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ENERGY EFFICIENCY FINANCE OPPORTUNITIES

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FINANCIAL SECTOR PROGRAM

ENERGY EFFICIENCY FINANCE OPPORTUNITIES STUDY

Contract No. 674-M-00-08-00043-00

CONTENTS

ACRONYMS

CIPA	Climate Change Investment Program in Africa
DCA	Development Credit Authority
DFI	Development Finance Institution
DoE	Department of Energy
EE	Energy Efficiency
EELN	Energy Efficiency Leadership Network
ESCO	Energy Services Company
FET	Further Education and Training
FSP	Financial Sector Program
GDP	Gross Domestic Product
HVAC	Heating, Ventilation and Air-Conditioning
IDC	Industrial Development Corporation
IFC	International Finance Corporation
KfW	Kreditanstalt für Wiederaufbau
LED	Light-Emitting Diode
M&V	Measurement and Verification
NBI	National Business Initiative
NCCP	National Cleaner Production Centre
NBI LC	National Business Initiative Leadership Council
POF	Purchase Order Financing product
RE	Renewable Energy
SA	South Africa
SANEDI	South African National Energy Development Institute
SME	Small and Medium Enterprise
TA	Technical Assistance
USAID	United States Agency for International Development
WBCSD	World Business Council for Sustainable Development

EXECUTIVE SUMMARY

In response to the interest shown by South African financial institutions in becoming involved in energy efficiency finance, USAID FSP commissioned an energy efficiency finance study. This study took place from January to May 2012 and assessed the enabling environment for energy efficiency in South Africa, identified specific opportunities for financial institutions to finance into this sector and presented international delivery models for EE finance that may be applicable to the South African context.

The conditions for significant expansion in the energy efficiency marketplace in South Africa appear extremely favorable:

- The national government is providing leadership, incentives, and policies supportive of efficiency;
- The national utility, Eskom, has launched a robust Demand Side Management program that includes incentives and market support activities, such as measurement and verification protocols, contractor and ESCO certification, and direct marketing to consumers;
- The donor community is providing significant levels of capital, guarantees, and grant funding;
- There is growing interest among commercial banks in supporting energy efficiency lending.

Given these favorable conditions, investment in efficiency and alternative energy is expected to increase markedly. With the rise in investment comes a commensurate need for financing, offering financial institutions, particularly commercial banks, opportunities to profitably expand lending. Key opportunities for EE finance to SMEs highlighted in the mapping study as described below. You can also view the presentation materials from the recent EE workshop held in Johannesburg in May 2012 on the FSP blog: http://www.fsp.org.za/blog/

1. **Financing SMEs operating in the manufacturing sector**. This sector is promising for more capital intensive EE investments, especially involving process improvements. Sub-sectors such as agro-processing, metallurgy and apparel have many cost effective and scalable energy efficiency applications.

2. **Financing SMEs operating in the retail sector.** Since most SMEs are in the retail sector, there are a large number of potential customers. Equally important, the specific efficiency opportunities are easily scalable and do not require a great deal of upfront analysis or system customization. By switching to more energy efficient lighting, particularly LED lighting systems, and more efficient refrigeration and HVAC systems, retailers can cut energy usage dramatically. Paybacks on these technologies are often less than 3 years, making them attractive investments and readily financeable.

3. **Financing Energy Service Companies (ESCOs).** With the growing demand for energy efficient products and services comes opportunity to drive expansion among the service firms installing the technologies and delivering efficiency services to other SMEs and to larger firms. Growing these Energy Services Companies (ESCOs) through providing finance could lead to wholesale energy reductions, employment growth, and wealth creation.

Potential delivery mechanisms to reach these identified market segments are:

1. **Market the opportunity to utilize the energy efficient incentives available from Eskom and the government to existing clients.** Financial institutions can connect existing customers to proven energy savings technologies appropriate for their specific industries. By highlighting the opportunities presented by investments with attractive paybacks, financial institutions can strengthen their relationships to important customers and help these clients reduce operating costs and enhance profitability of their firms.

2. **Develop aggregation mechanisms that allow financial intermediaries to efficiently and profitably service smaller loans.** Since many efficiency projects are small in size, especially within the retail sector, financial institutions must develop mechanisms to underwrite and service the loans efficiently. Financial institutions can work with intermediaries, such as Franchisors or ESCO's, who can target customers with multiple locations and package a number of discreet energy efficiency projects into one loan.

3. **Develop new loan products to serve unmet needs.** With the growing interest in efficiency, loan products supporting efficiency can provide a marketing advantage for financial institutions.

4. **Use of guarantee programs to offset risks inherent in efficiency projects.** Guarantees are needed on two fronts, to ensure projected energy savings are realized (performance guarantees) and to minimize credit risks (credit guarantees).

The above mentioned findings were presented on a one-day workshop, held on 25 May 2012. This event was co-hosted by USAID FSP, Industrial Development Cooperation (IDC) and International Finance Corporation (IFC). Key stakeholders in the sector presented at this event, outlining the enabling environment for energy efficiency as well as current barriers in the market.

The workshop concluded with break-out groups discussing 1) the role of financing in the energy efficiency market development; 2) enabling environment necessary for the development of the energy efficiency marketplace and 3) role of incentives and guarantees for the development of the energy efficiency marketplace. These discussions indicated, amongst others, the need for an EE finance pilot business case to build confidence in the market and to allow EE finance to scale up. In addition, a need for aggregators or intermediaries to get financial institutions involved in energy efficiency lending to SMEs was identified. Without these aggregation methods, energy efficiency lending is too risky and too costly. Franchises as well as ESCOs could take up this role of intermediary, but ESCOs need to increase marketing efforts and better communicate their value to banks.

The break-out groups also indicated that government should improve its information sharing on and enforcement of existing policies and regulations on EE in order to further build the energy efficiency market place. SMEs can be best engaged in the sector through introducing incentives specifically for SMEs, provision of legal contracting templates as well as guarantee schemes, and formulation of case studies and flagship programmes. Furthermore, donors and government could provide credit guarantees to financial institutions to further diminish the risk of energy efficiency lending (either to ESCOs or end-users).

Based upon the workshop outcomes, as well as the findings of the Energy Efficiency mapping study and on one-on-one meetings held with key stakeholders from 5-11 June, recommendations were formulated for short and long term interventions to further support and grow the energy efficiency marketplace:

- **Short term intervention:** Develop an EE finance strategy for Sasfin bank, a second-tier South African financial institution serving the SME market. The development of this strategy will serve as a pilot for further expansion of energy efficiency lending within the South African financial sector.

- **Long term intervention: A** 3-5 year capacity building program, focused on 1) scaling the pilot project and assisting multiple financial institutions in energy efficiency finance strategy development; 2) introducing a new business model to increase the capacity of the energy services sector; and 3) providing capacity building assistance to various market players, such as the Department of Energy, educational institutions, ESCO's and local business associations to further grow the energy efficiency market place.

- **Guarantees:** Look for market opportunities to provide USAID DCA guarantees to financial institutions to help mitigate risk and lower the risk for EE lending. Possibilities exist to set up a shared facility with IFC and also with several financial institutions in the market. These will be explored by USAID FSP.

SECTION 1: SUMMARY FINDINGS EE FINANCE OPPORTUNITIES STUDY

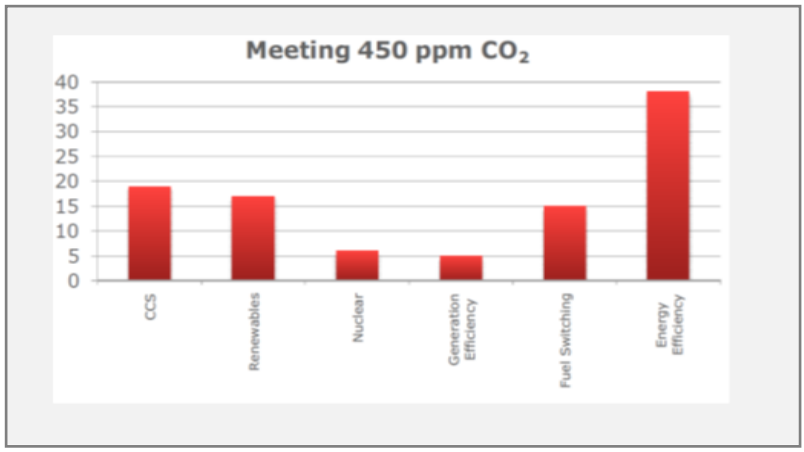
Globally, the marketplace for energy efficiency and alternative energy is expanding rapidly. Within South Africa, the trends are equally favorable. For instance, according to Marketresearch.com, the efficient lighting and HVAC market was US$272 million (R2,259 billion) in 2009 and was expected to achieve a compound annual growth rate of more than 10% through 2016[1]. Indeed, the conditions appear conducive for expansion of the efficiency and renewable energy market in coming years. The International Institute for Energy Conservation lists several key elements that are supportive of growth in the efficiency marketplace[2]. These include:

1. Energy prices trending upwards
2. Enabling energy policies from local and national government
3. Utility programs and incentives
4. Energy efficiency initiatives, such as tax incentives and financing programs
5. New regulations that support efficiency

All five conditions appear present in South Africa. Of particular relevance are the first and third points; South African electricity prices have been rising steadily and are expected to continue to do so until new supply sources come on line later this decade.

