

# GLOBAL VILLAGE ENERGY PARTNERSHIP

*Harnessing Energy for Poverty Reduction: People, Productivity and Partnerships*

**WORKSHOP ON CONSUMER LENDING AND MICROFINANCE TO  
EXPAND ACCESS TO ENERGY SERVICES**

**Manila, Philippines**

**May 19-21, 2004**

***PROCEEDINGS***

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## **Executive Summary**

Based on discussions with private firms, entrepreneurs, and consumer groups, it is evident that access to affordable loans on the consumer side is a major hurdle in increasing access to energy services as a means for poverty reduction. To date, the overwhelming majority of financial support for rural energy applications is local and state government or donor-based. Although these programmes are beneficial, unlocking access to loans for consumers will be essential in engaging the private sector and improving the investment climate for rural energy services.

The United Nations Development Programme (UNDP), in collaboration with Development Bank of Philippines and the Centre for Agriculture and Rural Development (CARD) Bank in the Philippines, organised a three-day GVEP workshop on Consumer Lending and Microfinance to Expand Access to Energy Services. The event took place from 19-21 May, 2004 in Manila, the Philippines, and included two days of plenary sessions, and a one day field visit to the CARD Bank Training Centre. The workshop was funded by UNDP, U.S. Agency for International Development, the Gesellschaft für Technische Zusammenarbeit (GTZ), and the World Bank/UNDP Energy Sector Management Assistance Programme.

Nearly 50 practitioners from Asia, Latin America, and Africa from both the energy and financial sectors gathered to develop design elements for increasing access to consumer loans and microfinance for energy services and identify existing barriers and innovative models within consumer finance that could be appropriate for the provision of energy services.

Microfinance practitioners acknowledged that energy services can provide a new, profitable product line for MFIs, and a number of them expressed interest in exploring this market by offering financial products specifically designed for energy. Participants agreed that energy services must match consumers' income flows, be demand driven and be affordable. Productive uses of energy services were seen as a vital component of loans to first time borrowers. It was agreed that in most cases, energy markets need to grow on their own strength rather than through the use of subsidies. However, it was acknowledged that subsidies have a niche if they are time-bound and designed appropriately. Ingredients for successful energy lending programmes include: improved financial capacity among lenders, adherence to best practices, solid energy service providers that include operation and maintenance of equipment, minimal deviation from existing bank policies and procedures, and increased awareness of energy products among key MFI personnel. Additionally, there is a need to match loan amounts to funding sources. Participants suggested that certain energy loans are too large for MFIs. It was determined that a knowledge gap exists between MFIs, consumers and energy service providers that could be addressed through capacity building, knowledge sharing, and piloting of new approaches for energy and consumer lending.

Furthermore, strategies for future action for the GVEP and its partners and stakeholders were proposed, the essence of which is outlined in these proceedings. As a global partnership, GVEP is in a unique position to offer a broad range of services and resources

to help encourage the use of consumer lending as a vehicle to promote access to modern energy services for poverty reduction. This workshop helped form the foundation for what will become a comprehensive set of robust strategies and tools aimed at assisting microfinance institutions to expand their existing lending portfolios to include financial products designed for the provision of energy services.

## **I. Workshop Overview**

The United Nations Development Programme (UNDP), in collaboration with Development Bank of Philippines and the Centre for Agriculture and Rural Development (CARD) Bank in the Philippines, organised a three-day Global Village Energy Partnership (GVEP) workshop on Consumer Lending and Microfinance to Expand Access to Energy Services. The event took place from 19-21 May, 2004 in Manila, the Philippines, and included two days of plenary sessions, and a one day field visit to the CARD Bank Training Centre. The workshop was funded by UNDP, U.S. Agency for International Development, the German Development Agency GTZ, and the World Bank/UNDP Energy Sector Management Assistance Programme.

Nearly 50 practitioners from Asia, Latin America, and Africa from both the energy and financial sectors gathered in Manila to discuss design elements for increasing access to consumer loans and microfinance for energy services. The workshop confirmed that access to modern energy services can be enhanced by access to consumer credit and microfinance, and there is a strong willingness to work together towards reducing poverty through increasing incomes, jobs and quality of life.

Microfinance practitioners acknowledged that energy services can provide a new, profitable product line for microfinance institutions (MFIs), and a number of them expressed interest in exploring this market by offering financial products specifically designed for energy. Both energy and financial practitioners agreed that lending for energy targeted at consumers is currently lacking, and expansion of this service could play an integral role in promoting widespread provision of modern energy services. Consensus was reached that lending for energy services must match consumers' income flows, be demand driven, and be affordable. In response to this, it was stressed that a broad range of technologies currently exist that match consumers' energy needs and incomes. Productive uses of energy services were seen as a vital component of loans to first time borrowers. It was agreed that in most cases, energy markets need to grow on their own strength rather than through the use of subsidies. However, it was acknowledged that subsidies can be useful if they are time-bound and designed appropriately. All participants acknowledged that a clear knowledge gap exists between MFIs, consumers and energy suppliers.

GVEP has the potential to act as a bridge between MFIs and the energy enterprises and service providers. GVEP could also provide risk mitigation or sharing facilities for MFIs, MFI business planning and product piloting, and help link MFI issues into GVEP country action plan, PRSP and other activities. Furthermore, capacity building programmes will help bridge the knowledge gap that exists between MFIs and energy suppliers. The Partnership can act as a convener of MFI-energy stakeholders, policy makers, and donors at the national level. Workshop participants proposed that GVEP assist in developing an MFI-Energy Toolbox. This would include step-by-step instructions for MFIs, as well as country specific information on how to expand financial portfolios to include products designed for energy.

The GVEP workshop on Consumer Lending and Microfinance to Expand Access to Energy Services was seen as a successful first step in incorporating consumer loans for energy into

the menu of services provided by microfinance institutions. However, the workshop participants acknowledged that a great deal is required from multiple players before MFIs will have the knowledge, interest and financing required to contribute substantively in providing energy services to the rural poor.

## **II. Introduction**

### ***Welcome Remarks***

Mr. Kyo Naka, UNDP Deputy Resident Representative, Philippines

On behalf of the United Nations Development Programme, Mr. Naka extended a warm welcome to workshop participants. He offered a general explanation of the crucial interplay between energy and poverty reduction, and highlighted UNDP's ongoing commitment to the issues of energy and environment, both internationally and in the Philippines. He also stressed that energy is not an end in itself but a tool to promote sustainable development and achieve the Millennium Development Goals.

Mr. Naka explained that UNDP supports energy activities through global, regional, and country-level projects and programmes, and UNDP's highest priority on energy is the implementation of GVEP. He highlighted local success stories in which UNDP has played an integral role in identifying and removing key market, policy, technical and financial barriers to promoting the provision of modern energy services. This includes UNDP's involvement in the "Palawan Alternative Rural Energy and Livelihood Support Project, and the UNDP/GEF Small Grants Programme in the Philippines. Furthermore, ongoing activities in the Philippines are working to increase outreach of breakthrough microfinance organisations. Mr. Naka underscored the importance of increased availability of loans to consumers and microfinance to pay for energy services, confirming UNDP's support for the workshop.

