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Financing mechanism for energy efficiency projects and programmes

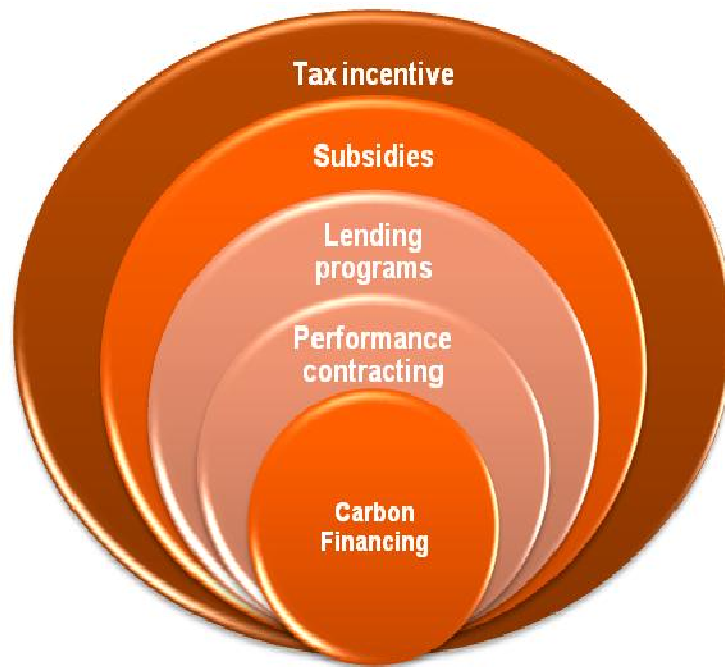
Agenda

- EE financing Mechanism
- EE financing Program
- EE financing - ASEAN
- EE financing - Global Best Practice

EE financing mechanism

Definition: Energy efficiency financing mechanism is the method through which funding is made available

Types of financing mechanism



Financing Approaches/ Models

Accelerated depreciation, Tax deductions, Tax credits, Tax reductions

Grant, Subsidy etc

Bank window, Low interest lending, Collateral free lending etc

Guaranteed savings, Shared savings etc

CDM funding

EE financing programs

No single mechanism meets all financing needs.

Depending on local conditions like consumer lending law, state legislation, political stability, institutional arrangement, degree of awareness, availability of technology etc energy efficiency financing program is designed.

A **lender/fund** provider can be one or a number of entities ranging from banks to nonprofit organizations to utilities to government agencies.

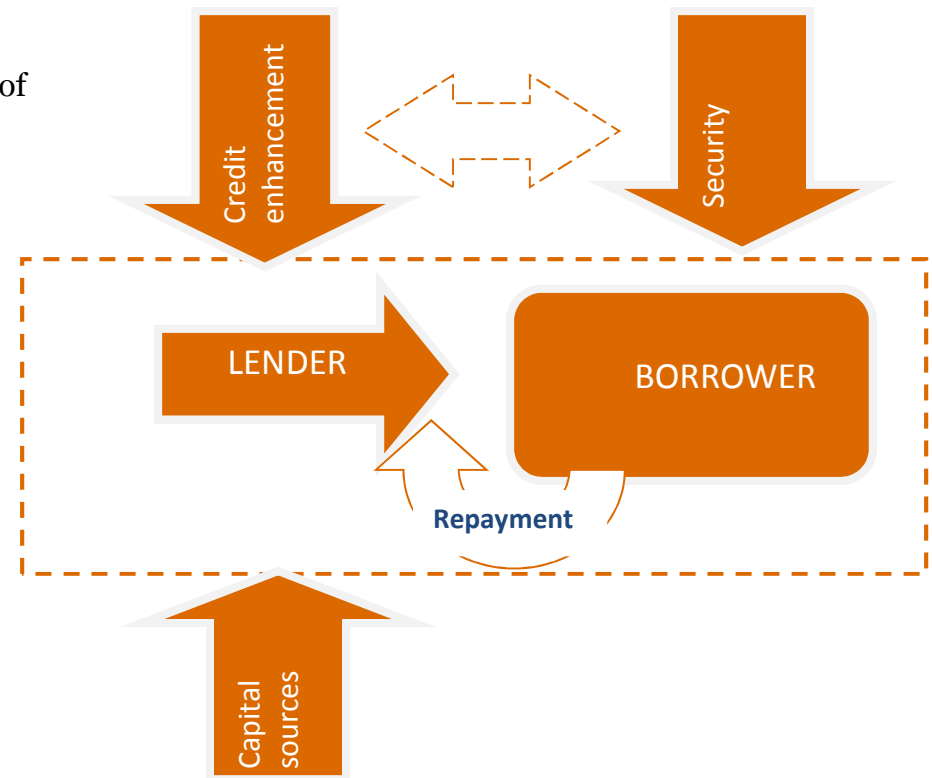
Borrower is defined as the company, country, government, group or individual who need capital to finance the energy efficiency activity.

