

China Utility-Based Energy Efficiency Finance Program (CHUEE)

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SECTOR	COUNTRY/REGION	THEME	TOPIC
Large Industrial	China	Finance	Delivery Vehicle for Financing Industrial Energy Efficiency

Scene Setting

Country Context

In 2008, the People's Republic of China (PRC) became the world's largest CO₂ emitter and the largest consumer of energy. The energy demand of the country increased over 100% in less than a decade with 50% of its energy consumption derived from the industrial sector. While the country consumed less than half as much energy as the United-States in 2000, estimates show that on current trends, it will consume 70% more than the United States by 2035. The share of the country's energy demand in global energy consumption went from 11% in 2000, 19% in 2009 and is set to reach 23% in 2035 (WEO, 2011).

China promulgated in 2006 and 2011 the 11th and 12th five-year plans (FYP) that made energy efficiency (EE) a priority for the country, both in the industrial and building sectors.

The total investments needed to meet the targets of the 12th FYP are estimated over USD 50 billion. The financing gap to reach these targets is still important. Facing this gap, the government has been implementing incentives for higher investments in EE through government guarantees and capacity building programs.

Barriers

The main obstacles identified by the government in getting increased EE financing in China were:

- Lack of information and knowledge among end-users and industrialists on the advantages of energy efficiency technologies;
- Small size of projects, perceived as too much trouble for minimal profit;

- Perception that EE projects entail large risks.

Financial Mechanism

Objective

The main objective of the China Utility-Based Energy Efficiency Finance Program (CHUEE) was to increase overall investments in energy efficiency. To do so, the program put two mechanisms in place: a partial guarantee mechanism, and technical assistance for finance partners, ESCOs, and end-users.

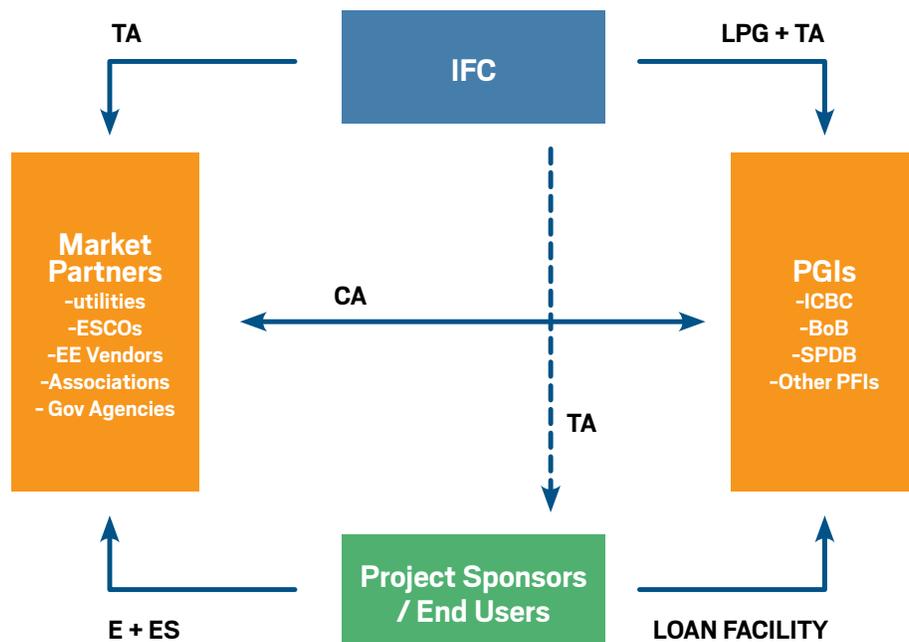
Program Structure

The International Finance Corporation (IFC), with the help of the Global Environmental Facility (GEF), has been in charge of implementing the program, involving three main components:

1. Partial Risk Guarantees,
2. Technical Assistance Programs,
3. Market outreach through information dissemination.

The first round of the scheme involved a USD 15 million fund from the GEF to guarantee the first loss under the loan facilities and to provide the technical training. This in turn enabled the IFC to provide extend guarantee facilities for over USD 215 million to three main Chinese banks: the Industrial and Commercial Bank of China (ICBC), the Shanghai Pudong Development Bank (SPDB), and the Bank of Beijing (BoB). Figure 1 below details items 1 and 2 of the mechanism; i.e. the loan guarantee program and the technical assistance. Although originally designed as a utilities cooperation program, the scheme evolved into a risk guarantee mechanism, as research outlined this as the main financing gap.

FIGURE 1: Structure of IFC/GEF Guarantee Program



Guarantee Facility

The partial loan guarantee component of the mechanism included the IFC covering 75% of the risk for the first 10% of the loss (i.e., First Loss); the remaining 25% of the First Loss was borne by the commercial banks. For the remaining 90% of the loss, the IFC covered 40% of the risk, with the commercial banks bearing the remaining 60%.

The underlying idea behind this transaction structure was to cover commercial banks, while training them in the specificities of energy efficiency projects. As illustrated, contingency financing in the form of loan guarantee program (LGP) such as the CHUEE provide loan guarantees and technical help to financial institutions (FI). By providing its guarantee against loan losses, the CHUEE program mitigates the loan risk for the participating financial institutions and achieving leverage on the GEF / IFC capital deployed.

