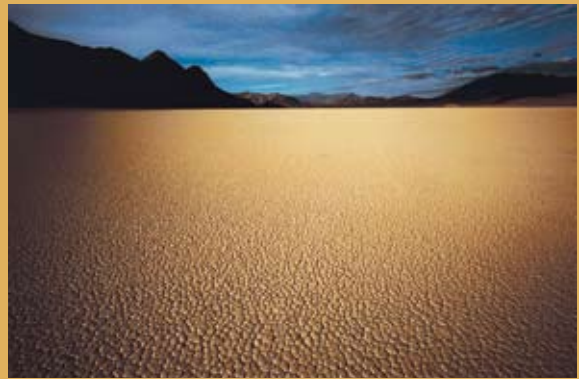




# UNEP and Sustainable Energy Finance



# UNEP and Sustainable Energy Finance



June 2006

## UNEP and Sustainable Energy Finance

This paper provides an overview of UNEP’s experience working with the finance sector on sustainable energy finance activities. UNEP is not a bank and therefore does not directly finance projects or companies<sup>1</sup>. Rather UNEP works with banks and other financial actors to increase their engagement in the sustainable energy sector, essentially those industries producing or deploying renewable energy (RE) or energy efficiency (EE) technologies and systems. Through different approaches UNEP helps financiers develop new financial products, buys down transaction costs, builds capacity and addresses various other barriers that restrict their ability to create and grow sustainable energy investment portfolios. This work, usually led by UNEP’s Division of Technology, Industry and Economics, is carried out in partnership with other UNEP teams and collaborating agencies, particularly the UNEP Finance Initiative, the UNEP Risoe Centre and the UNEP Collaborating Centre, the Basel Agency for Sustainable Energy (BASE).

UNEP’s sustainable energy finance activities fit within an overall strategy to help strengthen the continuum of financing sources needed to carry new ideas and technologies from the project conception stage through to commercial investment. The sustainable energy sector is still maturing and many gaps exist that prevent projects from raising finance on a purely commercial basis. Figure 1 is a conceptual finance continuum for Small and Medium Sized Enterprises (SMEs), showing the sorts of financing they typically are able to secure today, the gaps in financing that they often encounter and some possible interventions to close the gaps. UNEP has a number of programmes underway targeting two specific areas of this continuum: the first at the early stage of enterprise development, when lack of risk capital and technical support limits their ability to innovate new product or service offerings; and the second at the market expansion stage, when lack of end-user financing constrains market growth (these two areas are hatched in Figure 1). The risk capital oriented programmes are intended for sustainable energy markets in very early stages of development. The end-user finance programmes target more mature markets, where basic industry infrastructure (e.g. dealer support networks) is already in place but business is still only done on a ‘cash and carry’ basis.

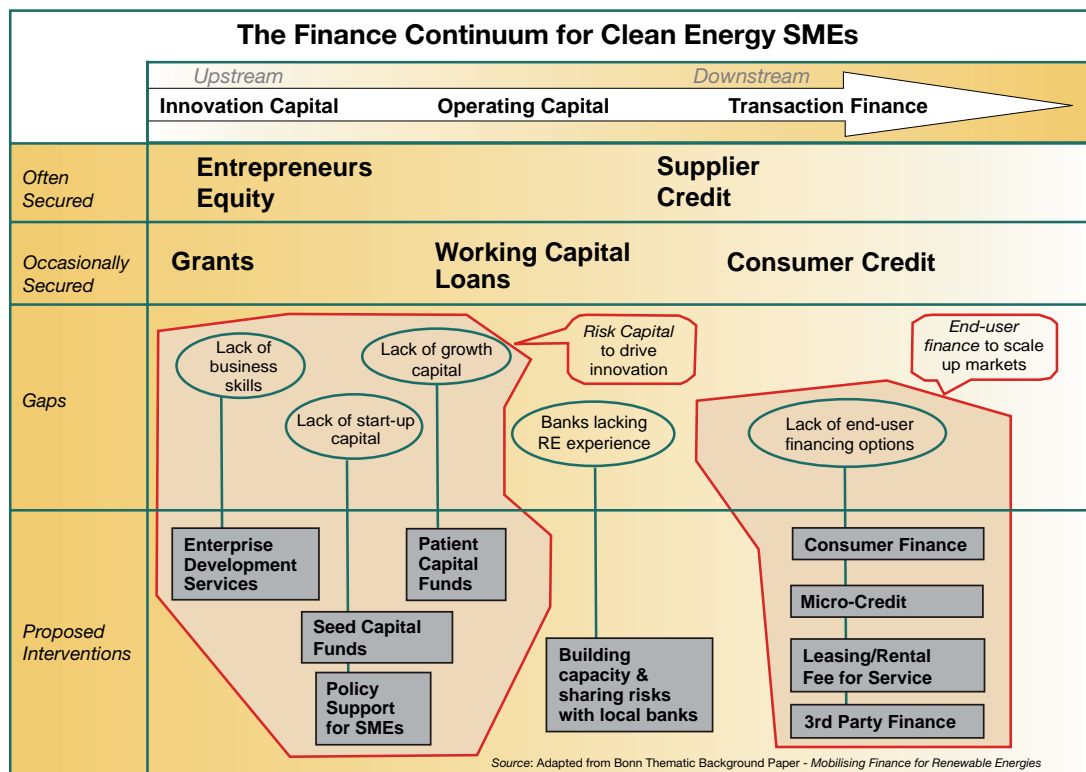


Figure 1: Clean Energy SME Finance Continuum

<sup>1</sup> In a few instances UNEP has channelled donor support to projects through finance sector partners, however this is generally seen as a less catalytic use of UNEP resources.