Credit enhancement is defined as a technique by which the lender is provided with a reassurance that the borrower will honor the obligation of loan repayment

Security refers to the stream of principal and interest repayments and what happens in the event that a loan defaults

Note: An effective financing program is the one which addresses all the key components shown in the building block

Building blocks of financing program



EE financing - ASEAN

Thailand, Energy Conservation Fund (ENCON)

Objective: to provide financial support to designated factories and buildings for investment in and operations of energy conservation programs and to support other agencies that wish to undertake energy conservation, including activities on renewable energy projects, energy-related research and development, human resource development and training, and public awareness campaigns.

Source of fund: Government Budget (i.e. tax on petroleum importers and domestic producers)

Sector: All

Repayment : Traditional

Thailand, Energy Efficiency Revolving Fund

Objective: to stimulate investment in energy efficiency by involving the Thai finance sector to provide low interest loans for energy efficiency projects. It is a Interest rate buy-down type financing program.

Source of fund : ENCON fund (discussed above)

Sector: All

Repayment: Traditional

EE Financing – ASEAN (Continue...)

Malaysia, Energy conservation & efficiency fund

Objective: To stimulate energy conservation, including energy savings and efficient use of energy. The Fund provides financial rebate to EE measures that reduces electricity consumption

Source of fund: **1.** Re-channel part of existing subsidies for gas used for electricity production & **2.** Re-channel part of the existing Special Industry Tariff for Electricity

Sector: Industrial, Commercial and Residential

Repayment : Traditional

Singapore, Innovation for Environmental Sustainability (IES) Fund

Objective: The IES projects shall target to achieve at least one of these following objectives:

- a. Initiatives that speed up environmentally sustainable applications;
- b. Innovative proposals that have the potential to create new value and capabilities of NEA; and
- c. Projects that offer long-term solutions to specific environmental problems faced by Singapore.

Source of fund : Government budget

Sector: Industrial

Repayment : Traditional

Singapore, Grant for Energy Efficient Technologies (GREET)

Objective: The Grant for Energy Efficient Technologies (GREET) is aimed at encouraging owners and operators of industrial facilities to invest in energy efficient equipment or technologies.

Source of fund : Government budget

Sector: Industrial

Repayment : Traditional

Best Practice – Lending

USA, Pennsylvania Keystone Home Energy Loan Program (HELP) Energy Efficiency Loans

Objective: To finance energy efficiency improvements in Pennsylvania homes “*Keystone HELP*” has a dual focus on quick-turnaround improvements and whole-house retrofits by using a third party lending arrangement.

Description: Pennsylvania Keystone HELP is a loan loss reserve program with an interest rate buy down and a secondary market component. It uses a set of State-allocated funds to protect the lender in the case of loan defaults. The loan loss reserve is similar to a loan guarantee, except that the loss reserve does not cover 100% of the principal losses. In the case of Keystone HELP, the loan loss reserve covers up to 5% of the principal losses on the entire pool of outstanding loans

Source of fund :

Source of loan capital: Private lender AFC first (Third party)

Source of loan loss reserve funding: Utilities and Pennsylvania energy development authority

Sources of interest rate buy down: Pennsylvania alternative energy investment fund

Sector: Residential

Credit enhancement: loan loss reserve

Repayment : Traditional

Total amount dispersed: \$24 million in total loans has been disbursed as of 2010. (started in 2006)

Total projects completed: More than 7,000 loans made as of early 2011.

Best Practice – Credit Enhancement

India, Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE)

Objective: To facilitate securitization of the loans guaranteed by the Trust “CGTMSE” by facilitating extension of collateral free credit through the institutional mechanism.

Guarantee fees: For credit facility upto Rs 5.0 Lakhs = Guarantee Fee (GF) of 1% of the amount sanctioned and for the amounts sanctioned beyond Rs.5 lakh and upto Rs.100 lakh, the GF is 1.5% is being charged.

Annual service fees: Annual Service Fee (ASF) of 0.50% on the amount guaranteed for credit facilities upto Rs.5 lakh and 0.75% on the amount guaranteed for credit facilities beyond Rs.5 lakh and upto Rs.100 lakh.

