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GRANTS PROGRAMME

Funded by the European Union

IMPACT SHEET: FEES - Financing Energy and Environmental Solutions

Empowering SMEs to adopt cleantech through innovative finance in China

The project identifies and leverages innovative financing models that assist SMEs integrate cleaner production and energy efficiency approaches, leading to the reduction of 396,000 tonnes of GHGs during its 4-year implementation stage.

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CHALLENGE

Lack of access to finance is the greatest barrier to implementing high-cost cleaner production (CP) and energy efficiency (EE) projects in small and medium enterprises (SMEs) in China. As SMEs make up 97% of all firms, enabling them is critical for transforming the economy to a system of sustainable consumption and production. However, there is a disconnect between SMEs and financial institutions (FIs). On one hand, SMEs have not been able to make compelling financial and economic cases for EE and CP projects to financial institutions while on the other hand, financial institutions possess limited capacity to gauge risks and opportunities associated with CP and EE projects. These problems are relevant in Shaanxi, one of China's fastest growing economies, where rapid growth led to increased pressure on the environment and natural resources.

To bridge the gap that prevents the widespread adoption of CP and EE, there is a need for competent environment and energy service providers that can provide integrated technical solutions and also prepare credit-worthy EE/CP projects.

PROJECT BACKGROUND

To help respond to these obstacles existing for SCP, the European Union (EU) funded the collaborative project, under the SWITCH-Asia Grants Programme, titled "Financing Energy and Environmental Solutions" (FEES).

"Financing Energy and Environmental Solutions", which operated for four years (2014-2018), served as a bridge to break the bottleneck and scale-up CP and EE uptakes in SMEs in Shaanxi province in China. Implementation was led by TUV Rheinland Group with a consortium of partners including EMCA, TCCO, ACXHTZ, SECC and XMRIEP.

PROJECT OBJECTIVES

FEES assisted SMEs in Shaanxi achieve significant pollutant discharge reduction and energy saving, carbon emission mitigation by improving their capacity to access green credit as well as implement high and medium-cost energy efficiency and cleaner production measures. The specific objectives included:

1. Enhancing the capacity of Shaanxi SMEs, particularly in eight energy and pollution-intensive sectors, to access green credit and implement high and medium-cost energy-efficient, cleaner production measures;
2. Developing risk-sharing mechanisms between government and financial institutions and improving their risk management capacity, and implementing innovative green credit products for SMEs
3. Strengthening the ability of government agencies and local energy service entities to engage in effective energy audit, inspection and information management activities

TARGET GROUPS

- **SMEs** of eight polluting or energy-intensive industrial sectors: chemical/petrochemical, electronics, equipment manufacturing, electroplating, pharmaceutical, construction materials, mining and metal, in Shaanxi Province.
- **Financial institutions** and other stakeholders involved in the provision of finance to SMEs
- **EE/CP service providers** and energy service professionals that serve the needs of SMEs and benefit from training
- **Government agencies** in Shaanxi that are needed to create policy that can support SMEs through EE/CP improvement and green credit

PROJECT ACTIVITIES

Building the capacity of SMEs to adopt CP/EE high-cost options

The project organized 20 three-day training workshops for 500 SMEs in Shaanxi that seek finance to implement CP/EE. 154 selected SMEs out of 500 received further training on green credit and support to create bankable green projects and apply for green credits. 52 SMEs were assisted to obtain financing and implement CP/EE investment projects.

Bridging the gap between SMEs and Financial Institutions

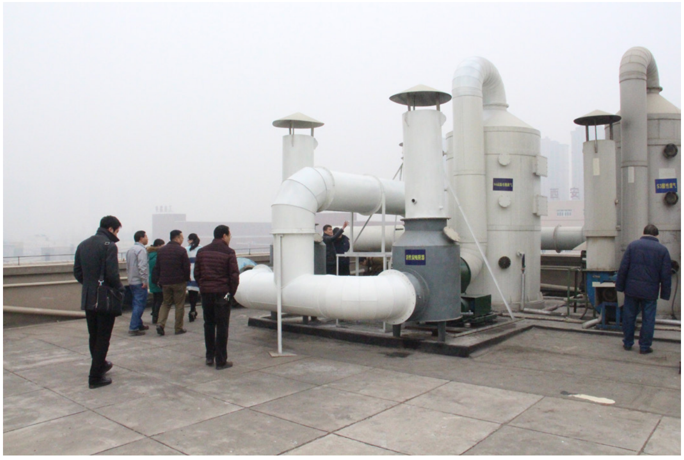
FEES engaged with financial institutions (FIs) in this action to identify and create green credit schemes best suited for the target SMEs. To achieve this, a multi-stakeholder Internet-based service portal was created and staff from 20 FIs were trained on the green credit business models.