Technical Assistance

Through the technical assistance (TA) component of CHUEE, the IFC builds capacity and knowledge of local commercial bankers in the technicalities and specialties of energy efficiency financing. The

training was not confined to local bankers. It also included other market players such as ESCO managers. The main goal of the TA was to familiarize the three commercial banks with EE financing. This included introducing project finance lending products, lending to ESCOs, savings based lending, etc. Also, consultants hired by the program provided project-by-project reviews of the energy efficiency projects for the banks that used the risk-sharing facility. The IFC also extended its TA to ESCOs and project developers.

Market Outreach and Information Dissemination

Market outreach and information dissemination were notable achievements of the program and have contributed significantly to its sustainability. The IFC set out to increase the general awareness of EE technology, services, and successful projects in the market through the organization of conferences and information dissemination to increase the general awareness on EE technologies and knowledge on best practices. The program also helped to overcome the asymmetry of information about EE. On the one hand, ESCOs, equipment vendors and engineering companies had ample knowledge of energy efficiency. On the other, their clients and financiers had little or none.

Achievements

It is estimated that IFC committed USD 104 million to ICBC as guarantees that leveraged USD 210 million of their funds in industrial EE loans. As such, the project has contributed to the reduction of 5 million tonnes of CO₂ emissions yearly. The estimated overall CO₂ savings for CHUEE I, II, III were 14 Mt (IEG, 2010).

By June 2009, the program had undergone an independent evaluation that underlined:

- Total number of projects: 98
- Number of participating companies: 78
- Total loan amounts: USD 512 million
- Total project investments: USD 936 million
- Guarantees provided: USD 197 million.

The first program that was guaranteed by IFC, to ICBC, had committed all guarantee funds of more than USD 60 million within a year, through 50 loans to 35 companies. IFC thus decided to re-allocate the GEF money for more guarantees. That new mechanism became CHUEE II. Overall investments in energy efficiency financing in China increased significantly since the beginning of the program, and particularly since the beginning of CHUEE II (from December, 2007). Beyond the guarantee facilities, the technical assistance in designing the credit lines and procurement, together with EE audits, were instrumental in convincing the banks of the necessity of the EE financing.

While the program design had assumed a default rate of 2.5%, there were no defaults under the CHUEE guarantee program.¹ The TA and outreach activities of CHUEE covered 47 banks and FIs, 14 utilities, 67 equipment suppliers, 72 end users, and 135 ESCOs. Similar guarantee programs and technical assistance have been implemented in the other regions by the IFC, notably in Eastern Europe.

The major shortcoming that was underlined in the official IFC evaluation of the three CHUEE programs was that they were mostly captured by large industrial projects with steel representing the largest proportion of projects (37%); chemicals (20%) and cement (17%), which, arguably, could have been implemented without the CHUEE program. In addition, CHUEE did not manage to tap into the

smaller projects; the average size of CHUEE projects being USD 5.7 million, relative to an expectation that 60% of the loans would be less than USD 200,000 at the program design stage. The program evaluation revealed that, in fact, loans of this size represented less than 10% of the portfolio.

Finally, little, if any, savings-based financing was done, as the large sponsors all had sufficiently strong balance sheets to obviate this step (i.e., the Chinese banks reverted to 'name-lending').

Lessons

Interviews and discussion with key participants that were conducted by an IEA study in 2010 underlined that contingency financing has been very successful in raising the interest and involvement of private financial stakeholders in China (IEA, 2010). Conversations with IFC analysts emphasise that in the second round of investments, awareness had been raised within commercial banks that were turning to the IFC to be part of the scheme.

The scheme and its results underline three main lessons:

The implementation of CHUEE has allowed the IFC to trigger a sustainable investments circle. Building the capacity of financial institutions was key in sustainability of the project

Many factors explain the success of the program including: the increased training and capacity building within banks. As underlined by IFC participants in the process, on average all the local bank personnel who participated in the transactions have been promoted at least once or twice since the start of the mechanism (December 2008, personal conversation with IFC staff). As it is, although the initial phase of the programs was conducted after specific training and guidance, the following phases were led directly by local banks (IEA, 2010).

Loan guarantees were helpful in getting the private sector's initial involvement, however, indirect training and capacity building, as well as information dissemination and awareness raising, were the key elements in making the initiative sustainable. The eagerness of non participating local banks to participate in the second and third round of investments stands as a testimony of the effectiveness of these elements.

Government support and market readiness are important

The support from the government was another key element in

¹ While the default rate of China's commercial banks was 1.14% in 2010.

the success of the mechanism. The Chinese policy context can sometimes be difficult for foreign investments. It is usually very difficult for foreign investors to successfully implement investment and financing programs in China. The fact that IFC was allowed to cover over 75% of the risk in their deal structure with national banks was exceptional. Preliminary discussions between the IFC and the government overcame this potential obstacle and were key in securing the deals.

Flexibility in the program design and careful selection of private sector partners played an important role in meeting the program objectives

It is often the case that between the time a program is designed to the moment it is implemented, market conditions change. When CHUEE 1 and 2 failed to meet IFC's goals in terms of additionality, transaction size, scope to SMEs and ESCOs, and savings-based lending, the IFC reacted with flexibility and developed CHUEE 3 to better address those elements. By shifting away from the original plan of implementing a scheme in partnership with utilities, CHUEE demonstrated that when the interests of the different partners are not aligned with each other and with the overall program objectives,

the results are likely to be affected and project objectives not met, and that it is best to reconsider the program structure (IEA, 2011).

The results from the CHUEE program are very encouraging. The very few instances of project default reinforce the importance of broadcasting success stories to ensure adequate risk evaluation of EE projects.

References

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