The mission of UNEP's Division of Technology, Industry and Economics (DTIE) is to work with decision makers in Industry and Government to develop and adopt policies, strategies and practices that are cleaner and safer and reduce pollution and risks for human beings and the environment<sup>2</sup>. The finance sector is an industry that, like the other sectors with which UNEP engages, has a need to integrate environmental sustainability into business practices. Working from its core mission, DTIE is well positioned to mobilise the finance community to begin increasing capital commitments to the clean energy sectors.

Energy programme activities within UNEP DTIE are managed through the Energy Branch. This Branch is divided into two teams: an *Energy and Transport Policy Unit* which promotes policies that place energy and transport within a broader sustainable development context and a *Renewable Energy and Finance Unit (REFU)* that works to steer project developers and the investment community toward greater support of renewable energy and energy efficiency projects<sup>3</sup>. In the area of sustainable energy finance, REFU specifically targets two UNEP Governing Council sub-programme outputs<sup>4</sup>:

D4: Technical advice and support to and partnerships with financial institutions to influence investment decisions favouring energy efficiency and renewable energy, and

D8: Policy and technical inputs to early stage enterprise support and project financing for innovative energy companies providing sustainable energy services.

On an operational basis REFU has addressed these sub-programme outputs through a finance sector engagement approach that:

- 1) partners with first movers to **develop and implement new products, commercial strategies or investment approaches** that demonstrate the sort of industry leadership needed for the rest of the sector to take notice, and
- 2) works through industry platforms (Sustainable Energy Finance Initiative and UNEP Finance Initiative) to **develop and share information and build awareness/capacities**, helping mainstream the leadership of first movers across the sector.

As an implementing agency of the Global Environment Facility (GEF), UNEP is building on its core activities to maximize global benefits. For the GEF climate change programme, UNEP's engagement with the finance sector brings to the GEF partnership an innovative perspective on finance. Smaller size programmes than those usually funded by major multilateral financing institutions allow testing of innovative approaches in particular for renewable energy and energy efficiency. The following sections present examples of UNEP's involvement with the finance sector.

## 1. Enterprise Development and Seed capital

The Rural Energy Enterprise Development (REED) initiative is one of UNEP's efforts aimed at addressing the early stage risk capital gap through the provision of enterprise development and start-up seed capital support to clean energy entrepreneurs. To date, \$9.4 million has been committed to REED programmes in five countries of West and Southern Africa, Northeast Brazil and China's Yunnan Province. This enterprise development model has been pioneered by the public purpose clean energy investor E+Co and advanced by a partnership between UNEP, E+Co<sup>5</sup>, the UN Foundation

2 Info on DTIE work with industry, and specifically its voluntary industry partnerships programmes, is available at <http://www.unep.fr/outreach/>

3 Info on UNEP Energy finance programmes is available at <http://www.unep.fr/energy/finance> and <http://sefi.unep.org>

4 (biennium 2004-2005 subprogramme - A/58/6 (Sect.14) Rev.1)

5 E+Co's homepage is [www.energyhouse.com](http://www.energyhouse.com) and information on their impacts is at [www.energyhouse.com/tbl\\_info.htm](http://www.energyhouse.com/tbl_info.htm)

(UNF), a growing number of other foundations and donor governments, and a diverse group of in-country enterprise development partners.