Training of local Environment/Energy Service Providers

163 staff from local environmental/ energy efficiency services and technology providers (ESTPs) received basic and advanced CP/EE and Green Credit Training (Training of Trainer Workshop) to enhance their technical capability to support SMEs in implementing high-cost CP/EE options. Out of them, 52 were further coached in assessing and preparing bankable CP/EE investment projects and received on-the-job training by European and Chinese specialists in preparing EE bankable projects. The project developed certification methods to certify qualified service providers.

Developing policy recommendations for CP/EE promotion

The project engaged in policy dialogues by organising annual events inviting representatives from central, provincial and local governments as well as FIs, ESTPs, industrial associations, SMEs, media and academia. It also drafted policy recommendations for promoting CP/EE and Green Credit in SMEs in Shaanxi. Six governmental officials and energy policy experts were selected to attend a policy study tour to relevant institutions in Europe to learn from the past experience and current situations of disseminating CP/EE and other EE practices in selected European Union countries.



PROJECT ACHIEVEMENTS

- 568 SMEs received follow-up training on EE/CP assessment & green credit. Given the common difficulties confronting them, the action consisted of a series of progressive capacity building activities, including CP/EE training and technical assistance in developing creditworthy CP/EE investment projects. The training included emphasis on economic analysis of CP/EE activities and financial management to meet the transparency requirements of FIs.
- 154 SMEs conducted technical/financial assessments to prepare bankable projects after being enabled through financial management training that targeted financial literacy and transparency, which was traditionally weak.
- 20 FIs received training on green credit and risk management after a comparative study on green credit programs in Europe and China developed and disseminated best practices in green credit in China. This training led a multi-stakeholder dialogue and exchange on vitalizing the green credit through establishing a round table on green credit. The focus of the round table was to develop a new operational business model for financing EE improvements in SMEs.
- 162 local energy service professionals trained and twinned with European/national specialists in conducting in-depth training to build the capacity of local energy service entities to serve the needs of SMEs. This action was necessary to improve the underdeveloped local energy service that undermined the implementation of government EE policy and programmes.
- 3 innovative risk-sharing schemes for financing EE/CP improvements were designed and adopted
- 52 bankable projects were implemented with access to green credit
- A total of 264,750 tonnes of coal equivalent was saved and 682,283 tonnes of CO_2 equivalent was reduced

LESSONS LEARNED

When policy innovation is targeted at regions with less economic development level and weaker institutional capacity, support is needed for the respective financial institutions, especially for those local branches of the national commercial banks that are working with internal innovative financial products.

The experience in Shaanxi demonstrated that much of the innovation of green credit products and services remains the territory of the headquarters of the commercial banks. As a result, it is very important to involve, to a greater extent, the decision-makers of central government agencies and from the headquarters of the national financial institutions in the bottom-up policy experiments.

Regular forums for multistakeholders are needed to conduct open exchanges and consultations on green finance.

It is of vital importance to identify, cultivate and empower relevant change agents (e.g. early/mid-career policy makers with passion for implementing green finance in particular and green industrial development in general) in relevant government, industry and financial institutions to push forward the development, integration and implementation of green finance policies for the purpose of generating long-term change and impact in Shaanxi Province. In addition to knowledge of green finance and green industrial development concepts, these change agents need to be trained on communication, negotiation and multistakeholder engagement skills.

Ms. Sherin Lin
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> Lack of access to finance is the greatest barrier to upscaling energy efficiency and cleaner production measures in SMEs. The FEES project is improving the capacity of SMEs to understand and communicate the financial attractiveness of their EE and CP projects. At the same time, FEES is building the capacity of financial institutions to capitalise on energy and environmental investments in the SME sector. To bridge the gap between SMEs and banks, a risk sharing facility is built to spur SME green investment.