### ***Opening Statement***

Mr. Simon R. Paterno, President and CEO, Development Bank of the Philippines (DBP)

Mr. Paterno welcomed workshop participants on behalf of the Development Bank of the Philippines (DBP). He provided a brief overview of the DBP, stating that his Bank provides financial services to many economic sectors including transport, communication, health, and education. Additionally, the power and energy sector is an area of concern for DBP. He stressed that although significant efforts have already been made, there are still many un-electrified villages in remote areas of the Philippines. He expressed a commitment that renewable energy technologies will be harnessed to improve quality of life in the rural areas by increasing electrification of households from existing levels. DBP further aims to provide affordable energy services by increasing efficiency of electric cooperatives, offering financial resources and enhancing the use of microcredit for energy services. Micro-lending programmes must therefore be designed to suit the needs of local consumers.

He challenged workshop participants on the issue of sustainability by emphasising that all programmes must be sustainable and must balance affordability and risk-return trade offs.

He cautioned the participants that subsidies can create artificial incentives. Mr. Paterno closed his remarks by congratulating the organisers of the workshop.

### ***Meeting Goals, Objectives and Structure***

Ms. Judy Siegel, GVEP Technical Secretariat Programme Coordinator

Ms. Siegel began by briefly outlining the Global Village Energy Partnership. GVEP was launched officially in August 2002 at the Johannesburg World Summit on Sustainable Development. She explained that GVEP is one approach to accelerate the pace and scope of energy activities in a more coordinated fashion to reach the target of improving access to energy services for an additional 400 million people, mainly living in rural areas, by 2015. GVEP has more than 300 partners, with a 13-member partner board and a 5-person technical secretariat. Partners include government agencies, NGOs and the private sector. GVEP activities fall under five service lines: action planning, capacity development, funding facilitation, knowledge management and monitoring and evaluation.

Ms. Siegel then spoke more specifically about the workshop, its goals, objectives and structure. She stressed that the purpose of the workshop is to document different approaches that would be appropriate to finance energy services, with emphasis on increasing consumers' purchasing power. Lastly, Ms. Siegel outlined the schedule and structure for the event, as explained in the workshop agenda included in Appendix I.

## **III. Summary of Panel Discussions**

### **Panel I: the Potential Role of Microfinance to Expand Access to Energy Services**

Harish Hande from the Solar Electric Light Company in India gave the keynote address to introduce the topic of energy services for poverty alleviation and the potential role of microfinance and consumer lending. His presentation was based on an "Issues and Options" paper, which he wrote in collaboration with Kamal Kapadia of the University of California, Berkeley. Included in Appendix II of this document, this paper set the stage for the workshop and provided key points for discussion. The challenges of providing modern energy services to the poor can be divided into issues associated with access, affordability and availability. Mr. Hande asserted that poor people must have access to modern energy services if global poverty and inequality are ever to be reduced. Energy services are an essential ingredient for socio-economic development and economic growth. Mr. Hande provided a compelling case for the potential role of microfinance in expanding access to energy services.

In considering this, Mr. Hande stressed the need to understand and meet the demands of the consumer. Modern energy does not just mean electricity, but instead the services that it offers such as lighting, heating, lean water, telecommunications, and others. A diverse set of technology options need to be considered in the provision of energy services. Energy needs vary substantially between members of a community. Consumer incomes vary, and may be seasonal or intermittent, as is the case in the agriculture sector. Mr. Hande also pointed out that the poor spend more proportionately on energy services than the rich. These

differences must be considered when designing financial products for the purchase of energy services.

Questions or challenges that Mr. Hande posed to workshop participants include:

- How can we design and implement programmes that can build on existing consumer lending and microfinance infrastructure and capacity?
- What policies are needed to promote rural lending?
- How can risk be minimized for the microfinance institutions and energy services providers?
- How should lines of credit be designed and operated?
- How could we use subsidies and grants more effectively?
- How can we create awareness and disseminate information about potential ways to approach consumer lending for energy services?

### *Discussion Highlights*

1. Direct subsidies can create inappropriate incentives and are not sustainable. The issue is whether subsidies can be reworked for microfinance such that the programmes are sustainable and market-driven for the supply and demand sides.
2. A network of service providers must be created which assures penetration into rural markets so that the poor can benefit from microfinance. It was pointed out that incomes are low but that the incomes are predictable so that appropriate finance products can be designed.
3. The target group of microfinance must be defined; who are the poor to be targeted? Without identifying this, we have no way of measuring results.
4. Who benefits from microfinance? Is it really the poorest of the poor, or does it benefit a higher socio-economic class? It was suggested that any service provider, in order to be successful, must create a network so that people can be reached. Energy service providers need to look at the product, vis-a vis the client, and products should be tailor-made depending on clients' needs and ability to pay. There should be flexibility among service providers as well as to the financing institutions.
5. Most microfinance institutions develop their products based on demand. If demand is lacking, loan products for energy services will not be developed. Supply as well as reliability of energy providers is critical to ensure long-lasting partnerships.

### **Panel II: Energy Challenges Facing the Consumer**

This session offered a closer look at challenges associated with linking energy services with microfinance. It was moderated by Douglas Banks of Rural Area Power Solutions. Presentations were provided by Mark Hankins from Energy for Sustainable Development, Bikash Pandey from Winrock International and Ivan Azurdia of Fundacion Solar.

The presentations demonstrated that experience of using microfinance as a means to enhance access to energy services has been met with varying success around the world. As evidenced by Mark Hankins' presentation, in East Africa, most experiences to date have failed. He stressed the need to look at the continuum of consumers, energy service providers, and financiers to be able to tackle energy and consumer lending effectively.

Winrock International is involved in introducing microfinance into a successful programme in Nepal that combines subsidies and private sector loans to promote the delivery of family biogas units. The Nepal Biogas Partnership (BSP) programme includes a quality control mechanism, providing an annual rating of member companies based on their performance. Mr. Pandey pointed out that sustainability will be enhanced by linking with members of cooperatives (e.g. dairy cooperatives) that have a regular source of income.

Finally, Mr. Azurdia provided a more general perspective of current challenges surrounding energy access and poverty reduction. He emphasised the need to ask the right questions before arriving at a solution. One size does not fit all when it comes to rural energy finance. In other words, financial products have to be tailored to specific types of energy consumers depending on their individual needs and desires. Mr. Azurdia stressed that income generation and employment creation has long-term comparative advantages for people. Each individual's needs and desires will determine the types of technology they will require, which will in turn determine the level of capital needed and the appropriate financial mechanism with which to purchase this technology. He also emphasized that good governance and transparency should be highlighted as well as learning how microfinance can play a role in this complex chain of energy

#### *Discussion Highlights*

1. The use of subsidies must be considered on a case by case basis. Subsidies must always be time-bound and targeted. It was pointed out that in certain circumstances, access to energy services should be subsidised, however consumption of energy services should not.
2. Some participants suggested that microfinance should focus on financing productive uses for energy rather than consumptive uses. Furthermore, financial models should be designed with the customer in mind, considering income streams, ability to pay, and individual needs and desires.
3. In many cases, consumers are not aware of the technologies and lending options available to provide needed energy services. Consumer knowledge is a major factor to be considered in designing loan portfolios for energy services, expressing the need for capacity building programmes.
4. GVEP should act as an intermediary between national governments and the energy and financial communities to promote long-term policy reform more conducive to sustaining rural electrification programmes.
5. The role of microfinance institutions and the expectations about what microfinance institutions can and cannot do needs to be better defined. There is a need to marry the two sectors of microfinance and energy. An MFI is always faced with numerous choices. Conditions should be identified providing evidence for why MFIs should choose energy services over sectors such as health or insurance. There is a need to revisit the question of consumer demand.