Currently, the national electrical utility Eskom is expecting a shortfall in electricity supply of 9 TWh for 2012, which is equivalent to base load of 1,000MW. The shortage will continue for the next few years until Medupi and Kusile power station units come into service. This will release the pressure on the supply network, but only temporarily. Pressure on the electricity supply will start to increase again from 2018 onwards as some of the existing power stations will reach the end of their operating life. Given the capacity constraints, Eskom has established a demand side energy management program, including significant subsidies, reaching upwards of 70% of project costs.

In South Africa, the growth in governmental and Eskom subsidies, interest by multi-lateral banks and intermediaries, changes in building standards, and escalation in energy costs, all are likely to dramatically increase adoption of efficiency technologies within the overall commercial sector. Furthermore, with the lack of supply and the growing demand, it will be essential to successfully implement long term energy efficiency strategies to balance the equation. As seen in the figure to the



[1] http://www.marketresearch.com/Frost-Sullivan-v383/Energy-efficient-HVAC-Lighting-Equipment-6417349/
[2] http://www.ecee.org/pubs/financing.pdf, see page 8-9

right, reducing energy consumption through energy efficiency initiatives have the highest sector contribution to reducing emissions. It has been proven globally that when public and private actors work together, the overall market for efficiency products and services can expand rapidly.

While the market for EE initiatives in South Africa is large, the market is growing more slowly than expected. Key market barriers hindering further growth of this sector are:

1. **Lack of technical skills and competences in the ESCO sector:** Many small ESCOs lack the necessary technical skills to perform energy audits, recommend appropriate technologies, provide a complete financial package to the client, and to implement technologies. In addition, the sector is comprised by many smaller players lacking the necessary business skills to successfully scaling their businesses.

2. **Lack of access to finance:** Access to finance is a key barrier for small ESCOs in growing their businesses. When considering their creditworthiness, FI's often consider ESCOs to be SMEs. Due to the fact that ESCOs are in the service industry, they often have few assets and consequently, weak balance sheets. FI's are therefore reluctant to lend to the ESCOs without appropriate collateral which impedes the development of the ESCO market.

3. **Many Energy efficiency projects sizes are too small to interest commercial banks:** The need for aggregation is particularly the case for energy efficiency projects targeting individual households and SMEs. Hence it is imperative to develop delivery models that encourage the upgrading of less efficient equipment in scalable ways; target credit worthy firms; and develop appropriate risk mitigation strategies.

4. **Limited understanding of EE in the market**: Households and businesses have a limited understanding of the EE market and are unsure of how to proceed with implementation of energy efficiency projects. Thus far, EE marketing campaigns, undertaken by the government, NGOs, and private sector associations, have been fragmented and uncoordinated. There is a need for a national awareness campaign to provide the market with a consistent, understandable message that offer simple and effective implementation strategies.

To address these barriers, capacity building efforts are needed on the level of financial institutions, ESCOs and end users. Growing the energy efficiency market place does not only lead to wholesale energy reductions, but also offers financial institutions, particularly commercial banks, and an opportunity to profitably expand lending.

Doing so, however, requires prudently exploring the opportunities and strategies that match each institution's risk profile, market niches, and product mix with the right customer segment, technology and marketing plan. Models developed internationally offer some guidance as to the potential mechanisms for expanding lending for efficiency and alternative energy by financial institutions in South Africa.

The most critical elements are finding borrowers that match each institution's underwriting standards and developing a mechanism for aggregating projects effectively since most efficiency projects will be small, especially with the level of incentives being offered by Eskom.

Reaching SMEs will require particular focus and specialization. While the SME market in South Africa is large, this market is slow growing and dominated by micro and very small enterprises operating in the informal sector. A segmented approach may be most appropriate since such an approach will allow financial institutions to target specific strategies and applications that can be scaled effectively. Retailers are one segment that appears promising. Since most SMEs are in the retail sector, there are a large number of potential customers. Equally important, the specific efficiency opportunities are easily scalable and do not require a great deal of upfront analysis or system customization. By switching to more energy efficient lighting, particularly LED lighting systems, and more efficient refrigeration and HVAC systems, retailers can cut energy usage dramatically. Paybacks on these technologies are often less than 3 years, making them attractive investments and readily financeable.

The manufacturing sector is promising for more capital intensive EE investments, especially involving process improvements. Sub-sectors such as agro-processing, metallurgy and apparel have many cost effective and scalable energy efficiency applications.

Figure 1: priority sectors for obtaining EE in the SME market place

Manufacturing sub-sector	Applicable system processes
Agro-processing	Lighting, motors, compressed air, steam systems, cooling systems, HVAC
Automotive	Lighting, motors, compressed air, steam systems, water heating, HVAC
Metal &engineering	Lighting, motors, water heating, steam systems, HVAC
Plastics, chemicals & pharmaceuticals	Lighting, motors, steam systems, compressed air, HVAC
Clothing textiles, footwear and leather	Lighting, motors, compressed air, HVAC, water heating

Figure 1 outlines system processes for each target sector that has potential to reach significant energy savings, while figure 2 provides an overview of the various available energy efficiency measures that can be taken within these system processes. Most energy savings that can be obtained are substantial (between 5% - 67%), while payback periods are relatively short (between 1 – 7 years).

Figure 2: available EE measures for obtaining quantifiable energy savings

System processes	Available EE measures	Potential energy savings reached	Payback period
Heating, ventilation and air-conditioning (HVAC) systems	Maintenance of various components of HVAC system	20%	<3 years
	Retrofitting HVAC systems	20-30%	5 years
	Using alternative HVAC systems such as heat pumps or central air conditioning units that have a higher coefficient of performance	30 - 42,5%	5 years
Lighting	Replacing magnetic ballasts with electronic ballasts; replacing incandescent, halogen and mercury vapor lights with CFLs and LED lighting.	40%	3.6 years
Water heating	Replacing electrical geysers with solar water heaters	63%	5 years
	Replacing electrical geysers with heat pumps	67%	3-5 years
Compressed air	Optimizing air usage, reducing air leakage, optimizing system operating pressure and increasing compressor inlet pressure	20-40%	1-2 years
Motors	Replacement of motor belt drives with variable speed drives	5-10%	7 years
	Installing energy efficient motors	5-7%	6 years
Steam systems	steam trap maintenance, improved boiler efficiency, isolating steam from unused lines, repairing steam leaks, optimizing condensate return, minimizing vented steam	20%	1.4 years

With the increasing demand for energy efficient products and services comes opportunity to drive expansion among the service firms installing the technologies and delivering efficiency services to other SMEs and to larger firms. Further developing these Energy Services Companies (ESCOs) could lead to wholesale energy reductions, employment growth, and wealth creation.

Improving EE within small and medium-sized firms, however, has its challenges. Smaller firms often have limited access to credit, less interest in adopting efficiency, and project sizes that are too small to interest most commercial banks. Hence it is imperative to develop delivery models that encourage the upgrading of less efficient equipment in scalable ways, target credit worthy firms, and develop appropriate risk mitigation strategies.

Expanding investment in energy efficiency and alternative energy will also require the support of financial institutions. Financing is needed to cover upfront costs of efficient technologies, as well as to bridge working capital strains among ESCOs installing the equipment, especially if part of their payment will come from an Eskom incentive weeks after installation is completed. These financing needs present a significant opportunity for financial institutions to profitably expanding lending, but will require a focused initiative to ensure the public and private sectors work together to overcome the significant barriers that exist in deploying capital to the SME sector.

Potential Strategies for Expanding Lending for Efficiency:

1. **Marketing EE incentives to existing clients base:** Financial Institutions can market to their existing customers the opportunity to utilize the energy efficient incentives available from Eskom and the government. Financial institutions can connect existing customers to proven energy savings technologies appropriate for their specific industries. By highlighting the opportunities presented by investments with attractive paybacks, financial institutions can strengthen their relationships to important customers and help these clients reduce operating costs and enhance profitability of their firms.

   Examples of such a strategy include:

   - Worldwide, banks have helped utilities market their incentives to bank customers with higher levels of energy intensity than industry benchmarks
   - Numerous US financial institutions (amongst others Shorebank, IFF, Community Preservation Corp, Community Investment Corp) have helped customers understand the benefits of upgrading to more efficient options when borrowers approach these institutions for loans for equipment or building renovations.
   - In the United States, one of the above banks is piloting connecting customers that have availability on home equity loans to utility programs offering robust incentives for efficiency upgrades. The bank's goal is to promote use of their existing lines of credit while reducing customers' vulnerability to future energy price spikes.

2. **Development of aggregation mechanisms:** Another strategy is to develop aggregation mechanisms that allow financial intermediaries to efficiently and profitably service smaller loans. Since many efficiency projects are small in size, especially within the retail sector, financial institutions must develop mechanisms to underwrite and service the loans efficiently.