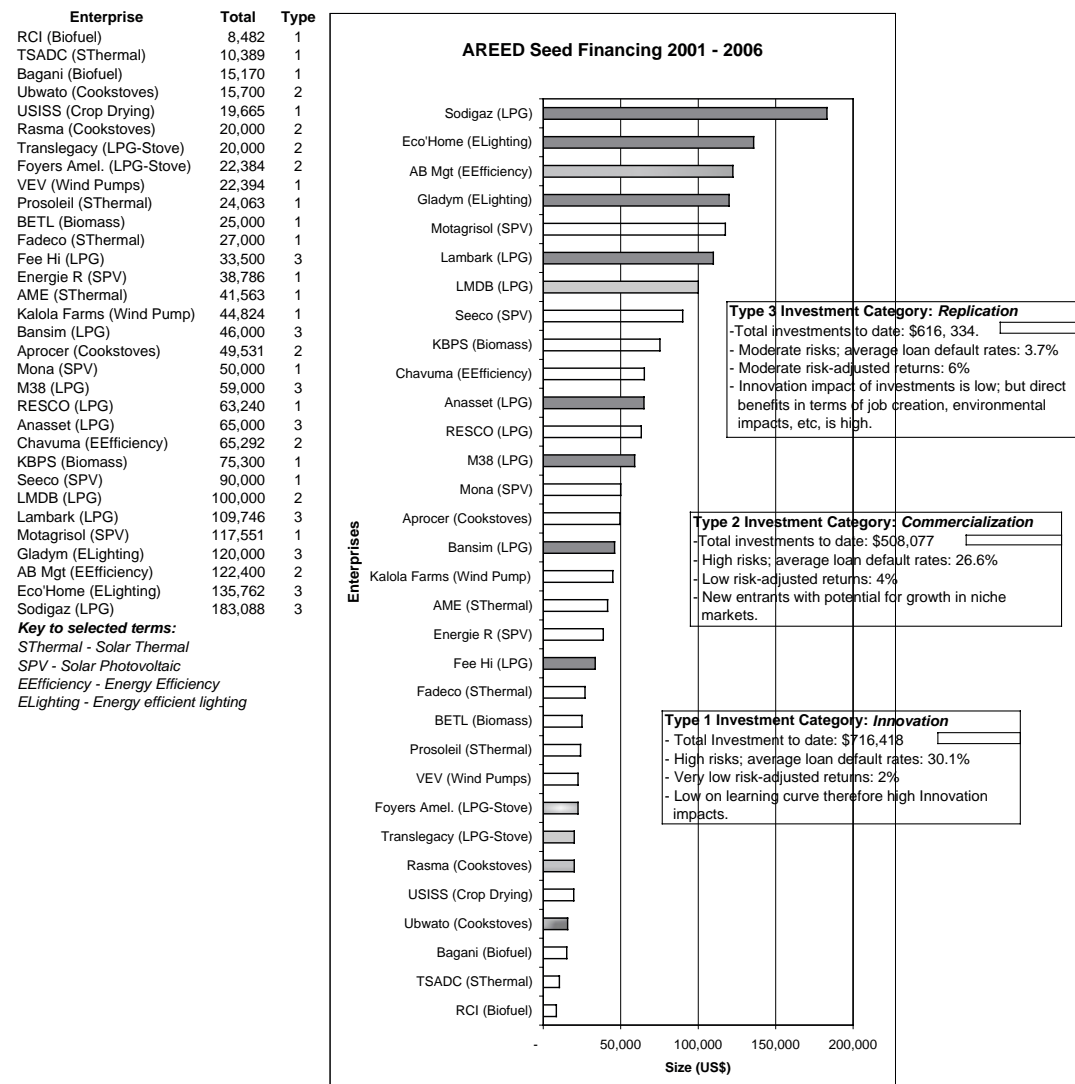


Figure 2: AREED Portfolio Analysis

4

REED seed finance is provided to SMEs that deal in clean energy products and services, a sector generally considered too risky to attract conventional sources of finance. The African programme, AREED, is the most advanced to date with 33 clean energy enterprises supported and hundreds of entrepreneurs trained.

Figure 2 shows the range of enterprises that have been supported under AREED and provides a segmentation into three types including very early stage *proof of concept* focused enterprises, early stage *commercialization* enterprises and the more mature *replication* stage enterprises. Of the three types, the *replication* enterprises, those which are copying business models that are already successfully commercialized in the country, are the most secure financially and have the best potential for near term direct impacts such as job creation, customers served, environmental improvement, etc. However the experience has been that the less mature *proof of concept* and *commercialization* stage enterprises can provide the largest longer term impact since they are the ones driving innovation forward and for those that succeed creating industrial development that can change the way in which energy services are delivered in a country<sup>6</sup>.

6 Based mostly on the longer term portfolio results of E+Co (see [http://www.energyhouse.com/tbl\\_info.htm](http://www.energyhouse.com/tbl_info.htm))

Although not all enterprises survive<sup>7</sup>, and those that do require significant hands-on enterprise development support, the overall portfolio from a financial perspective remains cash-flow positive, meaning that it grows and can be provided to other enterprises over time. However the need to continuously work with these enterprises to refine their business models and to test out new service offerings is certainly indicative of the hands-on risk (or venture) capital assistance approach<sup>8</sup>.

The REED programmes are each independently evaluated as part of their M&E plans<sup>9</sup> and in addition a number of specific studies have been commissioned by UNEP<sup>10</sup> or carried out independently<sup>11</sup> during the course of implementation.

Key Facts: Rural Energy Enterprise Development Programmes	
<i>Programme Strategy</i>	Offer entrepreneurs a combination of enterprise development support and seed financing to set up or expand a clean energy business or project.
<i>Geographic Coverage:</i>	Mali, Senegal, Ghana, Tanzania, Zambia, Northeast Brazil, Yunnan Province, China
<i>Total Budget:</i>	\$9.4 million (across three programmes)
<i>Donors:</i>	UN Foundation (\$7.8mn), Blue Moon Fund (\$0.7mn), SIDA (\$0.7mn), BMZ (\$0.4mn), Dutch Govt (\$0.2mn), Other: DBSA, Bodyshop, Domini Social Investments
<i>Seed Fund Manager:</i>	E+Co (US 501K non-profit status – audited annually) manages seed funds and provides co-finance (\$0.5mn direct; and \$8mn indirect).
<i>Seed Fund Size:</i>	\$0.9mn to \$1.8 mn
<i>Enterprise Development Costs:</i>	20 to 50 cents per dollar invested
<i>Co-Finance:</i>	1.1 times
<i>Leverage:</i>	can be significant over time (e.g. E+Co has achieved 9.4 times)
<i>Impact:</i>	Slow to produce direct impacts (job creation, GHG mitigation, etc), but can be significant in medium to long term

## 2. Bank Partnership Lending Programmes for Small Scale RE Technologies

Referring back to the continuum in Figure 1, for small scale clean energy technologies already commercialized on a ‘cash and carry’ basis but where growth is constrained by a lack of end-user financing, UNEP has been implementing credit support programmes that help local banks build their first clean energy loan portfolios. Such programmes are underway today in India (photovoltaic), Tunisia (domestic solar water heater), Morocco (hotel based solar water heater) and China (renewable energy), and others are in development in Egypt and Indonesia. Although the local context for each varies considerably, there are many common elements that have allowed UNEP to build experience and transfer best practice across countries and regions.