### **Panel III: Microfinance from the Consumer's Perspective: what is being done on energy?**

This session provided several excellent success stories on the small body of knowledge that exists on energy and microfinance. The session was moderated by Ivan Azurdia of Fundacion Solar. Presenters included Harriette Amissah-Arthur of Kumasi Institute of Technology and Environment (KITE), Indrani Hettiarachchy of the Sarvodaya Economic Enterprises Development Services (SEEDS), and Joselito S. Almario from the Philippine National Credit Council (NCC).

KITE presented their experience working in the energy sector in West Africa. In Ghana, although the rural energy sector is quite strong, subsidies play a substantial role in providing loans to the rural poor. For energy products, subsidies can account for up to 60% of costs. However, it was stressed that government will always have a role to play in the provision of modern energy services, and that the private sector cannot accomplish their goals on their own. SEEDS in Sri Lanka provided insight into the innovative credit programmes for the purchase of various energy technologies that they have pioneered. SEEDS' lending activities have provided solar home systems for 30,000 rural households and hydropower systems for 9 villages. Through access to their clients who are mainly low income, agriculture workers they achieved better living standards; the ability to listen to the radio/watching TV; and improved education.

As communities utilise increasing amounts of modern energy services, small business opportunities and livelihood projects will proliferate, requiring sustained microfinance services. Mr. Almario presented an examination of Philippine national and local policies that could promote microfinance for energy services. Targeted and supply-led subsidies have proliferated in the Philippines; however, programmes are still dominated by market oriented financial and credit policies. Providing an enabling policy environment in which microfinance can operate has been integral to the success of their microfinance sector in the Philippines. Some of the performance standards that they are setting for microfinance institutions include: portfolio quality, efficiency, sustainability, and outreach.

#### *Discussion Highlights*

1. Strengthening of microfinance to include expansion of access to energy services should have very clear policy frameworks. It must also be linked with other services such as the provision of clean water, health care or education to be of real benefit to the poor. Methods of integrating microfinance into communities should be culturally specific to assure success.
2. It was emphasised that neither energy nor microfinance can solve all the problems of the poor. There is a need to tailor the technology choice to the client and their ability to pay. One way is to look at the less expensive, more basic technologies for the lower income clients. Also there may be a role for subsidies which can be used and directed to help the poorest of the poor get access to energy services.
3. Consumptive loans are different from microfinance loans. Microfinance loans are intended for projects that improve livelihoods and help the poor earn income. These are small-scale loans compared to consumptive loans. Microfinance for

- consumption vs. productive uses, and the fine line between them, was an area of great discussion and debate with no clear resolution.
4. Business development services and capacity building help prevent loan defaults.

**Panel IV:** Uses of Microfinance: experience of practitioners

The first panel session on the second day of the workshop offered a broad range of perspectives on microfinance from energy and outside the energy sector. Evelyn Stark from the United States Agency for International Development moderated this session. Presentations were provided by Aristotle Alip of Centre for Agriculture and Rural Development (CARD) Bank, Nina Aguas from Citigroup Philippines and H.V. Kumar from Crestar Capital.

CARD Bank is a recognized leader in microfinance for women in the Philippines. CARD borrows much of their model from the Grameen style of banking, and the organisation includes a host of “mutually reinforcing institutions” that work together to provide a broad range of financial services to landless poor women in rural areas of the Philippines. CARD Bank enjoys a repayment rate of over 99%, and it takes an average of 5-8 years to bring a family out of poverty. CARD Bank also offers collateral services like health education and business development services to their clients. CARD is now looking into ways to offer energy loans among their standard financial products.

Citigroup Philippines has been highly involved in the microfinance industry recently, mainly in a training capacity. Citigroup views microfinance as a significant business opportunity and if they build capacity it will help to expand their markets in the long-term. Citigroup partnered with MFI-umbrella organisations (like PHILNET in the Philippines) to select middle to senior managers within the MFI sector to engage them in training programmes and help build capacity. The programme is called Citibank Microfinance Management Development Programme, and it has been held in the Philippines, India, China, and New York (in association with Women’s World Banking). Two other courses that were mentioned are Credit & Risk Workshop for Microfinance Institutions and Micro-marketing for Microfinance Institutions.

UNEP financed a loan programme for solar home systems in Karnataka State, India. They partnered with Canara Bank and Syndicate Bank to increase distribution efficiency of the loans. Over a three-year period, UNEP hopes to assist in the sale of 20,000 to 25,000 solar home systems. Although the loans are currently subsidised, they have a phase-out policy whereby consumers will be paying market price by the end of 3 years. Furthermore, the subsidy only acts to increase availability and not to lower interest rates.

*Discussion Highlights*

1. The microfinance sector is seeking sustainable, commercial, market or client-oriented and product driven programmes. It must be up to the financial institution to decide where the demand is and then to respond to the market accordingly.

2. Capacity building is very important in strengthening microfinance institutions to effectively address the needs of clients. Market studies provide the fundamental elements to understand business opportunities in a particular country.
3. It was stressed once again that subsidies are not sustainable, and should be implemented only as a marketing strategy for a set amount of time. It was emphasized that there must be a profitable business venture that has the ability to operate without subsidies that will make the microfinance institutions come onboard with energy products.
4. It was emphasized that priority sector lending to jump start a particular sector, such as energy, usually does not work.

### **Panel V: Potential Role of Consumer Lending**

The final panel offered a variety of success stories, some dealing specifically with financing for energy, others outlining successful consumer lending programmes not focussed on energy. Mohammed Maarouf from Al Amana moderated this session with presentations from Winnie Manyara of the Equity Building Society, Andres Urquidi of Fondo Privado and Wilfredo Billena from the Philippine Rural Electrification Financing Corporation.

The Equity Building Society in Kenya provided a look into the “mobile banking” centres that are increasing market penetration to rural areas of Kenya. The mobile banking system consists of a travelling bank vehicle from which a full host of financial services are available, allowing the organisation to access the most remote areas of their region. Collateral services such as education and community services are also offered through the mobile units. It was noted that the key to the success and replication is accessibility, simplicity, customer orientation, and the fact that the units are locally run and managed.

Fondo Privado is one of the more successful microfinance institutions in Latin America that started as a non-governmental organization and became a regulated institution in 1998. It utilizes an individual loan model and does not engage in group lending. They create branches and strategic alliances with local NGOs, allowing them to increase their impact and mobilize savings. Loans can be used for working capital, housing, or consumption. Their profit margin tends to be in the neighbourhood of 20%, proving that microfinance can be profitable.

Electric cooperatives in the Philippines are an example of a successful programme to support the energy needs of rural people. The Philippine Rural Electrification Financing Corporation assures a reliable source of financing for electric cooperatives to perform the needed updates and repairs of existing equipment. They also provide technical and financial assistance to facilitate processing of these loans.

### *Discussion Highlights*

1. There is a need to differentiate microfinance loan from consumer loans. The difference is quite subtle, and should be better defined.
2. There is a need to think about how to link energy with other consumer-oriented loans like housing, appliances, and household systems like wiring.

3. Attention should be given to the potential of over indebtedness of borrowers created by the ability to borrow from more than one lender. One approach is to use regulatory measures to prevent this.
4. Lending secured by collateral has proven to be more successful than lending based on trust, regardless of the nature of the relationship between the client and bank personnel.