   Successful strategies include:

   - Financiers can work closely with franchisors to offer loans to franchisees needing to upgrade equipment, such as fryers, lighting, and refrigeration. In many cases, the parent agencies have robust sustainability goals and are eager to reduce the carbon footprints of their franchisees and supply chains.
   - Financial institutions have been successful in providing financing to establish ESCOs for their use in supporting projects. The Purchase Order Financing product introduced to banks by the FSP program is an ideal product to serve this need.
   - Financial institutions and utility programs target customers with multiple locations and package a number of discreet projects into one loan. This strategy is particularly well suited for the retail sector. Specific technologies, such as LED canopy lighting or more efficient refrigeration can be marketed to grocery chains, petrol stations, and other multi-site retailers that have ubiquitous site plans.

3. **Develop new loan products to serve unmet needs**: With the growing interest in efficiency, loan products supporting efficiency can provide a marketing advantage for financial institutions.

Examples include:

- Banks have become increasingly comfortable providing short term loans that will be repaid by utility rebates once the equipment has been installed and tested. This bridge financing is a good fit for the Purchase Order Financing product and conventional lines of credit.
- Leasing is gaining traction globally, especially for lighting, since the returns can be quite attractive, once tax advantages are factored into the calculations.
- Some banks have begun to offer reduced rates or fees for loans supporting efficiency or renewable projects as a means of differentiating their institution and attracting new customers.

4. **Create new guarantee programs**: Equally critical to the growth the EE marketplace is the development of guarantee programs to offset risks inherent in efficiency projects. Guarantees are needed on two fronts, to ensure projected energy savings are realized (performance guarantees) and to minimize credit risks (credit guarantees).

   Examples include:

   - USAID's Development Credit Authority (DCA) program offers an ideal mechanism to manage credit risks. This program provides up to 50% guarantee for direct loans made to SMEs and ESCOs, but also can be used to guarantee a portfolio, such as for new loan funds being developed by non-bank financial institutions. Indeed, banks in South Africa already have recognized the opportunities presented by this flexible mechanism to support direct lending for efficiency or working capital financing for ESCOs.
   - In the United States and elsewhere, utilities play an important role in ensuring projected energy savings materialize, limiting the performance risks inherent in energy efficiency lending. Utilities have robust measurement and verification programs in place in conjunction with demand side management programs. These programs ensure products have been installed properly and function properly post installation. By doing so, utilities can bolster confidence that the benefits of energy efficiency will accrue to the end user and reduce risks to financial institutions lending to these transactions. By working closely with Eskom, institutions could enhance confidence that reductions will be realized and expected savings achieved.

Given the interest by the South African government, Eskom, donors and commercial banks in improving efficiency within the SME sector, conditions are conducive for significant growth in the efficiency marketplace. The technical expertise FSP is developing on expanding SME lending as well as existing tools available to do so, such as the DCA program, could lead to significant adoption of a focused energy efficiency lending program. Such a program would bring considerable expansion in the efficiency marketplace, robust growth among SMEs servicing the efficiency and alternative energy space, and dramatic reductions in operating costs for SMEs in the retail and manufacturing sectors.

SECTION 2: SOUTH AFRICA ENERGY EFFICIENCY WORKSHOP

The South Africa Energy Efficiency workshop was held on 24 May 2012. More than 70 individuals attended from government, the donor community, the financial services sector, Eskom, NGOs and for-profit companies focused on the energy efficiency sector.

To help prepare for the workshop and provide context for the mapping study, several meetings with local experts were held:

Overview of local experts contacted	
Gustav Radloff	Managing Director Energy Cybernetics
Jonathan Newfield	Head: Group Marketing and Strategy Sasfin
Barry Bredenkamp	Energy Efficiency Program, SANEDI (South African National Energy Development Institute)
Jan De Cock	Manager, Bulk Acquisition, Absa Bank
Xolile Mabusela	Director: Energy Efficiency and Environment, Department of Energy, Republic of South Africa

The meetings confirmed the favorable trends identified in the EE finance opportunities study and offered specific action steps that could be undertaken to expand the energy efficiency marketplace.

At the workshop, key stakeholders in the Energy Efficiency market place (including the Department of Energy, ESKOM, IDC, IFC, USAID) highlighted the policies, incentives, initiatives, and opportunities present in South Africa that collectively offer a platform for greatly expanding the energy efficiency marketplace. In addition, key findings of the Energy Efficiency finance opportunities studies were presented. All of the presentations that were presented at the workshop can be found here.

The workshop concluded with break-out groups discussing three topics: 1) the role of financing in the energy efficiency market development; 2) the enabling environment necessary for the development of the energy efficiency marketplace, and 3) the role of incentives and guarantees for the development of the energy efficiency marketplace. Notes of these breakout sessions are included in Addendum 1 of this report. Main findings of these sessions were:

1) Role of financing in energy efficiency market development:

- An EE finance pilot business case needs to be conducted to build confidence in the market and to allow EE finance to scale up. In this process, buy in from senior level managers is crucial.
- ESCOs are key intermediaries in providing EE finance to SMEs as they provide the necessary lending capacity for an energy efficiency project. SMEs only have so much

borrowing power and they are unlikely to want to use this limited capacity to reduce costs as opposed to grow revenues or invest in new production capacity.
- To equalize supply and demand, ESCOs need to increase marketing efforts and better communicate their value to banks.
- Franchises and industries with high propensities for adopting new technologies offer a good fit for efficiency.

2) Enabling environment necessary for market development:

- Existing policies and regulations are not sufficient to drive expansion of the marketplace because the lack of enforcement and skills deficit in the market.
- Government needs to improve information sharing on and enforcement of existing policies and regulations and provide EE flagship programs.
- Main barriers for SMEs to enter the energy efficiency marketplace are, amongst others, a lack of:
    - compulsory energy management activities
    - standard models of engagement
    - general business skills amongst SMEs
    - preferential procurement for smaller SMEs
- SMEs can be best engaged in the sector through introducing incentives specifically for SMEs, provision of legal contracting templates, providing guarantee schemes, formulation of case studies and flagship programmes.
- There is a need to recognize that the EE "market" is big - we need to segment it (the market) much better to promote the further growth of small ESCOs in the marketplace.

3) Role of incentives and guarantees in developing the energy efficiency market:

- Insufficient leverage of EE incentives is mainly due to limited awareness by end-users on the availability of these incentives and on how to best leverage them. Currently, information available on incentives programs is too fragmented. This could be resolved by creating a one-stop shop that would serve as a resource centre for end users.
- Contractors have been not been very successful in engaging the marketplace using existing incentives as an inducement so far. To make ESCO’s more successful in building the efficiency marketplace, they have to start to act as ‘agents of change’ and become committed in building long-term relationships with clients to realize substantial energy savings.
- There is a need for aggregators or intermediaries to get financial institutions involved in energy efficiency lending to SMES. Without these aggregation methods, energy efficiency lending is too risky and too costly.
- Donors and government could provide credit guarantees to financial institutions to further diminish the risk of energy efficiency lending (either to ESCOs or end-users).

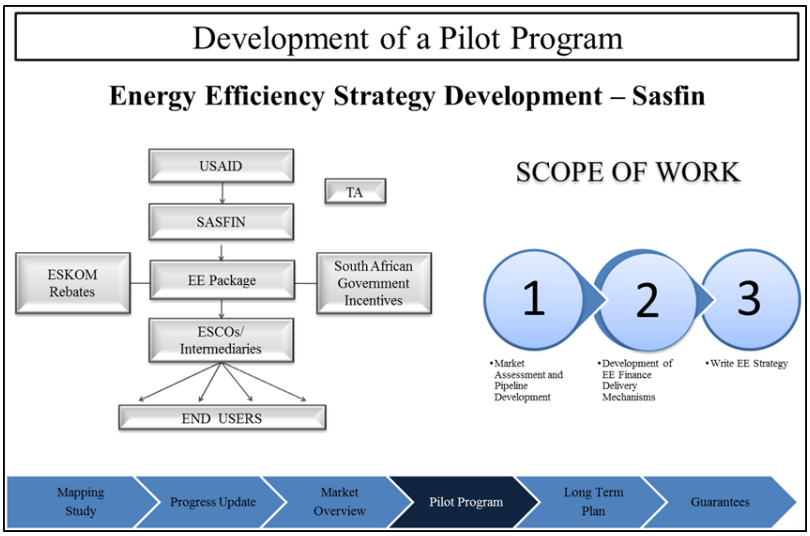
SECTION 3: NEXT STEPS

The workshop roundtable discussions (see Addendum II) provided specific actions necessary to expand the marketplace. Based upon this, as well as on the findings of the EE mapping studyand on one-on-one meetings held with key stakeholders from 5-11 June 2012, the following recommendations were formulated for short and long term interventions to further support and grow the energy efficiency marketplace. These recommendations are provided in the next paragraphs.

3.1. Short term intervention

In the workshop break-out sessions, as well in several one-on one meetings, stakeholders indicated the need for pilot programs to demonstrate the business case for Energy Efficiency lending. Sasfin is a 2nd tier bank which is focused on SME finance and is well placed to pilot this initiative. The development of an EE strategy for SASFIN thus will serve as the pilot. Sasfin is well placed to increase EE lending to the SME sector as this institution focuses on SME finance and has recently signed a $10 million long term credit facility with IFC, specifically targeting EE lending. Sasfin's management team is committed to develop energy efficiency into a new line of business and estimates to disburse a total of $ 20 million energy loans by 2015.