### Financing Solar Home Systems in India

A first bank partnership was launched in 2003 between UNEP and two of India’s largest banking groups – Canara Bank and Syndicate Bank – that provides consumer financing for solar home systems at preferential interest rates. Although India has one of the most dynamic photovoltaic (PV)

7 Today 69% of AREED investments are current or have paid back, 24% are in some form of business restructuring, and 9% have been written off.  
 8 Today it costs between \$0.20 and \$0.50 of enterprise development support for every \$1 of seed finance that is invested.  
 9 For AREED a first mid-term evaluation was carried out in 2003, a second mid-term evaluation is currently underway and a final evaluation will be carried out at project closure.  
 10 e.g., Social and Environmental Impacts of REED ‘Clean Energy’ Enterprise Development, P. Napier-Moore, November 2004; AREED Policy Review – Analysis of Policies and Institutions, and Linkages with Energy SME Development, F. Denton, February 2006.  
 11 Investing for Impact: Managing and Measuring Proactive Social Investments, A study carried out by the Foundation Strategy Group for the Shell Foundation, November, 2005. (includes a significant focus on AREED)

industries in the developing world, at the time, little bank financing<sup>12</sup> was available to customers which posed a severe constraint to market growth. The programme, supported by the UN Foundation (\$1.2 million) and Shell Foundation (\$0.3 million), was aimed at helping establish an Indian consumer credit market for solar home system financing.

The programme involved providing Canara Bank and Syndicate Bank with an interest rate subsidy, marketing support and a vendor qualification process. These banks were chosen based on their extensive branch networks, reputations for progressive social banking and interest in developing dedicated loan products for the solar PV sector. The interest subsidy was preferred by the banks over guarantees or other support mechanisms since, although they would not benefit directly, it enabled them to offer preferential banking terms to their customers in an efficient and transparent manner. The commercial interest rate for equivalent loan types at programme inception was 12%. UNEP's subsidy initially brought this rate down to 5%, but then was progressively phased out in 2% increments. The loans were offered through 1,115 Canara and Syndicate bank branches as well as 1,051 branches of 9 rural grameen banks sponsored by Canara and Syndicate.

The oversight mechanisms for the programme include 1) the vendor qualification process, which ensures that vendors have the experience and service infrastructure to maintain the products they sell, 2) compulsory product warranties and service contracts, 3) customer satisfaction surveys, 4) biannual bank and vendor audits and 5) the programme's overall evaluation component.

Two and a half years into the programme the banks have financed over 16,000 Solar Home Systems and the subsidy has been fully removed from one of the banks and partially from the other. Syndicate and Canara were the first major lenders, but a number of other banks started to compete in this new credit market in 2004, financing an additional 4,000 loans by the end of 2005. Although the solar home sector was pretty much a cash-only business in 2003, today over 50% of sales are credit financed representing an impressive response by the credit market to the impetus.

### Financing Solar Water Heaters in Tunisia

A second loan support programme is now underway in Tunisia, although this time for solar water heaters and in a somewhat more complicated institutional context. The Tunisian solar thermal sector began to grow in the 1980s but mainly due to subsidy distortions and quality issues went into decline through the early 1990s. In Tunisia the conventional water heating option is Liquefied Petroleum Gas (LPG) boilers, which have low capital costs and government subsidized fuel costs. In 1996 the Tunisian Government launched a program aimed at improving the competitiveness of solar water heaters vis a vis LPG, in part to level the playing field. This effort, supported by the World Bank and GEF, provided a similar subsidy to that of LPG, but as a capital cost reduction of 35%. This effort enabled the solar water heater (SWH) industry to re-establish itself between 1997 and 2001 but unfortunately once the capital subsidies ran out in 2002 the market dropped again with the two main barriers to sustainability being the skewed playing field and the lack of end-user financing options.

As part of the \$7 million Italian funded Mediterranean Renewable Energy Programme (MEDREP), UNEP began in 2004 to work with the Tunisian government to address the bank engagement issue. This led to the launch of the PROSOL loan programme in April 2005. The facility is similar to the Indian programme, in that it helps local banks provide low cost financing to solar end-users, although in Tunisia the state utility STEG also plays an important role by recovering the monthly loan payments via their customers' utility bills.

The commercial lending rate for similar loan products in Tunisia is 14%. Through a total commitment of \$1 million, UNEP provides a 7% interest buy-down which is phased out over time. The banks

<sup>12</sup> The pre-programme analysis determined that in total 1400 loans had been provided to the solar sector by a range of banks in the years preceding the UNEP programme, mostly through vendor-bank tie-ups that each financed in the range of 100-300 loans.

involved – the leaders being Amen Bank and UBCI – have agreed to a further 7% reduction meaning the rate initially charged to customers is 0% and after 12 months 7%. At the same time, based on the quick uptake of the sector and the bank engagement, the government passed legislation in late 2005 which made the SWH sector eligible for the energy subsidy that previously was only provided to LPG.<sup>13</sup>

PROSOL began operating in April 2005 and during that year 7200 solar water heating systems were installed, the equivalent of 22,616 m<sup>2</sup>, which on an annualized basis was 60% higher than the previous best year in 2001. As in India, the market has once again responded to the impetus and credit financing seems to be playing an important role. In relative terms of market potential the Tunisian response has actually been significantly larger, although the support package is more substantial with the energy subsidy of 20% factored in. UNEP’s interest subsidy will phase out over the next 6–8 months. The Tunisian government is now pushing very hard to scale up this programme, targeting 250,000 m<sup>2</sup> of installations by 2009 which would require a total investment of around \$125 million. However whether this can occur will depend on the programme being able to resolve an issue of vendor indebtedness since a particularity of channeling the financing through STEG is that the loans rest on the vendor balance sheets, not the end-users. In other words, the environment for SWH financing in Tunisia has changed entirely, with the banks more willing to lend than the vendors are able currently to accommodate. Two solutions are being discussed, one where vendors would insure their accounts receivables, effectively outsourcing their customer default risk, and the other involving shifting the loans off their balance sheets to STEG or a third party.