## **Roundtable Discussion Summaries**

At the end of the second day, participants were broken into three groups and assigned a topic for more detailed discussion and debate. Each group was posed with a unique set of questions to help direct the discussion. Although each set of questions offered a unique starting point, results from each breakout group were quite consistent with one another, reinforcing the validity of their findings. Results of each breakout group were presented and discussed with the entire group. Findings from these small group discussions are summarised below.

### ***Topic one: Identifying Ways to Integrate Energy into Existing Consumer Lending Approaches. Moderated by Charles Nalyaali, Uganda Micro-Finance Union.***

Group one examined different ways existing microfinance programmes could be expanded to include energy.

- **Market research** – Market research was identified as a crucial first step in determining the profile of the potential clients and the types of technologies suitable for specific regions / applications. There is a need to demonstrate a viable market to prospective MFIs before they will be willing to expand into this sector. More general marketing is also required, but it was unclear who would perform this marketing. Will it be performed by the energy service provider or the MFI, or a combination of both?
- **Capacity building** - It is crucial to train MFI staff on the basics of the technology so they better understand the products. With better understanding of energy products and services, MFIs would be better equipped to develop new lending products.
- **Loan product design** - The specific design of the loan product will depend on the preferences of the consumer and the local market characteristics. Interest rates should be set at market rate and should include cost of capital, risk, and margin, to assure financial sustainability. In many cases, collateral for the loan will be the energy equipment itself. The loan maturity and repayment frequency will depend upon the preference of the consumer within the parameters offered by the MFI. In addition, warranty and insurance need to be a feature of the loan product.
- **Risk Guarantee** - MFIs need to guarantee the client for the energy service provider and the energy service provider needs to guarantee the client for the MFI. In other words, the risk needs to be shared.

### ***Topic two: Overcoming Barriers to Microfinance for Energy Consumers. Moderated by Gil Lacson, Women's World Banking***

Group two attempted to determine why most existing MFIs are not currently funding the provision of energy services. They established several key barriers that help explain this situation.

- **Knowledge gaps** - There exists a knowledge gap between the consumer and MFI with regard to technologies available and costs involved. There is also a disconnect between the microfinance and energy sectors. Microfinance specialists need to better understand energy products and energy specialists must increase their knowledge of financial products.
- **Loan term mismatch** - The microfinance industry tends to prefer short term loans, especially to first time borrowers. However, many energy technologies are relatively capital intensive, requiring larger loans and longer payback periods. Depending on the technology chosen, energy loan sizes can sometimes experience “matching issues.” In these cases they are too large for a typical MFI, but too small for a traditional bank.

There are a number of concrete steps that the group identified to facilitate MFIs incorporating energy into their standard lending portfolios.

- **Market research** - MFIs need to identify (or create) demand prior to investing money in the creation of specialised loan products. There is also a need to articulate or communicate the relationship between energy and other needs
- **Capacity building** - An understanding of the central role that access to modern energy services plays in poverty alleviation and other development needs (e.g., agriculture, water, and education) is crucial in promoting MFIs to provide loans for energy services and products. Capacity building programmes will help alleviate a number of the information “gaps” described above. Large-scale information campaigns should take place to increase knowledge of energy technologies, their services, costs and limitations among the financial community. Energy entrepreneurs would benefit from entrepreneurship training on both entry level and second-phase business strategy. Training on risk mitigation and quality control will also play an integral role in bridging these gaps.
- **Risk guarantees** - MFIs need access to credit specifically for the purpose of increasing their loan portfolios to include energy. A risk guarantee mechanism that accounts for technical and financial aspects would help MFIs mitigate risk as they expand their loan portfolios. Partnerships between energy service providers and MFIs can yield beneficial relationships. In this case, energy service providers can perform marketing for financial products and vice versa.
- **Policy reform** - There should be an enabling policy environment that reduces risk and cost of energy distribution. An open and level playing field should exist for generation, transmission, and distribution. The market should be promoted through the use of “smart incentives.”

***Topic three: Global Village Energy Partnership. Moderated by Rachel Polestico, Southeast Asia Rural Social Leadership Institute (SEARSOLIN) / Appropriate Technology Center, Xavier University, and GVEP Board Member***

Group three focused on the potential role for GVEP to facilitate access to microfinance for consumers and an elaboration of the elements to be included in GVEP financing services that are targeted at consumers.

It was noted that GVEP could serve as a repository of methods, designs and plans on energy and microfinance; facilitator of country-level resources for microfinance energy business plans; documenter of good practices and lessons learned; and facilitator of country consultations and workshops with policy makers and various stakeholder. In addition, the existing GVEP service lines could be expanded in a number of ways to help promote the use of innovative financial models within microfinance for energy services as well as create other services.

- **Action plans** – National action plans could be enhanced by including microfinance and consumer lending for energy in national Poverty Reduction Strategy Papers and policy reforms. In addition it could serve as a neutral convenor of multi-stakeholders seeking to pursue energy and microfinance
- **Financing facilitation** – Financing facilitation should be expanded to bridge energy technology with financiers. GVEP should provide the information channels for interested parties to work together. GVEP could initiate the use of carbon financing as a means to supplement funding, using project bundling as a strategy to minimise transaction costs. GVEP could also play an advocacy role with multilateral and regional development banks to increase funding for MFIs funding energy services.
- **Knowledge management** – Knowledge management could also be expanded in various ways. GVEP should facilitate the open sharing of information and best practices, both through increased use of their website and through publications. Additionally, GVEP should link MFI issues into GVEP country action plans, Poverty Reduction Strategy Papers and other activities. This will ensure that a link between microfinance and energy services is emphasised at the level of national governments.
- **Energy-MFI Toolbox** - An “Energy-MFI Toolbox” could be useful in building capacity and sharing knowledge. The Toolbox could include detailed case studies of existing success stories, various outreach material and checklists for MFIs, easing the transition towards funding energy services. The toolbox would encompass a variety of country-level information including local policies and regulations, and a pre-screened list of energy vendors with which to work. The toolbox would include information on both local and global financing options. The toolbox could act both as a bridge to bring MFIs and energy distributors together, and as a repository for successful experiences.

## **Lunchtime Plenary Summaries**

During lunch on the first day, Francis Donovan from the United States Agency for International Development provided the group with an introduction to USAID-led activities in the Philippines. This included an explanation of the Microenterprise Access to Banking Service (MABS), an innovative programme designed to strengthen the domestic microfinance and microenterprise sectors. The second day lunch session featured a presentation by Herwig Meyer from the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ). Mr. Meyer offered a summary of the Renewables 2004 conference, held in Bonn, Germany in June.

## **IV. Conclusions**

The Consumer Lending and Microfinance workshop offered significant insight into GVEP's potential role in helping microfinance institutions to expand their lending portfolios to include energy products and services. The workshop convened experts from both the energy and financial sectors from Asia, Latin America, and Africa to help determine design elements for increasing access to consumer loans and microfinance for energy services. From the discussions, a number of common themes and recommendations for future action emerged.