It is envisaged that successful implementation of this strategy will result in further expanding energy efficiency lending within the South African financial sector; the energy efficiency strategy developed will serve as a model that can be replicated and scaled in other financial institutions. Addendum 3 provides a scope of work for this assignment.



3.2. Long term intervention

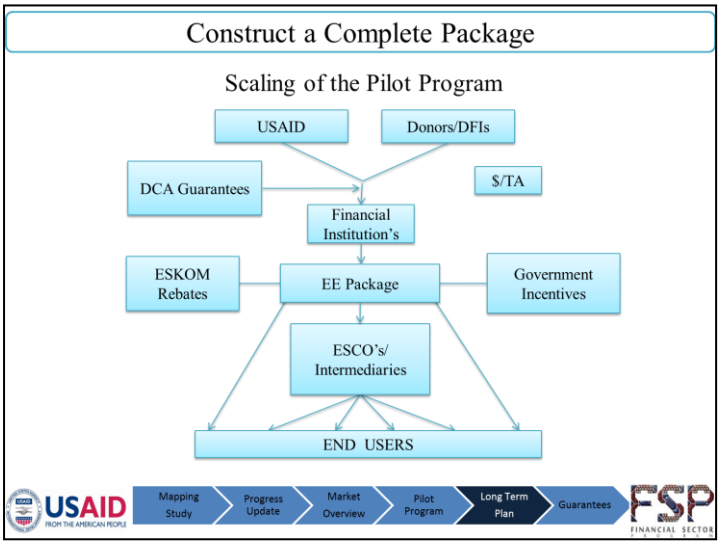
There are tremendous opportunities in the market for a long term intervention. As part of this report, FSP is presenting the key components for the roll-out of a capacity building program to further build the energy efficiency market place. Program elements focus on one or several of the following activities needed in the marketplace:

1) Replicating and scaling the pilot program by assisting multiple financial institutions in energy efficiency finance strategy development;
2) Introducing a new business model to increase the capacity of the energy services sector;
3) Providing capacity building assistance to numerous market players, such as the Department of Energy, educational institutions, ESCO's and local business associations to further grow the energy efficiency marketplace.

4) Developing guarantee programs to scale energy efficiency lending by offsetting risks inherent in efficiency projects.

Component I – Scaling the Pilot Program

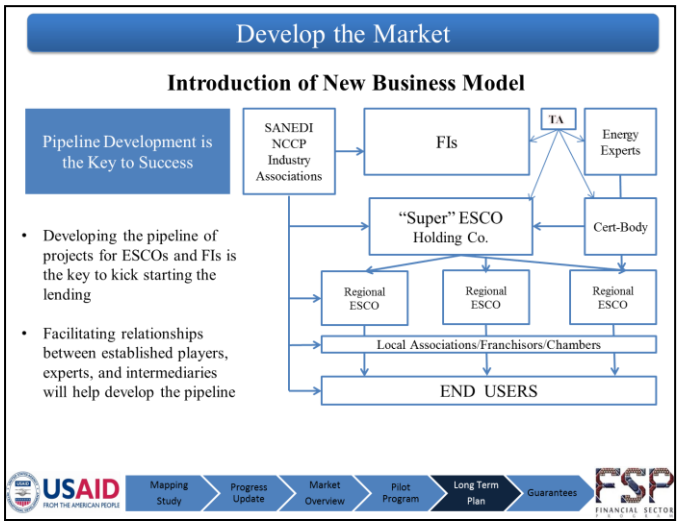
Financing remains one of the key barriers in expanding the energy efficiency market. Many financial institutions have shown interest in entering this space. They are hindered in doing so because they lack an understanding of the energy efficiency sector and have limited knowledge of suitable delivery models to effectively serve this market. A long term intervention could focus on assisting multiple financial institutions on how to profitably enter this market. It is envisioned that TA would be mostly directed to second-tier banks serving particular market niches, as the major market players are already moving in the energy efficiency finance space on their own. Major market players could be further encouraged to scale their energy efficiency lending portfolio by providing DCA guarantees or crafting new types of performance guarantees (see component IV).



Component II - ESCO Market Development

Another key barrier identified in further growing the energy efficiency marketplace is the lack of skills and competences within the ESCO sector. A vital ESCO market is crucial for further expansion of the EE marketplace, as ESCOs are key in developing a pipeline of projects that can financed by financial institutions.

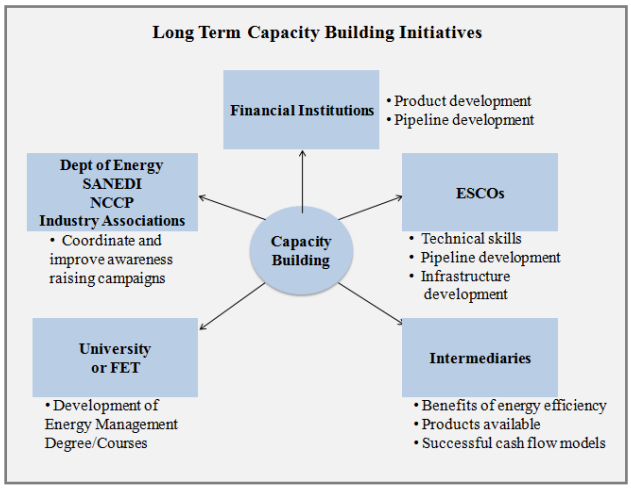
A long term capacity building project could focus on introducing new business models, such as the development of an ESCO holding company (or 'super ESCO') model. In this model, an existing ESCO already well situated for expanding its business could serve as a conduit for deploying capital and aggregating projects. Such a holding company would not only serve as a financial intermediary to smaller ESCOs, but also would maintain quality control and provide technical assistance and training to these smaller entities.



To further enhance the competence in the ESCO sector, there is also a need to establish an ESCO certification body. Equally important is awareness raising on the benefits of energy efficiency on all levels, from end users to financial institutions. Currently, various government institutions (DoE, SANEDI), private sector associations, and donors are involved in energy efficiency awareness campaigns. However, these efforts should be coordinated to further enhance the effectiveness of these individual initiatives.

Component III - Capacity Building

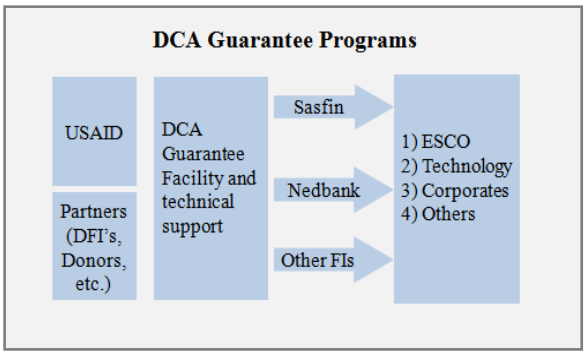
A long term program can deliver capacity building to various actors in the energy efficiency market to further enhance the growth of the marketplace. Financial institutions can be assisted through product and pipeline development.



ESCOs can be strengthened by providing them with the requisite technical and business skills, while energy efficiency awareness campaigns rolled out through government and industry associations can be further coordinated and improved. In addition, intermediaries, such as local business organizations, can be used to communicate the benefits of energy efficiency to their members. Furthermore, the entrance of skilled professionals in the energy efficiency field can be facilitated through developing energy management curricula within universities, technicians and FET colleges.

Component IV- Guarantees

Guarantee programs are important in scaling energy efficiency lending, as they offset risks inherent in efficiency projects. Guarantees are needed on two fronts, to ensure projected energy savings are realized (performance guarantees) and to minimize credit risks.



USAID's Development Credit Authority (DCA) program offers an ideal mechanism to manage credit risks. This program typically provides up to 50% guarantee for direct loans made to SMEs and ESCOs, but also can be used to guarantee a portfolio, such as for new loan funds being developed by non-bank financial institutions. SASFIN as well as Nedbank have already showed interest in using a DCA guarantee, while IFC has expressed interest in exploring possibilities of setting up a shared facility. Such a shared facility would decrease risk for USAID by (partly) covering of first loss.

Conclusion

There is an existent lack of supply in power generation in South Africa with an increasing demand for energy. However, favourable conditions for significant expansion in the energy efficiency marketplace exist and, as such, investment in efficiency and alternative energy is expected to increase dramatically. Because of this, the government, public and private sector are all seeing complementary opportunities in the energy efficiency market, particularly as it relates to energy efficiency finance.

There are a multitude of interventions currently being rolled out, some more successful than others. Over the next 4-5 years, there is a window of opportunity to work to build a viable energy efficiency marketplace from partner specific pilot interventions to broad market longer term interventions.

USAID and other donors can play a significant role in catalyzing the development of this sector and can help South Africa to successfully implement longer term energy efficiency strategies to balance the equation.