Source of fund: 70% government budget and 30% SIDBI.

Target Sector: MSME

Amount dispersed: Rs.7233 crore (approved from 2000-09)

Projects sanctioned: 203739 projects assisted

India, Partial Risk Guarantee Fund (PRGF)

Objective: provide commercial banks with partial coverage of risk exposure against loans made for energy efficiency projects to mitigate the risk perception associated with the lending for new technologies and new business models associated with energy efficiency projects.

Description: The guarantee will directly support financing of energy efficiency projects by:

- Addressing credit risk and transaction structuring barriers to energy efficiency finance,
- Engaging and building capacities of commercial financial institutions to provide financing for energy efficiency projects on a commercially sustainable basis.

Guarantee fees: To be finalised

Annual service fees: To be finalised

Source of fund: Government budget

Best practice - Repayment

USA, Midwest Energy, Inc. – How\$mart

Objective: To provide money for energy efficiency improvements such as insulation, air sealing and new heating and cooling systems.

Description: The How\$mart program, run by Midwest Energy, finances residential and commercial energy efficiency improvements through a revolving fund. The revolving fund is reimbursed through a tariff (surcharge) applied to the customer's monthly utility bill.

Source of fund : Midwest energy program funds, Kansas housing resource corporation and funds from efficiency kansas

Sector: Residential and Commercial

Credit enhancement: N.A

Repayment : On bill tariff (surcharge)

Total amount dispersed: Over \$1 million (From 2007-09)

Total projects completed: Approx. 203 properties have received energy efficiency improvements. (From 2007-09)

Task Group – AEEFM under IPEEC

Task group *Assessment of Energy Efficiency Financing Mechanism* (AEEFM) under *International Partnership for Energy Efficiency Cooperation* (IPEEC) is divided into 5 sub-tasks with a view to assess the existing financing measures in participating countries and recommend approaches based on cross country analysis of best practices and to provide a menu of measures that could be introduced to facilitate increased energy efficiency investments.

Various sub tasks under the Task group AEEFM includes

Sub-Task-1: Survey of the best practices in elimination of barriers

Sub-Task2: Study/review of existing financing mechanisms and economic incentives programs in the country

Sub-Task-3: Identify new innovative financial instruments

Sub-Task-4: Develop mechanism to significantly enhance investments in energy efficiency market among participating countries

Sub-Task-5: Roadmap for capacity building and Information dissemination workshop.

Outcome till Sub task 3

Various EE financing programs in FRANCE, INDIA JAPAN, GERMANY, RUSSIA and USA were analysed based on the following parameters:

- Target Sector
- Source of capital
- Credit enhancement, Security and Repayment

Identified innovative instruments which could be adopted to address critical issues in EE financing.

Areas in which these new innovative instruments are developing is shown in the figure :



Outcome till Sub task 3 (Continue..)

Innovative Sources of Capital

Instruments	Example	Key features
Cross Financing	Domestic Clean Development Mechanism (CDM), Japan	Here the money, technology etc from the large industry is utilized to undertake EE activities in smaller setups within the same country in order to achieve its mandatory emission reduction targets
Single Purpose Bonds	Qualified Energy Conservation Bonds (QECBs), USA	Traditionally capital raised through bonds were utilized for multiple usage but now EE centric bonds are catching pace

Innovative Lending

Instruments	Example	Key features
Third Party Lending and Servicing	Keystone HELP program offered by AFC First in Pennsylvania, USA)	The Financial institution manages day-to-day aspect of the lending program i.e. loan origination, servicing etc
E-lending	Renovate America is applying an e-loan approach to originating, qualifying, servicing and monitoring EE financing and projects	Hassle free lending with minimum paperwork

Outcome till Sub task 3 (Continue..)

Innovative Repayment

Instruments	Example	Key features
On Bill Repayment	Midwest Energy, Inc. – How\$mart, USA	Here the property owner or tenant is only responsible for the surcharge payment. A secured and robust repayment mechanism established.
Innovative ESCROW repayment	Municipal Energy Efficiency Project (GEEP), Gujarat, India	ESCROW account enables the investors get the first charge on monitored energy savings, hence reduce non payment risk

Innovative Credit enhancement

Instruments	Example	Key features
Revolving type credit risk guarantee fund	Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE), India	Collateral free lending could be arranged upto a loan of Rs 100 Lakhs

Innovative Credit Quality Criteria

Choice to Borrower	New financing programs in various developed countries now allows borrowers with an options to choose from FICO, EA or Prescribed measures towards credit qualification
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