### **Key Workshop Findings**

- Confirmed that access to modern energy services can be enhanced with access to consumer lending and microfinance. Energy services can provide a new, profitable product line for MFIs, and there is a willingness from both the MFI and energy sides to work together on this issue.
- Energy services must be demand driven, affordable, and matched with consumer income flows. More research on consumer needs and appropriate products is required. Furthermore, clients may not be aware of the collateral benefits of energy services, particularly related to income generation.
- There are a range of technology options and packages that can meet energy service needs at various energy levels and costs. For example, solar dryers, solar lanterns, solar photovoltaics, cookstoves, LPG, village hydropower, biogas and LED lamps can all play crucial roles in the provision of modern energy services.
- Productive uses and income generation should be a priority. This increases the client's ability to pay back loans and mitigates risk otherwise borne by MFIs, but more importantly leads to economic well-being and improved quality of life. However, it is important to recognise difficulties in separating consumptive aspects of loans from productive, and in some cases, could be an artificial distinction.
- The challenge is matching the target market, energy service provider (technology product), microfinance service provider (financing product), and other funding sources of the energy chain—in other words, the entire value chain: from consumers, to energy service providers to financiers. We should draw on the strengths of each player in the continuum to maximize impact and use of resources.

- Markets need to grow on their own strengths, not on subsidies. However it is recognised that in certain situations, subsidies may be necessary and appropriate for basic services. When applied, subsidies should be targeted and time-bound.
- Ingredients for successful energy lending programmes include: improved financial capacity among lenders, adherence to best practices, solid vendors that include operation and maintenance of equipment, minimal deviation from existing bank policies and procedures, and increased awareness of energy products among key MFI personnel.
- A knowledge gap exists between MFIs, consumers and energy service providers that could be addressed by capacity building, knowledge sharing, and piloting of new approaches for energy and consumer lending.
- There is a need to match loan amounts to funding sources. MFIs tend to limit the size of their loans, whereas traditional banks often have a floor for loan sizes below which they will not lend. Therefore, depending on the technology chosen, energy loans can be too large for MFIs to fund, but too small to receive bank funding.

### **Next steps:**

#### *GVEP's Role*

- Serve as a bridge between MFIs and the energy sector and provide services to bridge the gap.
- Advocate and raise awareness with microfinance institutions and consumers of linkages between energy services and productive uses and energy and development.
- Develop GVEP MFI-Energy Toolbox drawing on existing data and linkages where possible. This will include detailed case studies of existing examples of MFI-rural energy access programmes. It will also include threshold criteria and checklists for energy-MFI projects. Energy options, costs, and outreach materials for MFIs will also assist in raising capacity. The toolbox will include information on MFI financing sources: financiers, and both domestic and global organisations. Country-level MFI policies and regulations need to be outlined. A screened vendor lists at country level will help MFIs identify the most efficient energy service providers with which to work locally.
- Convene MFI-energy stakeholders, policy makers, and donors at the national level and include in GVEP country-level implementation.
- Assist in developing risk mitigation and sharing facilities for energy-MFIs
- Support energy-MFI business planning and product piloting
- Link MFI issues into GVEP country action plans, Poverty Reduction Strategy Papers and other development planning tools.

#### *Other Partners' Roles*

- Governments and international financial institutions can create enabling policy and regulatory environments to allow microfinance institutions to operate.
- Bilateral donors can support technical assistance, training, capacity building, and knowledge sharing.
- Private sector players can contribute to development of new financial products, marketing of loans for energy services and products, after service sales and quality control from energy service providers.

## **V. Acknowledgements**

The Global Village Energy Partnership “Workshop on Consumer Lending and Microfinance to Expand Access to Energy Services” was made possible by a number of generous and committed organisations, all of whom deserve our sincere gratitude. The United Nations Development Programme (UNDP) provided core funding and overall leadership for this event along with the local co-host, the Development Bank of the Philippines. The workshop would not have been possible without the generous support from the United States Agency for International Development, the Deutsche Gesellschaft für Technische Zusammenarbeit, the World Bank/UNDP Energy Sector Management Assistance Programme, and the Philippines Center for Agriculture and Rural Development. The workshop steering committee is recognised for their substantial contribution in ensuring that the design and scope of the workshop would meet our objectives. We would also like to thank Ms. Kamal Kapadia and Mr. Harish Hande, who prepared the issues and options paper on consumer lending that serves as background for the workshop. In particular, we would like to recognize the efforts of Ms. Imee Manal and the UNDP Philippines country office for their continuous support in enabling us to bring about this workshop along with broader efforts on sustainable energy for UNDP. In addition, UNDP would like to thank Dr. Ellen Morris and Mr. Erik Wurster, from Sustainable Energy Solutions, who supported the preparation and implementation of the workshop. Finally, we would like to thank the speakers and participants who came to Manila from all corners of the world for this workshop and donated their time and expertise to assure a dynamic dialogue and useful knowledge exchange that will allow GVEP to work toward its mission of improving access to energy services as a means to reduce poverty.

## Appendix I: Workshop Agenda

### DAY 1, WEDNESDAY (MAY 19)

Introduction 9:00-9:45 Welcome Remarks	Mr. KYONAKA UNDP Deputy Resident Representative
Opening Statement	Mr. SIMON PATERNO President & Chief Executive Officer Development Bank of the Philippines
Meeting Goals, Objectives and Structure	Ms. JUDY SIEGEL GVEP Technical Secretariat Programme Coordinator
9:45- 10:30 Issues And Options: The Potential Role Of Microfinance To Expand Access To Energy Services  Moderator	Mr. HARISH HANDE Chief Executive Officer SELCO Solar Light Pvt.Ltd. (SELCO-India)  Mr. Ed Jimenez Bangko Sentral ng Pilipinas
10:30–11:00	Coffee Break
11:00–12:00 ENERGY CHALLENGES FACING THE CONSUMER  1. Access to Energy Services: Can micro-finance address first cost barriers?  2. Affordability of Energy Services: Can payment regimes be matched to consumer’s income stream?  3. Availability of Energy Services: Can micro- finance and consumer lending be used to articulate demand & create markets?	Mr. MARK HANKINS Energy for Sustainable Development Africa, Kenya  Mr. BIKASH PANDEY Winrock International, Nepal  Mr. IVAN AZURDIA Fundacion Solar, Guatemala
Moderator:	DOUGLAS BANKS Rural Area Power Solutions, South Africa
12:00-1:00	Comments and Discussion
1:00–2:00  United States Agency for International Development’s Activities on Micro-Finance in the Philippines	Lunch (Room: Batanes 2)  Mr. FRANCIS DONOVAN United States Agency for International Development

2:00–3:00 MICROFINANCE FROM THE CONSUMER’S PERSPECTIVE: WHAT IS BEING DONE ON ENERGY?	
1. Microfinance in Ghana: Contributing to Energy Access	Ms. HARRIETTE AMISSAH ARTHUR Kumasi Institute of Technology and Environment, Ghana
2. Example of Microfinance for Consumer Purchases of Energy Services and Systems	Ms. INDRANI HETTIARACHCHY SEEDS, Sri Lanka
3. Microfinance Policy Initiatives in the Philippines	Mr. JOSELITO ALMARIO Philippine National Credit Council (NCC)
Moderator	Mr. IVAN AZURDIA Fundacion Solar, Guatemala
3:00–4:00	Comments and Discussions
4:00-4:15	Coffee Break
4:15–4:45 Wrap up of the day and plans for Day 2	Ms. ELLEN MORIS GVEP Technical Secretariat
5:15	Gather in hotel lobby for group bus to Dinner –Reception at Ilustrado Restaurant
6:30	Dinner –Reception hosted by the Development Bank of the Philippines