ADDENDUM 1: SUMMARY OF WORKSHOP ROUNDTABLE DISCUSSIONS

Group A: Role of Financing in Energy Efficiency Market Development

Financial Institutions in the Marketplace

1. What are banks and other financial institutions doing now?

- Purchase Order Financing (cash flows/unsecured loans)
- Contract Financing
- Use Eskom incentives to help contractors find opportunities, such as installing LED lights in client offices. Contractors would then receive a rebate based on the savings.
- Performance Contracting (IDC)

2. Are there gaps in the marketplace? What's needed to fill those gaps?

- To equalize supply and demand, ESCOs need to increase marketing efforts and better communicate their value to banks.
- Localization is an issue. IDC takes equity stake in local producers to help them reach scale. However, all producers must have a strong strategic need for investment and IDC always ensures they have a strong exit strategy. IDC has seen 10-12% returns on such investments for large producers. While they have no hard cap, they typically won't fund more than 60%.
- Some banks look at lending to ESCO's very differently than lending directly to an SME. However, if the ESCO has strong backing, then the banks should not have to underwrite them differently.
- SME's need the ESCO's because without them, the SMEs will have to use its lending capacity for the efficiency project. An SME only has so much borrowing power and they are unlikely to want to use this limited capacity to reduce costs as opposed to grow revenues or invest in new production capacity.

Financial Products and Delivery Mechanisms:

1. *Which products and delivery mechanisms appear most appropriate for the SME marketplace?*

- Franchises and industries with high propensities for adopting new technologies offer a good fit for efficiency.

2. *What's needed to scale these products/models significantly?*

- There is no one in the market doing proof of concept or pilot programs to demonstrate the opportunities. Having an expert design a project, roll it out, and document the resulting cash flows will build confidence in the market and allow it to scale up. Banks also want partnerships to develop proof of concepts before investing in these unproven concepts.
- Franchisors could provide a good platform. The franchisors could specify specific technologies to be adopted by their franchisees. The franchise market appears to be a good focus since it represents upwards of 11% of GDP.

- Commercial banks will need to build upon IFC's work or scale won't happen.

4. *What can donors do to help grow this opportunity?*

- IFC should tweak energy projects to look like business decisions/projects.
- Banks are more willing to work with clients they know and are willing to lend more to familiar clients. The primary issue is not a lack of capital in the commercial banking sector. The main issue is the need to convince the banks of the opportunity. A key issue in this process is gaining senior level managers to recognize the opportunity and support the initiative.

Group B: The Enabling Environment Necessary for Market Development

Role of Government

1. *Are existing policies and regulations sufficient to drive expansion of the marketplace?*

- No because of lack of:
    - Enforcement
    - Capacity
    - Policy implementation
    - Skills deficit

2. *What else is needed from government to develop this sector?*

- Information sharing
- Demonstration projects (flagship program)
- Recognition of energy management skills
- Registered pool of auditors
- Enforcement

3. *How does the government best engage the private sector around these initiatives?*

- Industry associations/ accessible incentive schemes
- Awareness and education
- Industry stakeholder groups

Contractor Engagement and Development

1. *What programs and institutions exist that can help to develop and engage contractors/ESCO*s?

- SANEDI
- Private training providers
- UNIDO project
- Eskom
- Tertiary institutions

2. *What are the biggest gaps in contractor and SME engagement and development?*

- Specified solutions for all groups
- Programs need to develop smaller SMEs
- Preferential procurement for smaller SMEs
- Fair procurement policies
- Skills and sustainable business.
- Lack of recognition.
- Lack of compulsory energy management activities.
- Standard models of engagement.
- Programs that are well packaged (finance, execution, maintenance, M&V).

3. *How do we best engage SMEs and what are needed to promote their expansion?*

- Performance guarantees
- Simplify the legal contracting of EE projects
- M&V needs to be tied to reporting
- Improve the risk/reward scenario

Marketplace Development

1. *What are the key elements of public-private partnerships to advance energy efficiency?*

- Incentives for SMEs
- Joint efforts to provide facilities.
- Legal contracting - templates available, etc.
- M&V should be tied into this contracting and to reporting.
- Guarantee schemes.

2. *What more is needed to facilitate greater partnerships?*

- Case studies of promotion of flagship programs.

3. *What can donors do to help drive marketplace expansion?*

- We need to recognize the "market" is big - we need to segment it (the market) much better. This will help engage the smaller guys.
- Effective localized stakeholders

Group C: Role of incentives and guarantees in developing the energy efficiency market

Incentives to end users

1. *Which existing incentives can be leveraged to grow the marketplace?*

- Many incentives available were already discussed during the workshop. However, one program not mentioned was the manufacturing competitive enhancement program,

rolled out by the Department of Trade and Industry (DTI). This program has recently been launched and provides grants for up to 50% of cleaner production (including energy efficiency) projects. The CDM system is another incentive to companies to improve energy efficiency; however, this system is only a viable option for the SME market when individual EE projects are aggregated. This is only possible for projects in specific industries, such as solar water heating. Also, this incentive will only be viable through 2012.

2. *What can be done to leverage them to fuller effect?*

- Insufficient leverage of EE incentives is mainly due to limited awareness by end-users on the availability of these incentives and on how to best leverage them. Currently, information available on incentives programs is too fragmented. This could be resolved by creating a one-stop shop that would serve as a resource center for end users. Such a one-stop shop could be either created within a government department or be set up as a separate agency. Another option is to use a decentralized approach and to let individual ESCO's play a key role in educating and reaching out to end-users.

- Another barrier identified in the uptake of current incentives in place is the uncertainty around the availability of certain incentives. In the past, some programs available in Eskom's Integrated Demand Side program were ended on short notice. This has created confusion among end-users. Incentive programs should have fixed timelines which are communicated clearly to end-users.

3. *What other incentives would be helpful to motivate SMEs to invest in efficiency?*

- All participants agreed that existing incentives are sufficient to motivate SMEs to invest in energy efficiency.

<u>Market Development</u>

1. *Have contractors been successful in engaging the marketplace using existing incentives as an inducement?*

No, contractors have not been successful. In the past, low-quality products have been delivered which hurt the market. To make ESCO's more successful in building the efficiency marketplace, they have to start to act as 'agents of change' and become committed in building long-term relationships with clients to realize substantial energy savings. ESCO's will need to substantially improve their competency and skills; only then the marketplace will develop significantly.

2. *Does the market need performance guarantees and who should provide them?*

- Yes.

3. *What can donors; government and the private sector do to grow the ESCO market place?*

- As touched upon earlier, increasing the competency and skills of ESCOs is crucial in further developing the marketplace. Government, donors and private sector

should work together in providing relevant training to these players. Training provided to ESCOs should be focused on energy management and system optimization.

Partnering with financial institutions

1. *How can we better leverage financial institutions to broaden participation by SMEs in efficiency?*

    - Financial institutions are most likely only to enter the energy efficiency space if efficiency finance is made simpler. For instance, financial institutions can be involved in providing financing for specific proven energy efficiency technologies (such as led lighting, HVAC, solar water heating) to their existing client base.

2. *How do we overcome barriers to work more closely with financial institutions?*

    - The group identified the need for aggregators or intermediaries to get financial institutions involved in energy efficiency lending to SMES. Without these aggregation methods, energy efficiency lending is too risky and too costly.

3. *What can donors and government do to facilitate more cooperation between the parties?*

    - Donors and government could provide credit guarantees to financial institutions to further diminish the risk of energy efficiency lending (either to ESCOs or end-users).

ADDENDUM 2: SUMMARY OF MEETINGS HELD 5-8 JUNE

IFC - *Tibor Kludovacz - Sustainability and Climate Finance Specialist* (5 June 2012)

CIPA

IFC's Climate Change Investment Program (CIPA) aims to increase the capacity of the financial sector in South Africa to finance energy efficiency, renewable energy, and cleaner production projects. Increased lending activity is expected to result in a reduction in greenhouse gas emissions. CIPA's objectives are to:

1. Increase internal capacity of partner FIs in providing financing for sustainability;
2. Increase the number of Energy Service Companies (ESCOs) and other energy market intermediaries and strengthen their capacity to develop bankable projects for FIs to finance and;
3. Catalyse market demand for EE/RE/CP by creating public awareness, dissemination of information international experience and best practice, and bringing market players together.

Investment deals under CIPA program

- IFC has closed a US$ 10 million deal with Mercantile bank and has also recently signed a deal with Sasfin for $10m of long term debt funding. It is estimated that Sasfin has excess capacity and is able to spend a total of $20 million on energy efficiency projects.
- Both deals are highly subsidized and are aimed to kick start the EE finance market in South Africa
- Sasfin consistently works with their suppliers to create deal flow. Pipeline development is crucial in implementing EE credit lines, and therefore TA provided by IFC to Sasfin will be directed towards these suppliers, which are mostly leasing companies. Leasing companies are ideally suited to finance energy efficiency projects as they already have relevant expertise, such as determining residual value of machinery etc.
- **Opportunity** – If Sasfin can ring fence IFC EE credit line, USAID could provide a guarantee for an additional $20m.