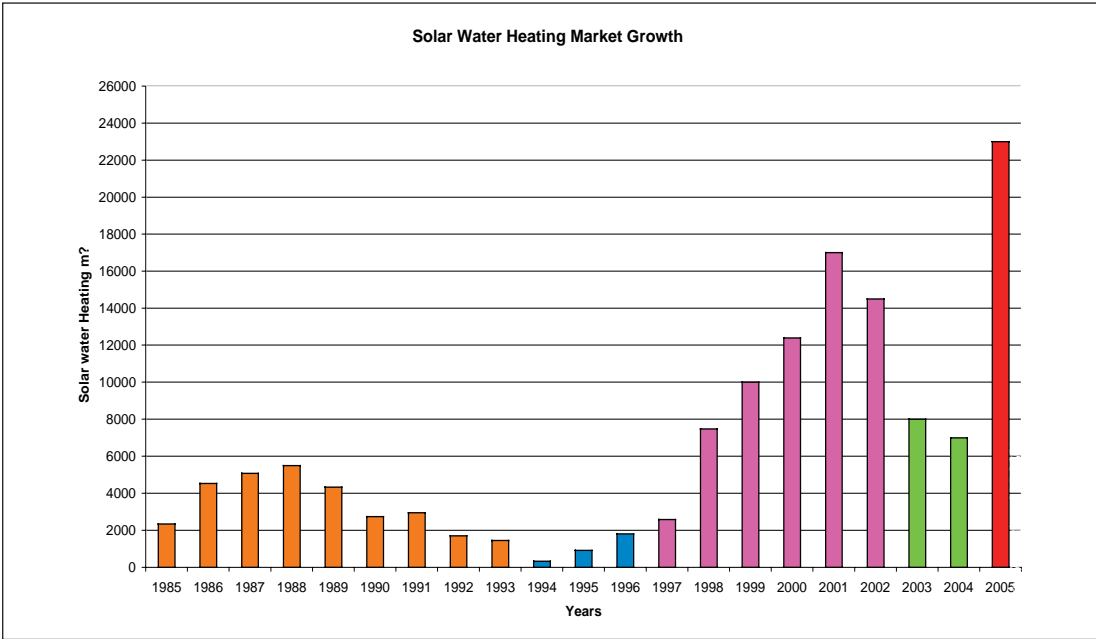


Figure 3: Tunisian SWH Market Growth

**Financing Hotel-based SWH in Morocco**

In January, 2006, UNEP launched a second MEDREP finance programme, this time in Morocco in partnership with the state utility, ONE, and three commercial banks. The Ecosol programme, also \$1 million in size, is a solar loan and leasing facility, targeting the financing of collective solar water heating systems in hotels. As in Tunisia, the partnership with ONE makes the loans and leases a low risk investment for the partnering banks as customers risk losing their electricity supply if they default on loan repayments. In return for the ONE guarantee, the banks have agreed to reduce their

13 Of course in the long-term the best solution would be to remove all subsidies, however in the interim at least this decision allows SWH to directly compete with LPG on a fully commercial basis.

rates from 10% down to 6%. UNEP has agreed to further buy down this rate, initially to 0% but then phased out over 2-3 years. The first financings under this programme are expected to be carried out in the 3<sup>rd</sup> quarter of 2006, with 17 hotels engaged so far. A similar SWH credit support approach is also now being initiated for hotels in Egypt.

### Green Micro Credit in China

In April 2005, UNEP launched a *GreenVillage Credit*<sup>14</sup> initiative in partnership with The Nature Conservancy to provide local villagers with financing for a range of sustainable energy systems and for related productive use activities. *GreenVillage Credit* makes loans of up to \$1,250 for 18 months with an annual interest rate of 5%. The loan capital is entrusted to Rural Credit Cooperative Union (RCCU), a local bank that serves as the platform for credit delivery. Loans are provided directly to the villagers, but co-signed through solidarity groups consisting of 5 member households from the village association. As of today, 286 loans have been disbursed, mainly for solar water heating and biogas systems. This is a smaller programme than the ones in Tunisia and Morocco, with total capital of \$400,000, and is operating in a more risk averse banking environment. However, based on the experience with the initial loan portfolio discussions are now underway with RCCU to shift to an interest subsidy approach, whereby they would begin to lend their own capital.

### Linking bank lending to policy making

An interesting lesson taken from these loan programmes is that there can be an effective feedback loop from the actions of the banking community to policy makers. When banks begin to scale up lending to an RE sector it sends a positive signal to policy makers that the technology is mature and ready to play a significant role in the country's energy mix. This change in perception can go a long way towards convincing policy makers of the need for shifts in policy frameworks, often from a narrow technology demonstration approach to a broader fiscal or regulatory approach. This has now happened both in Tunisia, with the change in energy subsidy policy, and in India, where the government is looking to shift its PV support programme away from capital subsidies and towards the interest subsidy approach. This contradicts the conventional wisdom that investment only engages once the right policies are in place. Rather our experience has been that financing and policy development evolve somewhat in parallel, with one community constantly influencing the actions of the other.