#### DAY 2, THURSDAY (MAY 20)

8:45 Introduction to Day 2	Mr. KAMAL RIJAL UNDP Thailand
9:00–10:00 USES OF MICRO-FINANCE: EXPERIENCE OF PRACTITIONERS	
1. How does Microfinance benefit rural people : The CARD MRI Experience	Mr. ARISTOTILE ALIP Center for Agriculture and Rural Development Philippines
2. Developing a Financial Education Curriculum	Ms. NINA AGUAS Citigroup, Philippines
3. Who is the Investor? Experience from a Bank with a Microfinance Lending Window: “The UNEP Loan Programme for Solar Home Systems in Karnataka	Mr. H. V. KUMAR Crestar Capital, India
Moderator:	Ms. Evelyn Stark

10:00–11:00	Comments and Discussions
11:00–11:15	Coffee Break
11:15–12:15	
<p>POTENTIAL ROLE OF CONSUMER LENDING</p> <ol style="list-style-type: none"> <li>1. Community and Local Banking with Customer Focus</li> <li>2. Role of Consumer Lending; Partnerships with Microfinance Institutions</li> <li>3. Rural Electrification Financing Corporation</li> </ol> <p>Moderator</p>	<p>Ms. WINNIE IMANYARA Equity Building Society, Kenya</p> <p>Mr. ANDRES URQUIDI Fondo Financiero Privado, Bolivia</p> <p>Mr. WILFRED BILLENA Philippine Rural Electric Financing Corporation and President, Philippine Rural Electric Cooperatives Association</p> <p>Mr. MOHAMMED MAAROUF Al Amana Morocco</p>
10:00–11:00	Comments and Discussions
1:00–2:00	Lunch (Room: Garden Ballroom 1 &2)
BRIEFING ON RENEWABLES 2004 CONFERENCE IN BONN, GERMANY	Dr. HERWIG MAYER GTZ
2:00-3:30	
<p>ROUNDTABLE DISCUSSIONS</p> <p>GROUP I: Identifying Potential Ways to Integrate Energy into Existing Consumer Lending Approaches</p> <p>GROUP II: Overcoming Barriers to Micro-Finance for Energy Consumer</p> <p>GROUP III: Global Village Energy Partnership</p>	<p>Moderator: Mr. CHARLES NALYAALI, Uganda Microfinance Union</p> <p>Moderator: Mr. GILLACSON, Women's World Banking United States</p> <p>Moderator: Ms. RACHEL POLESTICO SEARSOLIN</p>
3:30-4:00	Coffee Break
4:00–5:00	
Roundtable Session Reports and Discussions	
5:00-5:45	
VIII. Wrap-up and Closing Remarks	Ms. JUDY SIEGEL GVEP Technical Secretariat Programme Coordinator

## Appendix II: Issues and Options Paper

### Issues and options: The potential role of microfinance to expand access to energy services

May 9, 2004

Kamal Kapadia  
Energy and Resources Group  
University of California, Berkeley  
Tel: 510 653 8671  
Email: kamalk@socrates.berkeley.edu

Harish Hande  
Vice President  
Solar Electric Light Company (SELCO)  
Tel: 978 459 2223  
Email: harish.hande@selco-intl.com

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### 1. INTRODUCTION

Poor people must have access to modern energy services if global poverty and inequality are ever to be reduced. The primary aim of the Millennium Development Goals (MDGs) is to reduce by half the proportion of people living on less than a dollar a day by 2015, and to substantially enhance the social, economic, political and environmental conditions that make up the reality of these peoples' lives. While no MDG relates directly to energy, energy services are an essential input to achieving all these development goals. In itself, energy is of little interest to most people. However, it is an essential ingredient of socio-economic development and economic growth. The objective of the energy system is to provide energy services necessary for all sectors of the economy (residential, commercial, service, industrial, construction, mining, agriculture, and so on). Energy services are the desired and useful products, processes, or services that result from the use of energy, for instance, illumination, comfortable indoor climate, refrigerated storage, transportation, appropriate temperatures for cooking, materials, etc. For example, it would not be possible to supply safe water, without energy for pumping or clean fuels for boiling water. Issues of gender equity cannot be resolved if young girls are unable to attend school because they have to collect scarce fuels for family subsistence. In other words, energy is a central development issue that cuts across all sectors and development topics. Improving access to energy services is therefore not an end in itself but, rather, a critical means to achieve the goals of sustainable development, and especially the Millennium Development Goals.<sup>1</sup>

Emphasis on energy services is particularly important in developing countries, where the current levels of energy services are low. Access to modern energy services can be greatly enhanced if people could also access consumer loans and microfinance to pay for these services. Microfinance has played an important role in enhancing the economic opportunities available to poor people. These opportunities, however, will remain limited if people cannot access and pay for modern energy services. Access to consumer credit for financing the delivery of energy services depends on the availability of suitable mechanisms

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<sup>1</sup> United Nations Development Programme. 2003. *UNDP and Energy for Sustainable Development brochure*.

and institutions that are willing to provide capital. As the awareness of both microfinance and energy technologies grows, financial institutions will be able to better channel capital into loans for energy services for poverty reduction.

The goal of this paper is to evaluate how energy services and consumer lending can work together for the benefit of the poor (and often, though not exclusively, rural) energy consumer. Section 2 highlights key dimensions of the consumer's energy and financing needs. In sections 3 and 4, we discuss issues faced by microfinance agencies and energy service providers in meeting these needs. In section 5, we identify opportunities for synergy between microfinance institutions and energy services providers. This paper provides background information and a conceptual framework that can enable the identification, design and implementation of strategic and focused interventions. Throughout this paper we use the term microfinance, consumer lending and consumer credit interchangeably, to denote the provision of financial services (mostly credit) to people who cannot easily access the traditional banking system.

## **2. UNDERSTANDING THE ENERGY AND FINANCING NEEDS OF THE CONSUMER**

It is important to stress up-front that there is no one type of “energy consumer.” Discussions about the “energy consumer” must account for the fact that energy needs vary substantially between members of a community, and between communities. People will also have different incomes, and may not receive income on a regular monthly basis. It is essential to keep these differences in mind when designing energy and financial services.

Poor people do not need energy per se, but access to energy services. To understand this, we turn again to the Millennium Development Goals (MDGs). Goals such as reducing poverty, increasing primary education, improving environmental conditions, increasing access to safe water, reducing infant and maternal mortality, and reducing the spread of HIV/AIDs cannot be achieved without access to energy. Simultaneously, what is needed is not the provision of energy per se, but the services, or goals it enables. Energy services can be used for various purposes. Productive uses involve utilising energy for an income generating activity; household uses involve utilising energy inside the house for cooking, lights, and running home appliances like televisions and fans. Community uses are largely confined to schools, hospitals, health clinics, and community centres. These categories are in one sense artificial; more often than not, there is considerable overlap between them. For example, one can argue that using electricity to power lights in the house so children can study is as much a productive use as it is a household one. However, the categories are analytically useful in discussions surrounding microfinance, as explained in section 3.

We categorise the challenges facing the energy consumer in terms of access, availability, and affordability.