EE finance risk mitigation opportunities

- The IFC has in the past split guarantees with other donors, such as the Inter-American Development Bank (IADB). For instance, in Columbia, IFC together with IADB built a $100m facility and split both the investment and advisory services provided to a Colombian FI.
- There may be opportunities to do similar deals with USAID in South Africa (and elsewhere).
- First Loss issues – typically, the commercial banks cover their capital needs and the IFC uses donor funds to cover their first loss.
- The IFC takes 50% of the losses, but also takes 50% of the profits. Sometimes the IFC will do a fixed price deal. IFC shares the risk of a portfolio, not of individual transactions. The IFC doesn't pay out on default; they pay out on portfolio losses

(not project losses), which is mostly after 180 days. However, since their price is high, they don't do a great number of deals.

- If USAID is to work on a deal with IFC, they must be on individual deals rather than on a portfolio under a facility. IFC sees no need for a facility because the IFC would have to review each loan anyway. IFC can, however, have the same deal with multiple banks.
- A collaboration effort will also further increase the benefits to the bank, if we are able to take on a higher percentage of first loss.
- With IFC, USAID would also be able to multiple the 3rd party donor pipeline.

General EE finance issues

- EE is not a specific sector, because it is involved in every sector (construction, mining, housing, agriculture, etc.). The deals within different sectors need to be altered to match their specific needs and FIs need to set up specific EE departments or units in order to close EE deals.
- Africa produces the least CO2 and most of the CO2 is from land use, therefore, energy efficiency will not be a major priority for IFC in the African region in the near future. IFC is currently developing a climate change strategy for the African continent that focuses on 1) Adaptation (infrastructure, development of climate change related insurance products) 2) Sustainable land use and 3) Energy usage (developing small scale renewable energy to replace exiting electrical appliances as well as to increase access to energy)
- Up until today, DFIs have provided subsidized EE credit lines with limited success. Providing TA to bank to help them in EE pipeline development is crucial in enhancing EE finance. IFC has developed training material already to assist banks in this. Also, IFC's current cleaner production audit program could be extended to provide this service to smaller clients.
- ESCOs play a crucial role in pipeline development as they work directly with end users. Currently, for most ESCOs, it is difficult to get financing as banks underwrite them as ordinary SME companies, while, in reality, they are a mixture of a SME and leasing companies. A balance sheet of an ESCO might be small, but the balance sheets of end users need to be taken into consideration when underwriting a deal. This hurdle can be overcome through introducing a purchase order financing product along with a DCA guarantee.
- IFC is also considering guaranteeing performance risk at ESCO level or providing performance insurance to further mitigate this risk of lending to ESCO's
- As part of its capacity building program under CIPA, IFC would like to host a series of ESCO events to share technical expertise among sector players

Next steps

- Further exploration of risk mitigation/collaboration on deals between IFC and USAID
- Development an event or series of events targeted at ESCOs to boost capacity in the sector
- Organize regular roundtable discussions with other DFIs/ donors involved in the Energy Efficiency space in South Africa (IFC, USAID, KfW etc.), possibly facilitated by the National Business Initiative (NBI)

The National Business Initiative (NBI): *Peter Mukoma - Program Manager Energy*, *Valerie Geen – Director- Climate and Energy* (5 June 2012)

Introduction to NBI

The National Business Initiative (NBI) is a voluntary group of leading national and multi-national companies working together towards sustainable growth and development in South Africa through partnerships, practical programs and policy engagement. This is achieved through pilots and research on key areas. Since its establishment in 1995, the NBI has been an advocate for the collective role of private enterprise in supporting a stable democracy, growing the economy and maintaining a healthy natural environment. As one of the 60 global regional partners to the World Business Council for Sustainable Development (WBCSD), the NBI provides a platform for business leadership and a vision of how companies can contribute to shaping and achieving a sustainable society.

EE supply chain development

NBI does not work much with SMEs because of scalability issues. They work with the largest companies in SA and serve as a liaison between government and business. NBI expects that its members will be interested in working on energy efficiency initiatives within their supply chain. The larger companies want to be able to cut costs and market their sustainability efforts to their customers; for this to happen, expanding energy efficient initiatives within their supply chains is key.

NBI is interested in engaging with donors and DFIs involved in promoting energy efficiency within their Energy Efficiency Leadership Network (EELN). One of the possibilities could be to organize a once off event presenting various models of EE finance to NBI members. Another option would be to set up regular roundtable meetings between DFI/donors and interested EELN members to discuss issues, ideas, and available resources

Next steps

- FSP will approach other DFIs / donors in the EE space on their interest in participating in roundtable discussions facilitated by NBI.
- FSP will work with NBI to further formulate possible collaboration between USAID and NBI in the EE space. This will be based on further input provided by NBI per email.
- A meeting will be scheduled in mid-July to further discuss possible collaboration.

Energy Cybernetics (EC): *LJ Grobler – Managing Director, Gustav Radloff – Director* (6 June 2012)

Introduction

EC is an ESCO focusing on technology identification and training. They also have significant experience in conducting energy audits, energy assessments, and implementation of efficiency projects (only recently). EC previously was involved in measurement and evaluation, but they separated that business line from EC and transformed it into its own company to avoid conflicts of interest.

ESCO capacity building

- EC believes the ESCO market can be further developed through introducing a new delivery model. This involves development of a super ESCO which would be a holding company of many smaller BEE ESCOs that are spread throughout the country. The super ESCO provides funding, project support, training/development, and product delivery, while the smaller ESCOs provide energy management services and carry out EE projects in the region. Most of the ESCOs are in the cities, not out in smaller towns, while there is a great need for them in these smaller areas. Smaller ESCOs must have the technology to implement and roll out specific programs, which can be provided by the super ESCO. The Super ESCO can also help ensure quality control.
- To implement this delivery model, capacity building/skill development for existing and new ESCOs is required
- In order to further enhance the sustainability of the ESCO sector, influx of skilled graduates (such as energy engineers) is needed. Universities and FET should be assisted in setting up curricula to provide such graduates
- EC would like to play in four areas:

    1) Capacity building of ESCOs – they can help identify ESCOs that need the training. They want to help with technical skill development.
    2) Development of the Super ESCO. They can work with the infrastructure and technical development of the ESCO branches.
    3) Implementation – In the short term, they would be willing to play the ESCO role (end to end), but we would need to find a long term implementer, such as Phillips. EC could work to trains the implementer.
    4) Utilizing their monitoring and benchmarking technology

- Precaution needs to be taken with regard to strong ESCO players already operating in the market. Funding streams made available through donors/DFIs to support ESCO development should be accessible to all industry players.
- To identify end users, local chambers of commerce, such as Afrikaans Handels Institute (AHI), could be utilized. Such chambers should be interested in partnering in an EE program as this can offer their members cost savings, a reputable service provider, and skill development. AHI has a strong focus on local economic development and capacity building, and participating in an EE program would be a good fit.

Next Steps

- EC will share additional information on their ESCO capacity building program concept
- A follow up meeting will be scheduled to further discuss this concept and USAID FSP final report.

National Centre of Cleaner Production (NCCP): *Gerswynn Mckuur - National Project Manager: Industrial Energy Efficiency Project* (7 June 2012)

Introduction to NCCP

- NCCP is trying to become more relevant in the EE space. NCCP could be suited well as an ESCO certification provider due to their training background. They could also play as a referee of sorts.
- Within the Industrial Energy Efficiency improvement project, NCCP is performing 500 free energy audits for SMEs in six industrial sectors. The project currently has completed about 50 audits. According to the original planning, the project was expected complete all 500 audits by end of 2013; however, it is more likely that 100-150 audits will be completed by the end of this year and 250 by the end of 2013.
- NCCP is collecting data from the energy audits and hoping to develop a database with relevant information. They still need to finalize which data to collect, but they want to focus on energy savings, payback analysis, etc.

ESCO market development

- To transform one ESCO into a "super" ESCO has some barriers to implementation. ESCOs that are not chosen to participate will be at a severe disadvantage and may protest the project. Instead a more independent body, such as an association, could possibly play this role of super ESC.
- There needs to be a certification process for ESCOs to ensure top quality. An association could also act as a certification body as it would not have a commercial interest in the operation so could ensure fair play.
- However, an association would probably lack sufficient capacity to act as a financial intermediary.
- Awareness raising efforts on energy efficiency from various industry players (Department of Energy, Eskom, SANEDI, Association of engineers, NCCP etc.) need to be coordinated as current efforts are scattered and not fully effective.

There already are some professional development courses on energy management available, but further skills development at university, Technicon and FET level are needed.

