KOTEC’s Initiatives for Promoting Sustainable Production

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Korea Technology Finance Corporation(KOTEC)
# I. About KOTEC

<table>
<thead>
<tr>
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<th>Korea Technology Finance Corporation (KOTEC)</th>
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<tr>
<td><strong>Established</strong></td>
<td>April 1989, in Busan,</td>
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<td><strong>Statutory Law</strong></td>
<td>Korea Technology Finance Corporation Act</td>
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<td><strong>Corporate Status</strong></td>
<td>Non-profit Government-affiliated Institution</td>
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<td><strong>Mission (Role)</strong></td>
<td>To provide financing supports to <strong>innovative SMEs</strong></td>
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<td><strong>Source of Capital</strong></td>
<td>- Government</td>
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<td></td>
<td>- Financial Institutions(Banks)</td>
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<td><strong>Competent Authority</strong></td>
<td>Ministry of SMEs &amp; Startups(MSS)</td>
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What is Technology Finance?
- The branch of finance that provides funding to companies on the basis of technologies

Technology finance Instruments
- Credit guarantee, Equity investment

Decision-making: based on Technology Evaluation
- KTRS (KOTEC Technology Rating System)
- Technology Valuation

Other Services: Technology Transfer, Consulting, Technology Credit Bureau
KTRS
(KOTEC Technology Rating System)

- Management’s Competence
- Technological Capability
- Marketability
- Business Feasibility

33 Indicators

R&D Infra.
R&D Output
Level of Tech Innovation
Tech Readiness Level
Technological Impact
Difficulty in Imitation
KTRS (KOTEC Technology Rating System)

- 8 sectoral models
- 9 Policy-purpose models including GTRS

Diagram:

1. Input
   - Technology Appraisal Indicators
     - KTRS: 33
     - KTRS-SM: 23
     - KTRS-BM: 18
   - External environment variables
   - Internal environment variables

2. Rating
   - AHP Weight
   - Logit Model
   - Technological Competence score
   - Business growth potential score
   - Logit Model
   - Business risk score
   - Environmental risk score

3. Output
   - Measure of growth potential
     - Weighted average of technology business score
     - Weighted sum
     - Final ratings (AAA to D)
   - Measure of possibility of insolvency
Technology Appraisal Infrastructure

Headquarters (in Busan City)
- 3 Offices
- 5 Aff. Offices
- 8 Departments

64 Branches
- 57 Technology Appraisal centers
- 6 Technology Convergence Centers
- 1 Central Technology Appraisal Institute

Workforce
- Total 1,205
  - technology appraisers 645
  - Ph.D* 214
  - Over 1,000 External advisors
## Performances

<table>
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<tr>
<th>KOTEC</th>
<th>Yr. 2017</th>
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<tr>
<td>Equity Capital</td>
<td>KRW 2 trillion (USD 1.8 billion)</td>
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<td>Outstanding Guarantee</td>
<td>KRW 21.8 trillion (USD 20.4 billion)</td>
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<td>Total Investment</td>
<td>KRW 256 billion to 226 SMEs (USD 226 million)</td>
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<td>Client SMEs</td>
<td>74,584</td>
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<tr>
<td>Technology Evaluation Cases</td>
<td>617,448</td>
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II. Sustainable Production

- Today’s Topic: Financing the Sustainable Consumption and Production (SCP)

- My Presentation
  - Financial institutions’ role to enhance the sustainable production
  - Expansion of financing to biz enterprises who contribute to SP
II. Sustainable Production

- Green tech SMEs: major player to enhance the SP

- Financial Constraints faced by Green tech SMEs
  - Information asymmetry
  - Short-term perspective of lenders
  - Problem: market failure

- KOTEC’s Initiatives to tackle these problems
  - Green Finance of KOTEC
  - GTRS and green financial products
Initiative I: Green Finance

- Green Finance of KOTEC
  - Since 2017
  - Financial products provided to promote environmentally responsible investment
  - To help green tech SMEs better access to finance

- Tools for KOTEC’s Green finance
  - Special Guarantee for Green Tech SMEs
  - GTRS(Green Technology Rating System)
Green Technology Rating System (GTRS)

- CEO's Competence
- Technology Infrastructure
- Climate Tech. Competence
- Marketability
- Business Feasibility

22 Indicators

- Carbon Reduction
- Value Chain Analysis
- Perfection of Technology
- Technological Impact
- Economic Impact
- STEEP Analysis

Technology Score + Risk Score = Green Technology Rating (AAA~D)
Special Guarantee Program for Green tech SMEs

Application for guarantee

Qualification Check
- Green/Env’t/Energy /Climate Industry

- Due Diligence & Decision based on GTRS
- Eligibility
  * GTR B or higher

- Assignment of guarantee
  - Special Supports
    * Guarantee fee Reduction
    * Approval criteria relaxation

- Performance: USD 115 Mil. to 347 SMEs (Yr. 2017)
  USD 266 Million (Sep. 2018)

- Target: USD 1 Billion (Yr. 2022)

- Before 2017: Green Growth PG. Renewable Energy PG.
Initiative II: Green Tech Certificate

- GreenTech SMEs
- Information Asymmetry
- Reduce

Green Technology Appraisal Certificate by using GTRS
Initiative III: Int’l Collaboration

1. WIPO Green

- Interactive marketplace that promotes innovation and diffusion of green technology
- Partnership with WIPO Green Since 2014
  - To arrange green tech transfer between SMEs in Korea and abroad

- Technology Transfer Fairs
  - In Kenya, Ethiopia, Vietnam
  - 6 cases of tech transfer: water treatment, LED Streetlight, etc
Initiative III: Int’l Collaboration

2. UNIDO

(UN Industrial Development Organization)

• MOU with UNIDO in 2017
  – To facilitate green tech transfer to developing nations
  – GCIP(Global Cleantech Innovation Program)
    * To nurture cleantech firms in developing countries
    * Source of fund: GEF(Global Environment Fund)

• Collaboration
  * 18 demands ➔ 9 matched
  * 5 companies from 5 countries(Turkey, Morocco, Pakistan..)
Strategic Workshop for Climate Technology

- In collaboration with renewable energy dept. of IFC, and 11 local climate tech firms
  - Solar power generation, electric bus powertrain, biogas generators, etc.

Jan. 2018

After Workshop

- IFC climate finance program funding opportunity
- Extract demands for climate technology transfer from abroad
Thank you for listening!

Korea Technology Finance Corporation (KOTEC)