### *The challenge of access*

People who lack access to modern energy services, are for the most part, poor people who live in remote rural areas. This is not to say that urban areas do not suffer from energy problems, there are many people in urban areas who either lack access to the grid altogether,

or who suffer from frequent and prolonged blackouts. However, the oft-quoted 2 billion people who lack access to the electricity grid inhabit mostly rural regions. There are often no motorable roads connecting these regions to larger towns, and people sometimes have to travel by foot for days to reach market places, energy services, and financial services. Not only do these people have a difficult time accessing services, but also servicing their needs is a costly and difficult proposition for energy service providers, and finance agencies.

Accessing modern energy services for cooking needs is an even bigger barrier. Most rural people still rely on biomass for their cooking needs. Locating and collecting fuelwood is a time-intensive and laborious process. In parts of sub-Saharan Africa, women travel for 6-8 hours a day collecting sparsely distributed fuelwood for their cooking needs.

#### *The challenge of availability*

For people living in rural areas, energy services may not be available because energy service providers do not necessarily view this as a strong, viable market for their products. Despite the fact that people are willing and able to pay for energy services, providers will not go to the rural areas because they are typically remote, isolated and more challenging communities in which to work. It has been shown that the rural markets and economies are strong, and that if credit is put within reach of the consumer, energy services can be made available.

#### *The challenge of affordability*

The majority of rural people cannot afford the initial capital costs of investing in energy technologies. This does not only apply to decentralised renewable energy systems; often the cost of obtaining a connection to the grid (which involves the cost of getting a wire from the distribution line to one's house, and wiring and appliances inside the house) can be too high. Down-payments on loans can also be expensive; even if a rural individual or household has access to credit, the initial down-payment on the loan can be as high as 25-40% of total costs, which itself can prove to be prohibitively expensive. Finally, terms of credit may not match income patterns. Rural earnings are often not in the form of a constant amount every month. Income can, for example, vary according to changes in agricultural market prices, and be earned in a few lump sums at times of crop harvests. Such variations in income are often not compatible with fixed, regular loan payment schedules established by rural credit agencies.

### **3. UNDERSTANDING THE POTENTIAL AND LIMITATIONS OF MICROFINANCE**

For our purposes, microfinance is a term that is loosely used for a whole range of rural finance and credit agencies and activities that can vary substantially in many ways. There are three main types of microfinance institutions: (a) formal institutions, i.e. rural banks (public and private) and cooperatives, (b) semiformal institutions, i.e., nongovernmental organisations, and (c) informal sources, i.e. money-lenders and shopkeepers. These institutions can provide a broad range of financial services including deposits, loans, payment services, money transfers, and insurance to poor and low-income households and their micro-enterprises. Some lend only to individuals, some only to groups, and others lend to both. Cooperatives will generally only lend to their members. Certain microfinance agencies can be affiliated with rural NGOs and social movements that are also member-

based. Some finance agencies lend only to women, and while some do lend to the “poorest of the poor,” the vast majority lend to the rural middle-class. Even within one microfinance agency, different lines of credit may be operated differently. Some microfinance agencies do not demand collateral, however, many do, especially if there is no external line of credit they can access for lending purposes. Highlighting the diversity inherent in microfinance is not to imply that no general lessons can be drawn, it is simply to underscore the importance of paying attention to locally specific concerns. The provision of loans for energy services raises its own set of issues, which we discuss here.

*Lending for household vs. productive vs. community uses of energy*

As previously discussed, the categories of household, productive, and community uses of energy are somewhat misleading because there is considerable overlap between them. However, the distinctions are important in the context of consumer lending for energy services. Microfinance agencies need to be assured that the loans they make will be paid back. They minimise risk of default by lending for activities that directly augment the income of the borrower. For example, obtaining a loan for the purchase of cultivable land, or a water pump will enable a farmer to augment his or her agricultural income, and use some of the extra income to pay back the loan. This has implications for lending for household, productive and community uses of energy; each of these is discussed below.

a) Lending for household uses of energy:

Many energy services are not seen to contribute directly to an increase in income, and so rural credit agencies are reluctant to lend for such purposes. For example, electric lights in a home offer obvious social and economic development benefits; however, it does not always provide immediate financial benefits needed to pay back a 5-year loan. At the same time, it is important to recognise that rural people often spend large sums of money on their household energy needs anyway. For instance, they purchase kerosene or oil lamps, the fuel to run them, dry cell batteries to power radios, and car batteries to power small televisions. These energy costs rapidly add up, and switching over from traditional energy uses to a solar home system, for example, could be a cost-effective option for a household over the long run. In general, the "cost-effectiveness" of switching from traditional energy sources to modern energy services depends on the kinds of technologies and types and quantities of fuels being replaced.

For non-energy purposes, credit agencies do sometimes extend loans to rural people for purposes that are not directly income-generating. For example, many rural credit agencies will provide loans to build homes. Purchasing energy services for household uses is not dissimilar from building a home; in both cases, there is no immediate increase in household income, yet both are essential in enabling people to lead better lives and be productive.

b) Lending for productive uses of energy:

Small businesses often require greater energy inputs than households to run electric tools or machinery. This brings us back to a point made earlier; what people need is not energy per se, but energy services such as lighting, communications, motive power, and refrigeration. If a person wishes to do something productive with the energy they purchase, he or she inevitably needs other equipment and resources to make that happen. A farmer needs a water pump as well as electricity to run it. He also needs access to a market for his produce. A rural entrepreneur who wishes to set up a wheat-grinding business needs to purchase a

mill as well as the power to run it. Indeed, one of the key barriers to using energy for productive uses is that even in places where energy is available, complimentary opportunities and resources for generating income are not always present.

c) Lending for community uses of energy:

Community uses of energy are often the most difficult to finance. If community members wish to jointly make an energy-related purchase for a school, health centre, community centre, or place of worship, then a group loan could be organised. However, in the vast majority of cases, schools and health centres existing in off-grid, rural areas have many other more urgent needs. For example, they require furniture, books, basic medical equipment and medicines. Furthermore, schools and health centres are mostly funded and run by the government or NGOs, and purchasing decisions are made by government agents or NGO workers who are likely to obtain funds from their own sources.

*Financing terms and arrangements*

Terms of finance include considerations such as payment schedules, interest rates, down-payments and collateral. Payment schedules are significant because as discussed, rural incomes may not be on a monthly basis. Down-payments and interest rates are generally quite high in rural areas, since risks are high. However, they can be even higher for energy services because energy purchases are not always seen to directly generate income. Interest rates are also high since off-grid households are always in remote locations, mostly far from roads, and highly dispersed. These factors not only make them a (financially) high risk population group, but servicing such loans increases the financing agency's operating costs. Requiring collateral is another risk-minimising strategy employed by financing agencies. In the case of energy services, options for collateral can vary. For instance, it is simple to make a solar home system, or an efficient cook stove its own collateral. If a loan is not repaid, the microfinance agency can seize, remove and resell the system. However, if a loan is being sought for connecting to the grid, or to a community energy system, then the energy technology itself cannot be made collateral. This is because a microfinance agency is not in a position to disconnect a household from the grid. Further, even if they could, there is no physical asset to repossess.