South African Association of Energy Companies (SAAEC): *Dieter Krueger, Secretary* (7 June 2012)

ESCO mapping Study

- Dieter Krueger has been involved in the IDC ESCO study which is planned to be released in August 2012. Some market bottlenecks identified in the report are:
    - Banks perceive ESCOs as SMEs when considering financial applications. However, ESCOs have few assets and therefore, weak balance sheets, so banks are unwilling to lend.
    - Small ESCOs cannot afford to do an energy audit for no cost. Currently, most SMEs are not willing to pay for an energy audit.
    - Eskom's lead time for approving projects under their demand side management program has improved but is still too long.
- three key interventions to grow the ESCO Market are:
    - Certification - FIs want a certification system to ensure they are lending to quality organizations. However, many organizations that could develop the certification system (such as SAAEC or NCCP) do not have capacity to do it. Furthermore, there is great risk in being the certifier (lawsuits, complaints, etc).
    - Information and Communication between all players needs to be improved. FIs need a better understanding of how the energy sector works. They need to know about EE projects, how they work, determining pay packs and the value is generated.
    - Standard Performance Contracts - Standard Performance Contract are needed so banks can understand it easily and therefore, the lead time for projects will decrease dramatically.

African Business Group - *Michael Sudarkasa – CEO* (8 June 2012)

ESKOM/Universities

- ESKOM has worked with universities before to employ students to help with energy audits and certifications. ESKOM pays the university, the university pays the students. This model develops capacity in the sector.

Carbon Credits

- Various organizations have submitted carbon funding applications, but very few applications have succeeded in securing funding. Only a few organizations understand the business model of carbon credits.

Energy Audits

- If Energy Audits have a cost, SMEs will not sign up for one.
- ABG helped with an energy audit of a hospital that may be useful for a case study.

Opportunity

- The department of public works (DPW) owns all the government buildings. They are looking to “green” their buildings and may be an interesting partner.

ADDENDUM 3: SCOPE OF WORK - PILOT PROJECT

Chemonics International Inc.
USAID/Southern Africa Financial Sector Program (FSP)
Scope of Work: Energy Efficiency Finance Strategy Development for Sasfin
KRAs 1.1.1, 1.1.4, 1.2.1
Indicator #s: 1, 2, 3, 5, 6. 7

Background

The Financial Sector Program (FSP) supports the accomplishment of the U.S. Government's Economic Growth Objective in South Africa. This task order is one of three main vehicles to promote vibrant growth of historically disadvantaged small and medium businesses (SMEs) and reduce unemployment and poverty. FSP seeks to expand access to financial services and lower financing costs for small and medium enterprises[3] (SMEs) through facilitating the improvement of SME credit assessment methodologies and financial products, increasing the financial literacy of SMEs to become more bankable, improving the quality of financial business support services, and reforming the legal and regulatory framework affecting the financial sector and business environment thereby improving the commercial viability of lending to historically disadvantaged SMEs in South Africa. The ultimate result is to expand SME access to a range of high quality and affordable financial services.

Activities under FSP focus on improving and expanding financial services and products; managing and mitigating financial risk and transaction costs; improving bankability of SMEs and business services offered to SMEs by linking financial services with business service activities that can build SME capacity, productivity and competitiveness, as well as improve the capacity of financial advisory services to serve SMEs; supporting the emergence of an efficient credit industry regulator that promotes an enabling environment for financial intermediation and risk management, and boosts the private sector's role and participation in the provision of financial services to SMEs; promoting reforms to commercial laws, regulations, and administrative practices affecting the private sector and SME development; and, improving knowledge management through an accessible repository of knowledge about SMEs and finance in South Africa.

There has been a growing worldwide interest in energy efficiency to reduce operational costs and to improve the competitiveness of SMEs. This is also the case in South Africa, where electricity prices have risen sharply in the last few years. Financial institutions in this country have expressed interest in financing energy efficiency projects conducted within the SME sector and are now looking for delivery models to serve this market. In response to this, USAID FSP recently conducted an energy efficiency finance study to assess the enabling environment for energy efficiency in South Africa. This study also assessed specific opportunities for financial institutions in providing finance to energy efficiency projects. The study concluded that the conditions for significant expansion in the energy efficiency marketplace in South Africa are extremely favorable:

- South African electricity prices have been rising steadily and are expected to continue to do so until new supply sources come on line later this decade;

[3] For the purpose of this program, an SME is defined broadly as a business engaged in activities generating annual turnover between R200,000 and R35,000,000. This definition was based on the Financial Sector Charter definition proposed and agreed to by the Banking Association and its members.

- The national government is providing leadership, incentives, and policies supportive of efficiency;
- The national utility, Eskom, has launched a robust Demand Side Management program that includes incentives and market support activities, such as measurement and verification protocols, contractor and Energy Service company (ESCO) certification, and direct marketing to consumers;
- The donor community is providing significant levels of capital, guarantees, and grant funding;
- There is growing interest among commercial banks in supporting energy efficiency lending.

Given these favorable conditions, investment in efficiency and alternative energy is expected to increase markedly. With the rise in investment comes a commensurate need for financing, offering financial institutions, particularly commercial banks, an opportunity to profitably expand lending.

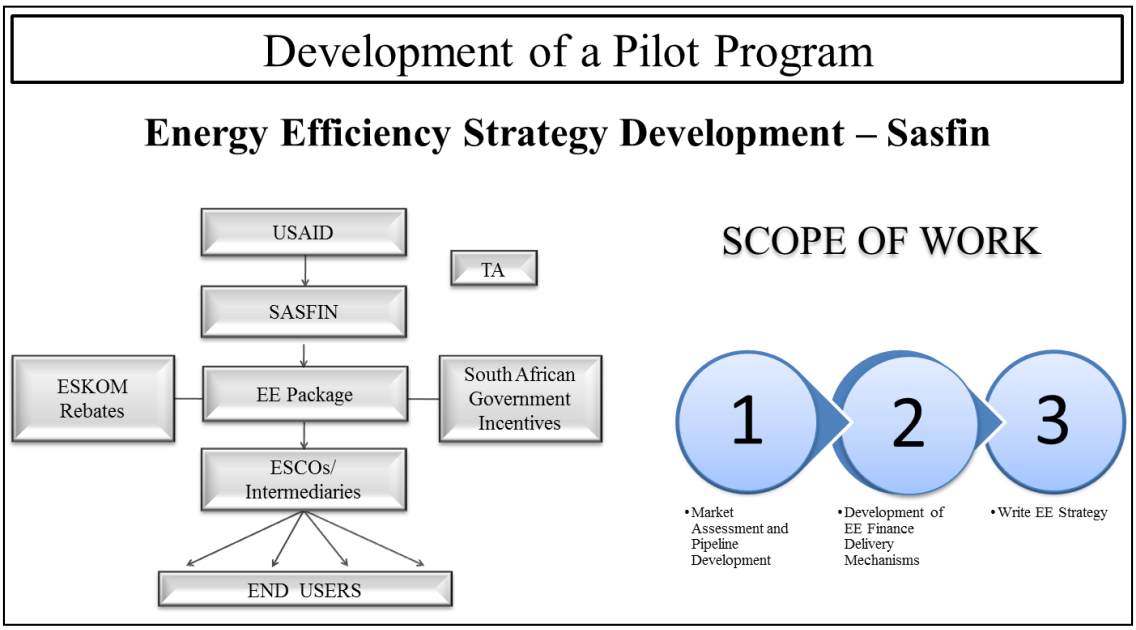
The energy efficiency mapping study also presented various EE finance delivery models developed internationally that can be used to guide the development of potential models for expanding lending for efficiency and alternative energy by financial institutions in South Africa. Developing these models requires prudently exploring the opportunities and strategies that match each institution's risk profile, market niches, and product mix with the right customer segment, technology and marketing plan.

In follow-up of this EE finance mapping study USAID FSP has been in discussions with Sasfin about the development of an EE finance strategy. Sasfin, is a second-tier South African financial institution serving the SME market.

Sasfin has recently signed a $10 million long term credit facility with IFC and the Canada Climate Change Program, specifically targeting EE lending. With this and other initiatives, Sasfin's management team is showing that it is committed to developing energy efficiency into a new line of business with goals and estimates to disburse a total of $ 200 million in energy loans by 2015.

This SOW is to be a pilot program for the EE work that FSP envisions to roll out. By engaging with not only a financial institution, but also major EE market players, FSP hopes that this work will evolve into a larger market building exercise. This is to be a mulit-phased initiative with a team of consultants that will take place over several months. The local EE specialist will set the stage for the international specialist to join to complete a market assessment and pipeline identification. Following the design of the of possible EE finance delivery models, Sasfin, will embark upon a one month trial and pilot test. The team will then reconvene to review the impact and approach and make modifications as necessary for a successful roll-out.

Below is the diagram of how the project would be structured.



Purpose

The objective of the assignment is to develop an Energy Efficiency finance strategy for Sasfin, providing the institution with:

1. EE Market Assessment and Pipeline Development
2. Development of EE Finance Delivery Models
3. Detailed Strategy and Roll-out Plan for Energy Efficiency.

Tasks

The principal tasks to be completed under this engagement are as follows:

Task 1: Preparation and partner identification

The consultant will identify possible partners and prepare for the Sasfin internal workshop that will launch this initiative. Potential partners are those active in the energy efficiency field (ESCOs etc.) that match Sasfin's needs to rollout EE product and service. This could include technology companies, servicing companies and others more broadly participating in the EE market. FSP will also look for potential funding opportunities with ESCO's and others in the market that are servicing industry.

