work on market awareness raising activities in parallel with working directly with FIs, end-users and service providers. Targeted market awareness raising activities will be organized in order to build sufficient pipeline for potential investments as well as to develop sufficient levels of understanding of the SE market. Thus activities will cover conferences, seminars and trainings for micro/SMEs/commercial entities (both management and energy professionals). Other tools used will be focused on direct marketing activities, work with industrial associations and other professional bodies. IFC sees the importance of partnering with other institutions who share or complement IFC business and developmental goals in order to maximize efforts for market awareness. With the active leadership of the local partners, market awareness activities will ensure broader reach. Road shows and other joint awareness raising activities will also be conducted to help disseminate information about SE technologies and financing options available locally.

### ***Market Transformation***

The combined IFC/CTF Program is expected to result in a transformed financial sector which views energy

efficiency and renewable energy financing as a standard business practice, as well as transformed SME, commercial and municipal sectors, which view sustainable energy technologies as standard ways of operating an efficient business and competing in the market. The Program is a long-term effort to increase awareness, support behavior change, build the SE financing market, support some early entrants by FIs into the SE financing business, and build the momentum for it to continue to grow. This will help to steer the Philippines' economic development into a low carbon path with more sustainable use and management of resources. Given the very early days of getting the local financial sector into SE business, CTF participation is very important. Without CTF it would be much harder to establish market acceptable conditions for early movers.

**FIT WITH INVESTMENT CRITERIA**

***i) Potential GHG Emissions Savings:***

The Program is structured as an intermediary operation. As such, the precise composition of the FI's loan portfolio cannot be exactly predetermined. Therefore, it is necessary to provide a broad range estimate of the emissions reduction that is likely to result from the project. It is estimated that the annual energy savings will be 63,000 MWh – 77,000 MWh while the renewable energy produced will be 350,000 MWh – 563,000 MWh. Considering a 15 year project life, the total greenhouse gas (GHG) reduction potential is expected at 4.5 – 6.0 million CO<sub>2e</sub> or approximately 0.3 – 0.4 million t CO<sub>2e</sub>/year.

***ii) Cost-Effectiveness:***

With the projected lifetime of the Program of 15 years, cost effectiveness of CTF investment would be US\$1.7 – 2.2/t CO<sub>2e</sub> considering only the impact of IFC/CTF financing. Given the long-term effect of market development work, and capacity building, it is expected that the participating FIs will continue their SE lending business, and other FIs will get into the market as well. Thus, over time, the cost effectiveness of the CTF Program will continue to increase.

***iii) Demonstration Potential at Scale:***

The Program builds on IFC's experience in implementing sustainable energy financing. IFC's model in various countries where it implemented the SEF program shows a very good demonstration potential particularly in the financial, manufacturing, commercial and renewable energy sectors. The implementation of the Philippines Sustainable Energy Finance Program would represent a further adaptation of the IFC SE lending market development model in Asia, where the market is somewhat less-developed. As such, the project represents an important opportunity to innovate in the area of commercial market development for less developed markets. If successful, the project would represent an important model for less-developed market economies where commercial SE investment activity remains low.

Considering the market drivers and barriers presented above, the implementation of this Program will further demonstrate the business case of sustainable energy and further catalyze the implementation of sustainable energy projects. Moreover, the opportunities in implementing their sustainable energy projects will boost the local financial institutions to be more open to adopting and introducing innovative financing products. The Program will aim to establish a track record for sustainable energy financing, after which, other financial intermediaries are expected to enter the market without further incentives and increase the availability of finance as demand for such investments grow. In addition, market knowledge sharing and capacity building activities will help create momentum for SE financing to continue beyond the Program lifetime.

***iv) Development Impact:***

The Program is expected to enable projects to happen that otherwise would not, and to generate a range of environmental and economic benefits related to the development of the sustainable energy service industry and stream of energy efficiency project investments. Specifically, the Program would: (i) build capacity in the local banking and leasing sectors to finance SE projects; (ii) support the emergence of energy service companies by securing financing for them; (iii) develop energy efficiency & renewable energy investment projects across sectors; (iv) improve the competitiveness of the Philippine economy by increasing the efficiency and competitiveness of their operations and create jobs; and (v) improve the local as well as the global environment through reduced emissions of greenhouse gases and other conventional pollutants.

**Replication Potential:** The Program is expected to have a large spillover effect to the companies through the on-lending of financial institutions. The Program would represent an important model for less-developed market economies where commercial SE investment activity remains low.

**Access to Finance:** Increasing the importance of sustainable energy and efforts to mitigate GHG in the Philippines will require development of new innovative financial mechanisms to support access to finance of target sectors. The Program's support in the development of financial products for SE investment will help the end users, project developers, service and technology providers access financial instruments and raise awareness about the availability of local finance for these type of projects. Risk sharing facilities to be provided to financial institutions through the Program will provide comfort and enable them to lend allowing their clients to implement necessary sustainable energy investments which are perceived to be risky propositions.