Financing arrangements can take the form of group or individual loans. Some microfinance agencies only lend to a group where members are jointly responsible to pay back the loan through sharing risks, supporting each other in difficult times, and using peer pressure on defaulters. Group lending makes more sense for certain kinds of energy technologies. For example, in the case of community-based energy systems like diesel generators, micro-hydro or biomass energy systems, people often form village committees, which obtain a group loan for the purchase of the system, and then collect monthly payments from their members to repay the loan. For technologies like solar home systems, solar lanterns, or small diesel generators, individuals or households make the purchase decision. However, just because the systems are on the scale of the household does not mean that loans cannot be grouped. There is considerable benefit to be gained from grouping small individual loans. For one, lending to groups reduces the administrative costs faced by the microfinance agency. It means that a single loan officer can process a set of loans in a geographically concentrated area, and make monthly collections far more efficiently, than if he/she had to travel to many dispersed households. Grouping loans, and customers, also brings down maintenance and service costs for the energy company.

#### **4. UNDERSTANDING THE ROLE OF ENERGY SERVICES PROVIDERS**

There is as much diversity in the nature and types of energy service providers as there is amongst microfinance agencies. Energy services providers can be government agencies, private companies or NGOs. In most countries, the government still plays a dominant role in the field of rural energy provision, directly, through activities like extending the grid, and indirectly through provision of subsidies for the purchase of energy systems and services.

##### *Energy service providers and consumer credit*

While some energy service providers do occasionally extend credit to their customers, this tends to be at very high interest rates, for very short periods of time. In general, energy service providers are neither established financially, nor in terms of infrastructure and operations, to provide credit to their customers. Some energy service companies are entering into partnerships with credit agencies. However, in cases where these partnerships exist, often, the onus of responsibility has traditionally been on the energy companies. Energy company representatives are often responsible for filling out complicated loan forms for their customers, and company employees often have to chase down loan defaulters. Microfinance agencies and rural energy service providers can have quite polarised views on who should bear different kinds of responsibility. In most cases, both partners are simply striving for the same goal – to minimise operating costs and risks.

##### *Providing services, not just energy*

Ensuring that energy systems are properly maintained is central to maintaining a good relationship between the service provider and credit organisation. However, rural energy service providers frequently lapse on service provision, to the detriment of their relationship with rural microfinance organisations. When systems stop working, people stop paying back their loans (as they should, after all in urban areas, people are not expected to pay for services they do not consume). In addition, energy service providers mostly offer standardised packages only, which does not always match the demands and purchasing power of rural consumers. Finally, energy service providers may sometimes offer complimentary equipment needed for productive uses (like a water pump, or a sewing machine, or home appliances), but in most cases, the customer has to look elsewhere for such equipment. In other words, many energy service providers are often lacking on the "service" aspect of their business.

#### **5. OVERCOMING THE CHALLENGES: OPTIONS FOR DISCUSSION**

Meeting the needs of the energy consumer calls for partnerships between energy service providers and microfinance agencies. Energy service providers can greatly increase access to poor and/or rural consumers if these consumers could also access credit facilities. Microfinance agencies could greatly increase the reach of their financial services, and augment the economic development opportunities they enable, by lending for energy. Although lending for energy services is not widespread, the experience has consistently been that once people gain access to modern energy, they are determined to keep that access, and are, for the most part, responsible borrowers. Further, once a person has access to energy, he or she is also likely to want to purchase equipment to use with it, and will return to the

microfinance agency to obtain more loans. Lending for energy services can also open up new markets for microfinance agencies that have little to do with energy.

Based on our understandings of the energy consumer's needs, and the issues facing microfinance agencies and energy service providers, we can now identify important questions and problems that need to be resolved, and discuss some potential ways and means to establish mutually beneficial programmes and partnerships. Many innovative approaches can be developed, and our goal in this section is to only indicate a few possible options. This is by no means an exhaustive list; it is aimed to serve as a launching point into a more extensive discussion of barriers to, and options for meeting the energy consumer's needs.

*How can we design and implement programmes that can build on existing consumer lending and microfinance infrastructure and capacity?*

Examples of activities that offer obvious mutual benefit to energy consumers, microfinance and energy service providers include:

- Lending for productive uses of energy  
Microfinance agencies can play an especially important role in overcoming this barrier, by providing information, and developing loan packages that encourage people to purchase the energy technology or service, and the equipment (e.g. a water pump or a sewing machine) or resources (e.g. a shop) needed to generate income. Energy service companies can facilitate this by designing "productive-use" technology packages that include both the energy technology or service, and complimentary equipment and appliances.
- Sharing costs and risks  
There are several ways in which microfinance agencies and energy service providers could work together to minimise costs and financial risks. For example, it may make sense for energy service company representatives to conduct preliminary loan evaluations on the customers they visit. By the same token, it would benefit companies if microfinance agency representatives could make their loan forms easier, and evaluation procedures less cumbersome.
- Integrating energy lending into existing financial products  
It is possible to expand the portfolio of financial products to include consumer lending for energy services and products. For example, in India, the regional rural banking network has established a line of credit called "priority sector lending." Through this line of credit, rural entrepreneurs and farmers can access loans at a relatively low interest rate for certain purposes like establishing rural businesses, and for agricultural purchases like fertilisers. These banks have now included solar home systems into the list of purchases they will extend loans for through the priority sector lending package. Packaging energy loans with housing loans is also an option that deserves more attention. The relatively small costs of the energy loan could be easily added onto the large housing loan. For example packaging a house mortgage with a loan for solar water heating system, and/or a solar home system could make good economic sense.

*What policies are needed to promote rural lending?*

In order for consumer lending for energy services to be more viable, it is necessary that policies be credible, and that there be an appropriate legal infrastructure and enforcement mechanisms. This could involve ensuring practical lending and repayment measures, removing policy biases and hidden subsidies that cause market distortions, and establishing integrated and efficient financial markets that put credit within the reach of the rural population. Governments can work to strengthen the rural markets and implement reforms that improve the overall business environment.

*How should lines of credit be designed and operated?*

International lines of credit could be designed so that smaller financing agencies can access them, especially for supporting a broad array of energy technologies. The availability of international loan guarantees, or lines of credit with lower interest rates and longer terms, can go a long way towards reducing the risks faced by microfinance agencies. The Clean Development Mechanism is potentially another important dimension of the international context.

*How could we use subsidies and grants more effectively?*

Government subsidies could be creatively reworked to buy down interest rates for consumers, or as loan guarantees. Another important opportunity for synergy between government grid-extension programmes and microfinance is in developing loan packages to buy down connection costs for consumers. As discussed in section 2, the high costs of connecting to the grid can be a substantial financial barrier to rural people.

Donor grants can also be used innovatively to leverage more investment. For example, instead of providing grants to individual rural consumers purchasing energy services, donor money could be used as a seed fund to establish revolving credit facilities for financing energy systems.

*How can we create awareness and disseminate information about potential ways to approach consumer lending for energy services?*

Connecting consumers with appropriate credit facilities or microfinance providers is an essential first step. This could be achieved through workshops such as this, and by establishing on-line, and in-country information resource centres to share experiences and best practices.

## **6. CONCLUSIONS**

Access to modern energy services is central to reducing poverty and to achieving the Millennium Development Goals. In order to develop effective programmes to enable this access, it is essential to have an understanding of the energy consumer's needs, and the issues faced by microfinance agencies and energy service providers in meeting these needs. In this paper, we develop a conceptual framework designed to create such an understanding. Within this framework, we highlight a few key challenges and opportunities that exist for mutually beneficial partnerships and programmes. The main goal of this paper is to provide food for thought and discussion at the thematic workshop on "Consumer lending and microfinance for increasing access to energy services." Translating the ideas and

recommendations that emerge in this workshop into concrete actions will help increase access to modern energy services, and serve to reduce the incidence of poverty.