#### Key Facts: Bank Partnership Loan Programmes

<i>Programme Strategy</i>	Help domestic banking sectors build credit markets for small scale RE systems through the use of credit enhancements, technical support and vendor qualification.
<i>Geographic Coverage:</i>	India, Tunisia, Morocco, Egypt, China (soon also in Ghana and Indonesia)
<i>UNEP Budget:</i>	\$9 million
<i>Donors:</i>	UN Foundation, Shell Foundation, Italian IMET, German BMU, The Nature Conservancy
<i>Typical Programme Size:</i>	\$0.4 mn – \$1.5 mn
<i>Bank Co-finance:</i>	\$5mn to \$7 mn per programme (less for China)
<i>Loan Portfolio Targets:</i>	10,000 to 20,000 loans per programme (less for China due to approach taken)
<i>Overall Impact:</i>	Can be quite significant quickly, although only for markets that are somewhat mature
<i>CO<sub>2</sub> Mitigation Cost:</i>	e.g. for Tunisia, the mitigation cost ranges from \$2.60 - \$9.50 per ton CO <sub>2</sub> <sup>15</sup>

14 See <http://www.c-reed.org>

15 The higher figure referring to direct reductions associated with 10,000 SWH installations to be financed with the UNEP subsidy and the lower figure including the expected replication to 83,000 installations, based on a 50% causality assumption.

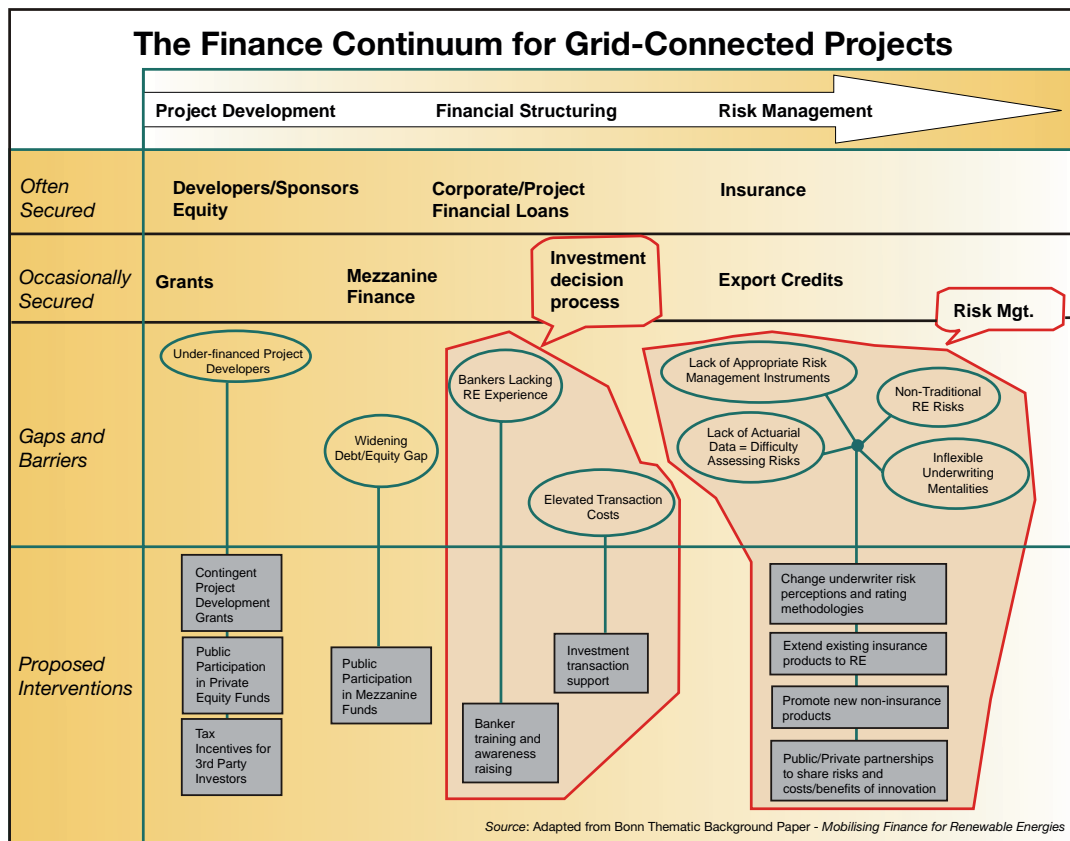


Figure 4: Large Grid-Connected Project Finance Continuum

### 3. Facilitating Investment in Larger Scale Grid-Connected Projects

For larger grid-connected projects, UNEP efforts to date have mostly focused on working with banks and project developers to address barriers in the investment decision process and working with the risk management industry to determine new ways to evaluate and hedge project risks. These two areas are shown in Figure 4, a conceptual finance continuum for grid-connected projects.

Between 2000 and 2002, UNEP ran a GEF-supported pilot RE/EE Investment Advisory Facility (IAF) that promoted renewable energy and energy efficiency investments in developing and transition economies. The IAF provided banks and financiers with targeted expertise and support to evaluate proposals in the sustainable energy sector and to help these institutions develop the skills to evaluate such projects independently. In total 12 investment evaluations were supported and of these, five secured financial commitments and four went on to implementation. The total financing leveraged by these four projects was \$95.5 million, which will result in the reduction of 3.8 million tons of CO<sub>2</sub> (over 20 years) and implying a low cost of mitigation<sup>16</sup>.

An on-going UNEP/GEF targeted research project, *Assessment of Financial Risk Management Instruments for Renewable Energy Projects*, is trying to catalyze new thinking in the risk management area for renewable energy projects, assessing risks associated with RE projects, examining existing instruments and approaches and suggesting potential modalities for new instruments that could be developed in partnership with private / public sector financial institutions and donors. The project is being implemented in co-operation with BASE, the World Bank, UNDP, the Scientific and Technical Advisory Panel of the GEF, as well as a number of insurers and RE finance industry partners.