This task consists of the following activities:

A. Liaise with Eskom to identify financing need of ESCOs that are currently working within its integrated demand side management program.
B. Coordinate these efforts with other initiatives in the market to more easily allow Sasfin's clients to benefit from the work being planned.
C. Identify opportunities with local industry players, such as NBI and the National Cleaner Production Centre.

D. Organize discussions with key stakeholders (ESKOM, department of Energy (DoE), Department of Trade and Industry (DTI)) to define parameters for EE finance delivery models to be used by Sasfin.

3 Days on-site

Task 2: Internal Sasfin workshop, EE Market Assessment and Pipeline Development

Pipeline development is crucial in expanding energy efficiency finance. To determine which delivery models will be most suitable for Sasfin's lending energy efficiency strategy, the consultants will identify the best product, client base and market opportunities to fit within the Sasfin business model and client base.

This task consists of the following activities.

A. An internal Sasfin workshop: A half day workshop will be held with internal staff to kick off the project. The workshop will include staff from Sasfin and the Iquad (Sasfin owned consulting arm) incentive unit as well as others appointed by Sasfin. The workshop will cover the following:
    - Identify a project working group and who will participate going forward.
    - Basic review of current trends in energy efficiency and renewable market in South Africa
    - Typical "low hanging fruit" – especially in industrial manufacturing space
    - High level technical overview on EE – measurement thereof – KW/h / Carbon Impact / dynamics of pay-backs / accessing incentives
    - Review of the IFC long term energy loan - the vetting and reporting requirements with them to ensure appropriate level of understanding thereof
B. A screening of Sasfin's existing client portfolio and mapping specific industries and clients in these industries. Select sectors within Sasfin's portfolio to be targeted for the identified technologies/ applications.
C. Work with Sasfin consultants (Iquad) to identify potential technologies/EE opportunities with short breakeven points that could be a good fit for Sasfin's clientele. Based on Eskom data, which technologies have had the highest uptake in their existing incentive programs.
D. Determine potential total client base for EE lending.
E. Asses financial needs of this client base.
F. Together with the project working group, conduct pay-back analysis to help build the product, risk analysis parameters and marketing of the EE product.

2 Days on-site

- Participate in the workshop to develop a workplan for project rollout and act as key contact for the working group. Primary focus will be on building external partnerships to help Sasfin with roll out their EE strategy. This includes with donors, government and private sector players.

2 Days on-site

- Lead and participate in the kickoff workshop. The consultant will focus on the internal bank process and the building of product and services that would eventually be rolled out. This will include internal review process, client data mining, risk assessment review and other technologies and sectors that will be the focus for the new EE lending model.

Task 3a: Development of EE Finance Delivery Models

On the basis of the selected target market for EE finance and its financial needs, EE finance delivery models will be developed to reflect the specific risk profile, structures, and clientele of Sasfin.

This task consists of the following activities:

A. Review existing products to determine if new products/services are needed for providing finance to energy efficiency projects.
B. Modification of existing products or designing new products, policy and procedures for roll out as needed.
C. Risk modeling based on new external cash flows from incentives in the EE marketplace.
D. Define parameters of new EE products and services and specific needs, such as credit or performance guarantees.
E. Identify and begin piloting of the assessment of up to three existing portfolio clients for EE finance.
F. Needs assessment to determine if additional future technical assistance would be needed by Sasfin on their Energy products including potential partners that can support any future technical support.

3 Days on-site

Task 3 b: Remote support as Sasfin engages in pilot testing

On the basis of task 1 and 2, an energy efficiency strategy will be developed and finalized, providing an implementation plan for rolling out identified delivery models for expanding financing to energy efficiency projects. During Task 3a, three existing portfolio clients will be identified to roll out the newly developed energy product. For approximately a month, Sasfin will pilot the proposed finance delivery mechanism and the consultant will provide remote support to assist during the pilot testing.

2 Days off-site

Task 4 a: Writing of EE strategy and final implementation – detailed strategy roll-out plan for Sasfin for Energy Efficiency

Based on the pilot testing phase results, the technical team will begin to draft the strategy document and participate in an on-site assessment of partner uptake, customer interest and assess the strategy impact.

This task will consist of the following activities:

A. Determine partners that can help drive success
B. Determine indicators to monitor and evaluate roll-out of EE Finance delivery model (s).
C. Work with project working group to assess pilot performance
D. Draft preliminary composition of the strategy for Sasfin EE business line. Items to be identified as part of the strategy include:
    i. Where to compete (niches) – technology, industries, sectors
    ii. Differentiators (value proposition)
    iii. Strategy Mapping for Sasfin to roll out business line
    iv. Financial models developed based on product developed
    v. Strategic change agenda (timing of build-out of strategy)

***3 Days* off-site**

- The consultant will finalize identifying ESCO's that can participate in the project roll out as well as look to engage with IFC, IDC, Escom, Dept of Energy, NBI, and others to identify what value they can to the product roll out. The consultant will also begin writing the final report and help with strategy documentation including M&E process.

3 Days on-site

- The consultant will work with Sasfin's project working group on implementation issues and needed modifications. He will be sure to incorporate lessons learned and summary the way forward as part of the final strategy document.

Task 4 b: Final Strategy and Report

Following the evaluation of the pilot phase and based on the review of partner recommendations the consultants will finalize the strategy and complete an initiative report.

This task will consist of the following activities:

A. Internal workshop with project working group to review the piloting of the newly developed product and services with three Sasfin clients.
B. Together with the working group, make any suggested changes or modifications based on the results of the piloting of EE product and services.
C. Finalize indicators to monitor and evaluate roll-out of EE Finance delivery model (s).
D. Identification of staff resources needed for strategy rollout and formulation of responsibilities and key performance indicators for these staff members.
E. Final Strategy document including a marketing strategy completed and presented to Sasfin and USAID.

2 Days on-site

The consultant will engage with identified partners to be included in the product offering and contribute to the final strategy document.

2 Days on-site

- Based on the review process, the consultant will complete the final strategy document and final report for USAID.

Staffing

This Scope of Work (SOW) will be carried out by the following team of experts/consultants:

Expert 1:

Local South African Energy Efficiency Market Expert (total input 13 days): This person will be the central local contact person for Sasfin and USAID FSP. This expert will be responsible for all reporting requirements under this assignment. She will provide assistance to the Energy Efficiency Finance Expert (Expert 2) to develop EE finance delivery mechanisms and to assist in the writing of the expected EE finance strategy for Sasfin as well as the final report.

Qualifications:

- An MBA or similar degree, or commensurate banking and financial sector experience specifically as it pertains to energy efficiency.
- Energy expert with at least 2 years' experience on energy saving in the private sector (SME's).
- Proven, successful track record in energy efficiency with the ability to communicate at all levels.
- Excellent communication, writing and, analytical skills.
- South African specific experience with energy efficiency systems and finance opportunities.
- Practical experience with a comprehensive understanding of the energy savings strategies and energy management systems.

Expert 2:

Energy Efficiency Finance expert (total input 16 days): This expert will be responsible for developing EE finance delivery models and developing and support the testing of an EE finance strategy. The expert will also assist in conducting a market assessment and pipeline development.

Qualifications*:*

- An MBA or similar degree, or commensurate banking and financial sector experience specifically as it pertains to energy efficiency
- At least 10 years' experience on designing and re-engineering financial products for energy solutions
- Proven, successful track record in energy efficiency with the ability to communicate at all levels.
- Broad international experience with regard to EE financing models
- Excellent analytical, communication, writing and presentation skills.
- Global expertise in developing credit processes and procedures in very diverse marketplace settings.
- Practical experience with a comprehensive understanding of the energy savings strategies and energy management systems.
- South African experience preferred

Deliverables

Deliverable A: Market assessment, partner identification, initial product development and pipeline development report for Sasfin delivered midterm. Set the stage to pilot EE product and services to at least three Sasfin clients.

Delivery B: Final strategy paper and detailed marketing plan for energy efficiency delivered to Sasfin with the goal of helping them roll out EE lending.

Deliverable C: A final report providing an overall summary of activities undertaken, detailing lessons learned as well as next steps for replicating the assignment in other South African financial institutions.

Specifically, the final report should include:

- Executive Summary
- Background of the project
- Summary of project activities
- Findings
- Conclusions and Recommendations – Next steps for replicating project in other South African financial institutions.

Timing/Duration:

Anticipated start date of this assignment is July 17, 2012

Task	**Approximate timing**	**Expert 1**		**Expert 2**	
		On site	**Off site**	**On site**	**Off site**
Task 1: Preparation, market analysis and partner identification	o/o/a July 17	3	0	0	0
Task 2: Kick off meeting at Sasfin; Market assessment and pipeline development	o/o/a July 23	2	0	2	0
Task 3a: Development of EE finance delivery models	o/o/a July 25	0	0	3	0
Task 3b: Remote support during Sasfin pilot test	August	0	0	0	2
Task 4a: Writing of EE strategy and final implementation	o/o/a September 10	0	3	3	0
Task 4b: Finalize strategy document and final report	o/o/a September 13	2	0	2	0
Travel Days		3	0	4	0
Sub-Total LOE		10	3	14	2
Total LOE		**13**		**16**	
Total LOE Days:		**29 Total Days**			