



IMPROVING ENERGY EFFICIENCY IN INDUSTRY IN ASIA

A Review of Financial Mechanisms

Elaine Blatt

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Gerlap





Overview

- Mechanisms for financing energy efficiency reviewed in 9 countries – Bangladesh, China, India, Indonesia, Mongolia, Philippines, Sri Lanka, Thailand, Vietnam.
- Conducted as part of the GERICAP program.
- Purpose two-fold: to identify sources of financing and to provide policymakers with models for use in their own countries.
- Survey was not exhaustive.
- Full report available at: www.energyefficiencyasia.org.



Findings

Country	Mechanism					
	Tax Incentives	Subsidies	Lending Programs			ESCOs
			Loan Funds	Guarantee Funds	Bank Windows	
Bangladesh						
China			✓	✓		✓
India	✓		✓		✓	✓
Indonesia						
Mongolia				✓		✓
Philippines	✓		✓			✓
Sri Lanka		✓	✓	✓		✓
Thailand	✓		✓			✓
Vietnam		✓				✓



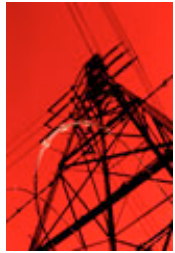
Findings (cont.)

- The availability of specific financial mechanisms for energy efficiency investment continues to be limited in Asia. Where such mechanisms exist, most are not yet self-sustaining and depend heavily on donor support.
- The most commonly available mechanism is Energy Service Company (ESCO) performance contracting, followed by subsidized loan funds. In both cases, donor subsidies and technical assistance to financial sector promote mechanism use. ESCOs face particularly difficult hurdles in obtaining bank financing, and equity investment in these companies is still only a future possibility.
- Subsidized energy prices discourage implementation of energy efficiency projects; artificially reduce cost of energy and thereby reduce energy savings associated with greater efficiency.



Findings (cont.)

- Barriers to more widespread use of mechanisms include:
 - Industry capacity: ability to evaluate potential investments and prepare applications for financing.
 - Financial sector capacity: availability of capital, understanding of energy efficiency investments
 - Government policies: policies that discourage investment, limit financial sector activity, etc.
- Government and/or donor programs to facilitate financing of energy efficiency investments should be part of a larger set of integrated policies that promote demand for energy efficiency among industry and catalyze financial industry response to that rising demand.
- For more information on policy issues, see *“Improving Energy Efficiency in Industry in Asia – A Policy Review,”* also available on the GERIAP website.



Conclusions

Conclusion 1. Mechanisms specifically designed to finance energy efficiency investments in Asia are limited.

- Most commonly available mechanism is ESCO performance contract, but significant barriers remain that prevent performance contracting from becoming a widespread and sustainable practice.
- Second most common mechanism is loan funds. Of these six available funds, five are currently supported through donor funding.
- Most mechanisms rely heavily on donor support. Only Thailand has programs supported primarily by government revenues. Financial sector continues to require both technical and financial support for the financing of energy efficiency projects.



Conclusions (cont.)

Conclusion 2. Private sector financing of energy efficiency investments can be viable and profitable.

- With right interventions and adequate level of financial sector development, private sector financing of energy efficiency projects is possible in Asia.
 - Example: Thailand
- There is interest in developing and financing projects through performance contracts (an alternative to bank loan financing provided through ESCOs), but financial sector barriers continue to restrict growth in this area.



Conclusions (cont.)

Conclusion 3. Availability of private sector financing will not be sufficient to encourage energy efficiency investments in all cases.

- Some businesses (especially SMEs) simply will not have the financial strength necessary to qualify for traditional loan financing, even with subsidized interest rates or guarantee funds.
- Some businesses will not choose to make energy efficiency investments, even if financing is available. Other policy options may need to be considered to promote energy efficiency among these businesses.



Conclusions (cont.)

Conclusion 4. Financial mechanisms should not be viewed in isolation from other energy efficiency programs.

- Investment in energy efficiency will not increase unless industry wants to invest. Programs to ensure adequate demand for energy efficiency financing may therefore be necessary before programs supporting financing mechanisms can be undertaken.
- Financial mechanisms aim to address different barriers to financing. Specific barriers to financing in a given country must be understood first, before planning programs to improve financing availability.
- Some policies – e.g., energy price subsidies – discourage investment and discourage implementation of energy efficiency projects.



Recommendations

For energy efficiency project financing to be sustainable, several conditions must be met:

- Government policy should encourage (and certainly not discourage) efficiency improvements.
- Industry must have the technical know how and management systems to plan energy efficiency projects and evaluate their potential business benefits.
- The financial sector must be well developed and understand the potential for profit in energy efficiency projects and businesses.

Achieving these conditions requires action, not just from policy makers, but also from industry and the financial sector.



Recommendations To Policy Makers

Energy Efficiency Policy

- Eliminate energy subsidies to ensure proper valuation of energy efficiency cost savings.
- Use fiscal policy (taxes & tax incentives), other demand building financial mechanisms (e.g., non-tax subsidies) to encourage energy efficiency.
- Use fiscal policy to encourage equity investment in energy efficiency ventures, such as ESCOs.
- Use revenue from fuel taxes to fund energy efficiency programs.

Industry Programs

- Educate industry on the business benefits of energy efficiency.
- Build energy user capacity and provide tools to evaluate energy use and potential savings.
- For state-owned industry, ensure managers are rewarded for production cost reductions.
- Assist in improving accounting and management systems.
- Require large users to evaluate energy use to identify efficiency opportunities. Reward compliance with help implementing efficiency projects.
- Provide technical assistance to build capacity to apply for financing.
- Develop alternatives to facilitate investment for businesses that do not qualify for traditional loans.

Financial Sector Programs

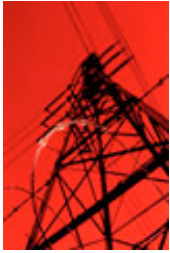
- Provide technical assistance to the financial sector concerning energy efficiency lending and financing of innovative ventures, such as ESCOs.
- Provide incentives, e.g., dedicated loan funds, to encourage financial sector to make loans.
- Subsidize guarantee funds where financial sector concerns about risk, or where industry not able to provide collateral for loans.
- Build capacity among equity investors to increase investment.



Recommendations

To the Industrial and Financial Sectors

- Industry should build the technical capabilities to develop the feasibility studies that will be required to obtain private sector financing.
- Industry should have the kinds of financial and management systems in place to accurately appraise the potential cost savings associated with energy efficiency investment opportunities, qualify for financing, and support the implementation of ESCO performance contracts.
- The financial sector should recognize the opportunities available and work to develop the products and programs to respond to growing demand from industry for energy efficiency programs.



For More Information

See GRIAP website:

www.energyefficiencyasia.org.

Contact Elaine Blatt at:

elaineblatt@gmail.com