Energy Efficiency Financing for SMEs in China

Xiaochen Zhang
The Asian Cleantech MSME Financing Network
New Development Ventures
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New Development Ventures leverages global talents, technology and capital to create an innovative pathway for a better world.

We achieve the goal through empowering innovation in China and help to promote those innovations around the world.
ACMFN project at a glance

200 financial institutions & 400 MSMEs as ACMFN members

400 MSMEs received capacity building

200 MSMEs improved processes/created innovations and accessed cleantech financing products

To enhance cleantech value chains & access to cleantech financing for MSMEs ...

... by supporting:
• MSMEs financial literacy
• the uptake of innovative clean technologies,
• strengthening MSMEs access to financial institutions

20 financial institutions with updated cleantech financing portfolio

To enhance the availability of cleantech financing products ...

... by providing financial institutions with:
• technical assistance,
• peer learning opportunities
• support funding / co-financiers
• network creation
• matchmaking with promising cleantech MSMEs.

200 MSMEs improved processes/created innovations and accessed cleantech financing products

3 regional marketplace conferences and 12 national matchmaking forums facilitated network creation among 300 Asian & global financiers that enabled financing & co-financing of at least 50 MSMEs.
Why does Energy Efficiency Financing for SMEs matter in China?

- Five Years Plan- Green Development; Paris Agreement and Targets; G20 ENERGY EFFICIENCY ACTION PLAN; G20 Energy Efficiency Leading Programme and Made In China 2025
- SMEs account for around 60% GDP in China;
- SMEs are on average almost 40% less energy-efficient than large industrial enterprises in their respective industrial sectors. The SME energy efficiency potential in China has been assessed at 25% of SME energy demand (IFC, 2012).
- In 2012, 70% of enterprises in China’s energy-saving services were small or medium-sized;
- A survey by the Chinese Development Research Center (2013) showed that only around 33% of SMEs have access to bank loan
Energy Efficiency Financing for SMEs in China - an overview

Sources and Intermediaries

Challenges
- Government schemes: state-owned and large polluters oriented
- National banking sector: high collateral requirements, lack of tool to assess SME risks, high interest risks
- Non-deposit taking lenders and informal finance: low financial capacity and high interest rate
- Capital market: small in scale, two boards; EE bias

Instruments

- Policy incentives: Lack of guidelines and implementation and monitoring capacity leads to the SME and Green Lending Guidelines not being followed
- Risk management instruments: Green credit line is the dominating instrument, lack of innovation;
- Grants: limited grants to build capacity and reduce market risks;
- Low cost project debt: lack of sources and intermediaries to provide such debt; local capacity led high risks to provide such debts;
- Capital instruments: Green bonds and other instruments were underdeveloped

Uses

- SMEs are in lack of awareness, knowledge, financial literacy and financial track records
- ESCOs face high financial burdens and risk
Case study - Green Finance in China

2007: Green Credit Guidelines
- Published by CBRC the new guidelines to encourage banks to increase lending to green projects.
- A revised version of the guidelines was published in 2012;

2013: Notice for Green Credit Statistics
- This initiative identified 11 categories of environmental investments that can be classified as qualifying for green credit, providing clearer guidance to the market. (CBRC)

2014: Green Finance Task Force established
- The TF was to establishment of a green financial system in China
- In April 2014, the first report contained 14 detailed recommendations

2015: Green Finance Committee established
- Set up by PBoC, represent more than 65% of the assets under management (AUM) in China
- Working groups; Energy Efficiency Credit Guideline 2015

2015: PBoC Releases first official green bond guidelines
- PBoC, NDRC and Shanghai Stock Exchange has established regulations and rules including guidance on, and requirements for green definitions, management and use of bond proceeds, and reporting

2016: Green finance now prominent in China’s 13th 5-year plan
- establishment of a green financial system as part of the national plan for ecological civilisation.
- The development of a green financial system has also been included in China’s 13th Five Year Plan.
Case study: Government Schemes to Enable EE in China

National Climate Fund (NCF)
- A mechanism that supports countries to direct finance toward climate change projects and programs to meet the climate finance challenge.
- Key goals are the collection, blending, and coordination, as well as strengthening national ownership, of climate finance.
- Can be designed to complement and blend sources from the emerging global public climate change financial system (GEF, Adaptation Fund and GCF);