Long-term project sustainability

While a number of elements of sustainability have been built in the implementation, the overall sustainability of the benefits and outcomes remain to be observed in the future. Such sustainability elements included: stronger levels of awareness, knowledge and support given to green finance in government, financial institutions and industry in Shaanxi Province; a small network of change agents identified and empowered in the public and private sectors; two pieces of tailor-made policy to promote green finance and cleaner production in XHTZ; 52 environmental and energy investment projects receiving green finance support and serving as successful examples at SMEs; and practical procedures for identifying, assessing, and refining green investment projects at SMEs.

Project contributions to Climate Change Mitigation and SDGs

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SUSTAINABLE DEVELOPMENT GOALS

While China has already produced a national plan for implementing the 2030 Agenda for Sustainable Development, which has action plans each Sustainable Development Goal (SDG), and has adopted the Paris Agreement, this project also takes action. SDG 12 drives every action of the project, leading back to supporting the shift towards sustainable consumption and production. This includes actions impacting other SDGs. This project's support of SDG 7-related activities – ensuring access to affordable, reliable, sustainable and modern energy for all – comes through providing access to finance for investments in more efficient and cleaner technology, which ultimately contributes to a more sustainable cycle of consumption and production. Also important for FEES has been SDG 13 on climate action as this project contributed to the reduction of GHG emissions and promoted alternative sources of energy to mitigate climate change. Finally, SDG 8 – Decent Work and Economic Growth – is promoted and protected through the creation of new, green jobs, particularly those in the energy sector.

Impacts at a Glance

Economic Impact	• More green loans are now provided by Financial Institutions and there is an increased demand on environmental protection and energy saving technology and services • Green bonds were introduced to the Shaanxi finance market
Environ-mental Impact	• VoC Emission Standards were published for implementation and control in Shaanxi Province • Cleaner Production measures are now enforced with increased incentives from local authorities • Environmental impacts were reduced through SCP measures e.g. biodiversity loss, soil contamination • FEES helped environental protection companies that run Energy Management Coordination projects obtain funding. In turn, these projects help make China's energy production infrastructure become more efficient and less wasteful.
Social Impact	• Green jobs were created through improved access to finance, facilitated by capacity building with financial institutions and bridging the gap with SMEs. This included supporting a research and development company that holds patents on purifying water and waste from oil and mining facilities secure credit to set up a new facility, creating local jobs.
Climate Benefits	• A total of 264,750 tons of coal equivalent was saved and 682,283 tonnes of CO_2 equivalent was reduced • GHG mitigations measures were implemented by SMEs, including cleaner production projects and Energy Performance Contracting • Measures carried out to enhance business awareness on climate change risks included an annual summit, along with other conferences and seminars, which promoted incentive policies and the new VoC standards • Risk control systems were introduced in FIs for loan lending
Green Finance	• 154 SME-investors were engaged and 52 SMEs benefittied directly from better access to finance • Over EUR 1 billion in green finance was leveraged for SMEs • 568 SMEs received follow-up training on EE/CP assessment & green credit • Strengthened connections between SMEs, local government, local energy service companies and financial institutions, including through providing a platform for promoting green technology when approaching investors • Developed new financial instruments such as the Risk sharing mechanism, which enabled effective financing for SMEs
Target Group Engagement	• 568 SMEs were engaged in project activities • 10 major outreach activities were organized • Major outreach activities included technical training, study tours, meetings, conferences and net-working events
Policy Development	• 20 events were held with policymakers leading to several new policy contributions were developed based on recommendations from the project: the Xi'an High-tech Zone Audit methods for encourag-ing internal enterprises to carry out cleaner production and Management Measures for Risk Compen-sation Funds for the Working Funds of Scientific and Technological Financial in Xi'an Hi-Tech Zone • The project also had inputs to development of: the VoC emission standard in Shaanxi Province; Cleaner Production Incentive Policy in Xi'an High-tech Zone; and Risk Compensation Policy for Green Finance in Xi'an Hi-Tech Zone
Europe-Asia cooperation	• Three events were organized with European and Asian participants as well as two EU-Asia study tours and one new EU-Asia partnership was initiated • A comparative study on European and Chinese practices of green credit and an Operation Guideline for Implementing Green Credit in SMEs were also developed as a result of Europe-Asia cooperation

FUNDING

EU co-financing EUR 1,023,439

DURATION

February 2014 - January 2018

PARTNERS

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ESCO Association of China Energy Conservation Association, China (EMCA)

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