**Improved Competitiveness of the Sub-borrowers:** The implementation of SE projects by the borrowers/end-users will increase long-term sustainability of their operations, improve their cost efficiency and competitiveness, and bring them financial benefits and create jobs over the long run.

**Job Creation:** EE related investments in the Philippines would mainly include modernization and optimization of existing production systems, thus it would not lead to elimination of jobs. Considering development impact and demonstration effect, this Program will develop a new market in SMEs/residential sector and expand existing EE related markets in the commercial sector. This in turn will contribute to job creation in industries such as equipment manufacturers, ESCOs, retailers, housing, etc. The question of job creation attributable to EE related investments is a difficult one. The team will try to build tracking employment growth among borrowers into the M&E system.

**Poverty Reduction:** The Program may have a trickle-down effect on poverty reduction through the following:

- a) the PSEF Program will promote the use of energy efficient technologies with end-users and will make equipment more accessible by increasing access to finance for such equipment;
- b) This will lead to expansion of EE related markets (technology, equipment, financing, etc.) and once such technology and/or market practices become "business standard," the demand for EE related technologies and financing will increase;
- c) Companies with sophisticated EE technology will be able to lower their cost and gain competitiveness;
- d) In addition, increase in renewable energy sources may provide some solution to power supply shortages, thereby increasing productivity and contributing to more sustainable businesses;
- e) All the above will contribute to economic growth and job creation as well as an increase in wages/salaries of employees.

f) It should be noted that these impacts would be indirect and difficult to measure, except as part of a broader assessment of market evolution in the Philippines done several years after the implementation of the Program.

The MDBs will be monitoring the development impact of CTF funded projects following the CTF Results Framework.

**v) Implementation Potential:**

The Program supports the big push from the Philippine government towards energy independence and sufficiency. The Program creates greater opportunities for FIs in financing investments with high growth potential and by implementing programs with high replicability in the areas of SE financing. IFC is very well suited to implement this Program as it has: (i) significant experience due to well-established financial markets and energy investment portfolios in the Philippines; (ii) a well-established Advisory services delivery infrastructure with which to administer the Program; and (iii) extensive experience in implementing SE financing programs.

**vi) Additional Costs & Risk Premium:**

IFC will invest its own capital in the Program through risk sharing facilities and credit lines (depending upon demand from partner FIs) to local Philippine FIs to stimulate the market for SE investments. IFC will make an initial allocation available for risk sharing – although the initial and eventual size of these facilities (which are expected to grow over the life of the Program) will be reviewed during individual negotiations with financial institutions. The nature of the risk sharing (or possibly IFC fully funded credit lines) will vary between institutions, based on actual demand. Learning from our experience in implementing SEF in various countries, it is essential that there is flexibility in how to structure the risk sharing agreements as individual bank strategies and market opportunities change frequently, thus dictating new strategic foci and product needs by the partner banks.

The risk for the CTF investment is mitigated through: IFC's stringent appraisal of FI credit procedures; risk sharing structures which ensure that the FI's interests are aligned with IFC/CTF, and through the use of advisory services to help with project development and structuring. CTF funding will seek to overcome barriers to market transformation for the Program with the minimum level of concessions required.

**vii) Financial Sustainability**

The overall objective of the Program is to support the development of a sustainable commercial financing market for SE projects in the Philippines. In other words, the anticipated outcome of the Program is that banks will finance SE projects after IFC/CTF exit driven by the business case of the investments as a normal business practice. IFC's experience from implementing SE finance market development projects in Central and Eastern Europe, Russia and China is that this can be achieved by seeking the right banking partners and using the Program to encourage banks to learn about this business segment and gradually integrate SE financing into their long-term business strategies.

IFC's work with FIs in other markets has demonstrated that banks are attracted to SE financing for a combination of reasons, including but not limited to:

- the realization that SE investments can improve the cash-flows of a borrower, thus improving the borrower's creditworthiness overtime, hence offering the bank a growth opportunity while improving its portfolio quality

- the ability to be one of the first movers and establish a strong market share in a high potential segment,
- the opportunity to differentiate the bank and its offerings in a highly competitive banking sector where, in general, margins might be very tight in more established sectors.

The Program will adapt IFC’s experiences in the various countries where the SEF Program is implemented by using specific tools to encourage banks to enter this market and integrate SE financings in their broader strategies. Once banks begin to experience the unique opportunities available in financing SE, they will pursue the market opportunity alone and without IFC/CTF support. This is the behaviour IFC has experienced in other markets where the basic market conditions are analogous to those IFC has identified in the Philippines.