Example: The China CDM Fund (CCDMF)
- National fund that offers grants and loans
- Supports China’s National Climate Change Program
- Grants funded by revenues from CDM projects

Fast Facts:
- More than USD 81 million in grants committed to support over 200 projects;
- Direct reduction of over 7 million tons of CO2 equivalent through funding enterprises, mobilizing market capital and achieving verified emission reduction effects;

Additionally:
- National: all major Chinese banks reduced their credit for high energy consumption and pollution industries by more than 50%, while investments related to energy efficiency and emissions reductions increased.
- National SME Development Fund: The energy savings scheme started in 2011 and now covers 17,000 enterprises.
Case study - Enable National banking sector for EE in China

China Utility-based Energy Efficiency Finance Programme for SMEs

- **Conditions**
  Loans provided under the Program have a maximum duration of 5 years. Borrowers are required to cover at least 20% of the project costs themselves.

- **Outcome:**
  By directly supporting sustainable energy investments through 4 local **Chinese partner banks** (namely, Industrial Bank, Shanghai Pudong Development Bank, Bank of Beijing and Jiangsu Binhai Rural Commercial Bank) worth **11 billion yuan**, the program has achieved an annual greenhouse-gas emissions reduction of over **19 million tons of carbon dioxide**.
Case study- Engage foreign investors in energy efficiency projects in China

KFW Green Financing Program

• **Conditions:** Total investment of each individual project no more than 50 million yuan (100 million yuan possible at more matured stage); sub-loan no more than 40 million yuan; loan period no less than 3 years (including 1-year grace period); GHG emission reduction no less than 20%.

• **CITIC and Chang'an Bank (China)** sub-loan funds from KFW (Germany), assisted by two consulting professionals (GFA from Germany, CECEP from China).

• The sub-loan structure sheds light on a potential model for foreign investors interested in China energy efficiency projects.
Case study: Scaling Up Energy Efficiency through Green Bonds

Annual issuance of labelled green bonds tripled in 2014 to reach USD 36.6 billion, and issuance grew further in 2015 with USD 40 billion issued by November 2015.

In the first half of 2016, Chinese-funded entities (governments, banks and companies) issued US$11.2 billion (75 billion yuan) in green bonds, 33% of the global total during the period.

The total value of green bonds issued or approved, including in offshore markets, now stands at 143.65 billion yuan (about US$21.5 billion), making it the fastest-growing and most attention-grabbing player in the global market.

At RMB 43tn (USD6.7tn), China’s bond market is the third largest in the world. However, China’s bond market remains small relative to its GDP (51%) and to total credit in the financial system (<10%) (DFID).

Though the trend is encouraging, more research needed to understand the contribution of green bonds to China’s EE activates for SMEs.
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<tr>
<th>ESCO Model</th>
<th>From shared saving model to guaranteed saving and fee for service model to allocate risks among parties</th>
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<tbody>
<tr>
<td>P2P for EE</td>
<td>Individuals are investing in energy efficiency projects needed by communities and small businesses around the world. Pooling private contributions to enable entrepreneurs to implement projects while earning return on private investment.</td>
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<td>Blockchain based Non-collateral lending</td>
<td>The peer-to-peer energy saving trading, in which EE users buy, sell or swap energy saving directly with each other for a minimal return.</td>
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<td>Green Credit Line+</td>
<td>The loans are disbursed through commercial banks, and the interest rate is risk-adjusted, meaning that it is fixed by the ultimate borrower's bank, on the basis of the borrower's credit standing and the value and recoverability of the collateral provided for the loan.</td>
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Technology Enabled New Solutions: Examples

Identifying current and future uses of Blockchain technology in the energy efficiency

Guaranteed Savings Contracts

Financial Institution

- Arrange financing
- Repayment with funds according to EPC*
- Project development and implementation
- Payments for services according to EPC*
- Savings guarantee

End User

ESCO

Sell As-a-Service

Building trust → Increased transparency → Smart Metering → Customer retention

* EPC: engineering, procurement and construction
Power Innovation through Silicon Valley Frontier Labs

**Lab Services**

- Identify the most promising tech companies and entrepreneurs from around the world
- Help to validate the technologies and business models in key markets through a partnership arrangement
- Match the start-ups with the most daunting challenges and help to bring their solutions to new markets
- Marketing support including market strategy, branding and channel distribution