<sup>16</sup> Assuming a causality factor of 0.1 the mitigation cost is \$1.20/ton CO<sub>2</sub>

UNEP has also been working in a few other areas, including carbon finance and energy efficiency finance. Since mid 2005 UNEP has been undertaking a joint \$1 million initiative with the World Bank's Community Development Carbon Fund (CDCF) called *Carbon Finance for Sustainable Energy in Africa* aimed at facilitating the first Clean development Mechanism (CDM) transactions and World Bank CDCF investments in Cameroon, Ghana, Mali, Mozambique and Zambia. This initiative builds off the \$12 million *Capacity Development for the CDM* programme, run through the UNEP Risoe Centre, that has been helping establish the institutional frameworks for CDM in 19 other developing countries.<sup>17</sup> Since 2001 UNEP has been undertaking a joint initiative with the World Bank (\$2.2 million UNF and World Bank Energy Sector Management Assistance Programme (ESMAP)) on *Developing Financial Intermediation Mechanisms for Energy Efficiency Projects in Brazil, China and India*. This effort builds off of World Bank experience as well as a number of UNEP industrial energy efficiency projects<sup>18</sup>.

#### 4. Develop and Share Information, Build Awareness and Capacities

Although on-the-ground partnerships can test out new approaches and help foster leadership in the sector, only through catalyzing broader support within the financial community can we hope to achieve any significant scale-up and through this a replication of first mover successes. This network approach allows UNEP to associate with more than 200 financial institutions while examining specific environment related topics. Traditional topics such as renewable energy and energy efficiency are still very much on the agenda. However, the impact of climate change and related damages with incurred costs are of increasing interest to the finance world as a whole and to insurance companies and re insurers, participants to the networks.

##### Helping Foster a Sustainable Energy Finance Community

Part of UNEP strategy is to support growth of a nascent sustainable energy finance community through a platform managed by UNEP Energy, the UNEP Finance Initiative, and BASE. The *Sustainable Energy Finance Initiative*, or SEFI<sup>19</sup>, aims to foster a sustainable energy finance community that brings together financiers, engages them to do jointly what they may have been reluctant or unable to do individually, and catalyses public-private alliances that together share costs and lower barriers to investment. SEFI operates using a three pronged strategy of information provision, networking and partnerships.

- *INFORMATION – at the core of SEFI is a growing portfolio of tools, guidelines, reports, services, and capacity building activities that together help financiers understand the opportunities for sustainable energy investment, and to assess and manage the risks, improve deal origination, and lower the transaction costs of their first investments in the sector. Some specific outputs of this work are listed in Annex 1.*
- *NETWORKS and FORA – building the sustainable energy finance community – bringing together bankers, insurers, and investors with project developers to share experiences, create alliances, promote new financing initiatives, and build credibility in the finance sector and within financial institutions. Communicating investment activity in the sustainable energy sector to the broader finance community and conveying the financial community's needs to governments and policy-makers.*
- *PARTNERSHIPS – connecting financiers with project developers and corporations, and creating alliances within the finance sector for launching innovative financial products and mechanisms tailored to the sustainable energy sector.*

<sup>17</sup> See [www.cd4cdm.org](http://www.cd4cdm.org)

<sup>18</sup> for more information see <http://www.unep.fr/energy/efficiency>

<sup>19</sup> See <http://sefi.unep.org>

The scope of SEFI includes renewable energy and energy efficiency investment in developed and developing countries, including climate change and carbon trading activities as they relate to clean energy investment.

2005 was the first full year of operations for SEFI. The second **Sustainable Energy Finance Roundtable** took place in New York City in late October. Organized around the theme of 'Creating the climate *for* change', the event provided a forum for representatives from the finance community, business and government to discuss what is needed to scale up investment in the renewable energy and energy efficiency sectors. In November, SEFI co-organised the Finance Forum of the **Beijing International Renewables Conference**. SEFI also joined with the London Stock Exchange (LSE) to host an investment forum for renewable energy companies preparing to list on the LSE Alternative Investments Market, the most active market for clean energy Initial Public Offerings (IPO) in 2005.

At the same time SEFI released a report on **Public Finance Mechanisms to Catalyze Sustainable Energy Sector Growth** and in 2006 is assessing the creation of a public finance network on the topic. This network would bring together decision-makers from the public and private sectors to discuss how public capital can be better used to promote innovation and investment in the clean energy sectors.

SEFI is working on developing a package of tools designed to **help local credit institutions** better engage in the sustainable energy sectors. These tools (credit scoring guidelines, training programmes, consultant rosters) will help build in-house expertise and give loan officers more capacity and confidence to mainstream clean energy lending.

SEFI will continue to work with the **export credit community** on renewable energy financing and other environmental issues after the special Sector Understanding on Renewable Energy and Water went into effect in June 2005. This agreement will increase the duration of project financing allowable from Organization for Economic Co-operation and Development (OECD) member **export credit agencies** (ECA). In April, UNEP/SEFI hosted the most recent ECA environment meeting in Vienna.

In collaboration with the Renewable Energy Policy Network for the 21st Century (REN 21), SEFI is exploring new ways to monitor global renewable energy investment trends and in late 2006 plans to release its first Global RE Investment Report. A study has also begun on the financial community's perspective on how the design of various policy instruments intended to facilitate renewable energy uptake affects the cost of raising capital for these investments.