An additional aspect of sustainability is the willingness of end users, project developers, ESCOs and financial institutions to pay for some of the upfront costs that are inevitable to prepare bankable projects or to properly assess a credit risks, such as energy audits, technical evaluations, feasibility and market studies, etc. A range of services that the Advisory Services team and external advisors will be provided to all stakeholders.

**viii) Effective Utilization of Concessional Finance**

The CTF funds would be used exclusively to address areas of needed “additionality” in order to leverage available co-financing (and private sector commercial investment) which is conditional on the CTF contribution. This primarily includes co-financing the technical assistance to FIs and project developers, as well as providing a portion of the funds for the risk sharing facility. IFC, itself, will provide co-financing to: set up, fund and manage the credit lines; and co-fund and administer the risk sharing facility. It will also provide extensive training, coaching and mentoring for the implementation team, and help FIs with strategy development.

This Program involves three distinct types of incremental costs to be met by CTF funds. They include:

- (i) the costs associated with the advisory services programs that cannot be met from other funding sources;
- (ii) the amount of risk sharing funds required to persuade FIs to invest in SE projects and which is subsequently not returned to CTF at the end of the Program;
- (iii) that portion of the Program’s administrative and operating expenses that cannot be met by IFC nor can be offset by fees paid by FIs.

The first and last are typical incremental costs while the second is related to the incremental risk facing FIs. Addressing this cost is necessary in order to persuade them to move into a new business area. The major justification for CTF’s involvement is that under the baseline situation, the Philippines lack a robust commercial financing capacity for private sector SE projects. The specific use of CTF funds in the Program is limited to those areas where the Program co-funders and private sector investors are unable to pay the costs. The CTF contribution is thus truly incremental and additional, and is very highly leveraged in terms of both the resulting SE project investment generated, and the direct Program costs leveraged.

**ix) Mitigation of Market Distortions**

The Program represents an important opportunity to innovate in the area of commercial market development for less developed markets where more distortive interventions such as subsidies and stand-alone revolving funds have been the common approach. The proposed Program will not distort the market, since it will not be displacing any private sector investment. The Program will leverage and enable

financing to enter the market that doesn't currently exist. The financing provided by the commercial banks and/or leasing companies will be used by the private sector including SMEs in implementing SE projects.

**x) Risks**

- *Risk:* The Philippines has recently held its national elections and new national leaders starting with the President have been elected. A change in government may also impact policies governing energy efficiency and renewable energy.  
*Mitigant:* Historically, the Philippines have a consistent track record of pro-private sector regulation. The newly elected President has also expressed a strong desire of creating a stable and level private sector playing field. On a positive note, increasing interest for climate change mitigation in both the public and private sectors result in policies that are likely to remain supportive of RE and EE projects. It should be noted that many companies are still using old equipment and there is a strong business case for technology upgrades regardless of national policies. The CTF funds will be invested alongside IFC financing and IFC will review the political and regulatory situation carefully prior to making any project level commitments.
- *Risk:* Changes in macro-economic conditions could adversely affect the Program. Slow economic growth could reduce the demand for capital investment of all kinds.
- *Mitigant:* The Philippines has benefitted from a dramatic improvement in its fiscal balance and has enjoyed stable growth. This has brought about an improved climate for investment. The global financial crisis resulted in less robust growth but the economy is still expected to expand over the short- and medium-terms. The security of energy supply and the volatility in energy prices pose threats to the economy, but this situation also highlights the need to manage energy costs through energy conservation or upgrades to more energy efficiency equipment. Energy efficiency projects have the distinct counter-cyclical advantage of improving both profit and cashflow without requiring an increase in sales as well as increasing a company's savings as energy prices go up.
- *Risk:* The Program relies on its FI partners to deliver the SE loans. There is a risk that FIs will continue to be risk averse, will reject many potential borrowers, and that the Program will not succeed in mobilizing local FIs loans on terms that are needed by and attractive to borrowers.
- *Mitigant:* IFC, will continue to engage with partner FIs on the benefits of working with IFC on a risk sharing product. IFC will continue to assess whether targeted segments can generate enough volume and that lending goals are realistic. Current partner FIs, have signed risk sharing facility (RSF) agreements with IFC, and FIs rely on RSF to mitigate risks to proceed in building a portfolio of SE projects. A number of local FIs have been approached and have expressed interest to participate in the Program.
- *Risk:* Based on previous program experience from other countries, a primary concern is the development of a sufficient volume of equipment and project financing deals to meet project targets and generate sufficient partner interest in the program to sustain their commitment to it.  
*Mitigant:* IFC has spent considerable time researching the various opportunities for sustainable energy and has developed a clearer understanding of the potential pipelines in a number of additional areas. IFC engages energy-related services companies and vendors in the Program, providing them with advisory services where relevant, to ensure a sufficient and sustainable deal flow to FIs. The current pipelines from the partner FIs indicate that there is sufficient business to warrant FIs' attention.