**Acceleration Program**

- In working with global acceleration programs, we will develop tailor made world class acceleration programs for member companies to grow in a new market
- Connect the most promising start-ups with investors and partners to help them to grow

**Market Access Fund**

- Deal size: $300,000-$3,000,000
- Co-finance with partners
- Work closely with the Fast Access Fund, innovation labs, partner incubators and industrial parks
- 30-50 deals in total, mature in 3 years
- Hybrid model: Debt+ Equity+ licensing
- Operate in a number of key tested markets
- No more than 5 LPs with at least 2 institutional investors
Why labs - We tested the model in other sectors

New Energy Sharing Economy Lab

- Initiated by world leading electric car manufacture, battery producers, battery sharing solution providers and investors;
- To drive innovative solutions to scale up new electric cars in China;
- Founding date: June 28th, 2016 in Shanghai, China

Insurance Blockchain Lab

- Initiated by world leading insurance, reinsurance, P2P insurance, big data companies and investors;
- To develop partnership with global academic and industry leaders to develop insurance blockchain reports;
- To develop blockchain-based applications for the insurance sector;
- Founding date: July 9th, 2016 in Beijing, China;
- Cross-boarder collaborations among Germany, Australia, and China

Media coverage of the launching event of the Labs

2016年6月28日，“新能源分享经济”论坛暨“新能源分享经济创新实验室”成立发布会在上海财经大学创业学院报告厅拉开帷幕。本次论坛由翼电科技、晶科电力主办，上海财经大学创业学院、新发展资本等机构，从各自不同的角度聚焦于保险行业的区块链应用，成为目前国内参与机构最多、专业度最高的区块链应用研究机构。实验室的发起机构涵盖互联网保险公司、保险中介公司、互联网类保险互助平台、再保险公司、比特币交易平台、大数据公司、海外科技创新基金等，从各自不同的角度聚焦于保险行业的区块链应用，成为目前国内参与机构最多、专业度最高的区块链应用研究机构。区块链保险实验室在成立的同时，还向悉尼大学申请了相应的研究课题，力图与欧洲、北美、澳洲的区块链践行者共同进行区块链保险的探索。

当前，保险业利用区块链技术的业务创新主要集中在两个领域：
- 一是技术融合，针对区块链数据不会泄露丢失等技术特点，将保单信息、客户信息，理赔信息放到区块链进行存储，避免意外事故对数据安全的冲击。
- 二是合作创新，让区块链在保险业务场景化拓展过程扮演新的角色，推动产品服务创新。
Fintech National Conference
Welcome to the China Internet Finance Association’s Annual Meeting on December 9th, 2016 with more than 200 financial institutions in China

Banking Blockchain Innovation Lab Partners Meeting
Discuss details with key partners and co-create an action plan for the Banking Blockchain Innovation Lab

Launch the lab in multiple locations
Including China (January, 2017), Singapore (March 2017), Kazakhstan (May 2017), UK (July 2017) and United States (September 2017)

Innovation Chile-China, April 2017
Focused in 3 areas: cleantech, fintech and women empowerment
Innovation Labs’ Activities in 2016


New Energy Sharing Economy Lab launch event, June 28, 2016

Clean Tech Finance Workshop by Asia SME Finance Network, June 16, 2016

Inter-America Development Bank EE Financing Event, Peru, Nov. 15-16, 2016
Innovation Labs’ Activities in 2016

Global Symposium on Innovative Financial Inclusion by World Bank on Sep. 21, 2016 in Malaysia


Global Investor Summit by OurCrowd, Israel, Jan. 25, 2016

Social Innovation and Philanthropy, Sep. 5th, 2016

Crowdfunding Beijing Summit, Beijing, 2015

Innovative Finance Workshop, Beijing, 2016
Innovation Labs’ Activities in 2016

Future Financiers Beijing Forum, June 8, 2016

Global Solutions Summit, Dec. 13, 2016

China-Latin America Economic Forum, May 9, 2016

SuperReturn, China, Apr., 18, 2016
Let’s Create a Green Revolution together!

Thank you

Xiaochen Zhang

Wechat: dcbluelight
E-mail: zxc@newdevelopmentventures.com
Linkedin: https://www.linkedin.com/in/cmyidea