### **Mainstreaming Environmental Finance through the UNEP Finance Initiative**

SEFI grew out of a long standing voluntary partnership with the finance sector through which UNEP has been working to mainstream environmental management within the big banks and insurers. Today more than 175 banks and insurers from over 50 countries have signed up to the **UNEP Finance Initiative** (UNEP FI)<sup>20</sup>. Initiated in 1992 as a means of engaging financial institutions on sustainable development, signatories commit to integrate sustainable development considerations into all aspects of their operations and service. The participating institutions (i) support the precautionary approach to environmental management, (ii) recognize that identifying and quantifying environmental risks should be part of the normal process of risk assessment and management and (iii) pursue best environmental practice. Contributions from private and public finance agencies provide the bulk of the funding for the secretariat and its activities.

UNEP FI's work programme is focused on current and emergent issues which are relevant to the signatories. They work collaboratively to find innovative approaches to issues around finance and sustainability. Through its Climate Change Working Group, UNEP FI has focused on carbon finance,

---

<sup>20</sup> See <http://unepfi.net>

national and international policy and regulation debates, and renewable energy as well as climate change impacts.

## 5. Conclusion

Achieving critical mass will require investment, finance and insurance products to create the liquidity necessary for vibrant markets in sustainable energy. As the environmental agency of the United Nations, the UN Environment Programme is working with the finance sector in much the same way that it works with other industries. By providing first mover financiers with the tools, support and networks to drive the cycle of financial innovation, it is hoped that this work can help move the sector from a niche market to a more mainstream status acceptable to conventional financial institutions.

## Annex 1: Example SEFI Tools and Reports



**SEFI TOOLS & REPORTS**

**Tools & Studies**

**Sustainable Energy Finance Directory**  
The Sustainable Energy Finance Directory is an inventory of lenders and investors who provide finance the renewable energy and energy efficiency sectors. The directory is available as an online database at <http://www.sef-directory.net>

**Renewable Energy Environmental Due Diligence Guidelines**  
UNEP and BASE have prepared Guidelines for Environmental Due Diligence (EDD) of Renewable Energy Projects. These guidelines provide investors and lenders with practical, standardised procedures for identifying and managing environmental risks associated with particular renewable energy technologies. EDD guidelines are now available for wind, solar PV, solar thermal, biogas, biomass systems based on: cultural and forestry waste, biomass systems based on energy crops, geothermal, and small-hydro plant. The guidelines are available on-line at <http://sefi.unep.org/edd>

**Risk Management Study**  
Appropriate risk management tools are often lacking for Renewable Energy projects, particularly in developing countries where risk and risk perceptions are highest. UNEP is therefore working on a comprehensive overview of currently available and potential future financial risk management instruments for the Renewable Energy sector. This study will pave the way for an upcoming GEF assessment of financial risk management instruments that favour the development of RETs. The summary document is available at <http://sefi.unep.org>

**Briefings**

**UNEP FI CEO briefing on Renewable Energy**  
This study is the third by the UNEP Finance Initiative Climate Change Working Group. The first was a scoping paper in 2002 on the risk of climate change. It called for more leadership from policymakers and action by financial institutions on awareness-raising, and valuation methodologies. The second paper (2004) confirmed the sector's support for emissions trading as a key financial tool to address climate change. This third paper presents the business case for financing renewable energy. It presents concrete examples and makes strong policy recommendations for further action. The briefing is available at <http://sefi.unep.org>

**Making it Happen: Renewable Energy Finance and the Role of Export Credit Agencies**  
Only a very small portion of global export credits goes for the financing of renewable energy projects or the sale of renewable energy equipment. This is due to various barriers, some sector-specific and other more general in nature. In addition, certain provisions in the OECD Arrangement on Officially Supported Export Credits - under which ECAs operate - seem to pose barriers to financing renewable energy projects. This document looks at if and how ECAs or their guardian authorities can break down these barriers, either directly by tailoring products to renewable energy project specificities or by making appropriate changes to the Arrangement. The briefing is available at <http://sefi.unep.org>

**Communiqué**

**'Creating the climate for change'**  
On 1-2 June 2004, the SEFI event 'Creating the Climate for Change' brought together members of the finance community, government officials, and project developers from 37 countries in Bonn as part of the International Conference for Renewable Energies. Work sessions were held on: risk management, venture capital, consumer lending and micro finance, credits, carbon, infrastructure, and SME finance, as well as public-private partnerships. Each session produced specific recommendations for unlocking investment in sustainable energy, which have been summarised in this communiqué. The communiqué is available at <http://sefi.unep.org>

**Contacts**

**UNEP Energy Branch, Div. of Technology, Industry and Economics**  
Eric Usher, Tel. +33 (0)1 44 37 76 14, [eric.usher@unep.fr](mailto:eric.usher@unep.fr)

**UNEP Finance Initiative, Div. of Technology, Industry and Economics**  
Paul Clements-Hunt, Tel. +41 (0)22 917 81 16, [pch@unep.ch](mailto:pch@unep.ch)

**BASE - Basel Agency for Sustainable Energy**  
Virginia Sonntag-O'Brien, Tel. +41 (0)61 274 04 80, [virginia.sonntagob@energy-base.org](mailto:virginia.sonntagob@energy-base.org)

[www.unep.org](http://www.unep.org)

United Nations Environment Programme  
P.O. Box 30552, Nairobi 00100, Kenya  
Tel: (+254) 20 7621234  
Fax: (+254) 20 7623927  
E-mail: [unep@unep.org](mailto:unep@unep.org)  
Web: [www.unep.org](http://www.unep.org)

