



European Bank
for Reconstruction and Development

ADP.2.4

TECHNICAL EXPERT MEETING ON ENERGY EFFICIENCY

Jan-Willem van de Ven

ENERGY EFFICIENCY AND CLIMATE CHANGE

EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT

March 2014

The EBRD

- **AAA rated. Capital base of €30 billion**
- **2013: €8.5 billion finance committed**



Sound
Banking
Principles

Environmental
Sustainability

- International financial institution established in 1991 to promote transition to market economies in 34 countries from Central Europe to Central Asia
- Owned by 63 countries and two inter-governmental institutions (EU and EIB).

The Sustainable Energy Initiative

- The EBRD has been engaged in sustainable energy finance since its establishment.
- In 2006, the EBRD launched the Sustainable Energy Initiative to deal with energy efficiency and climate change.
- The EBRD was the first MDB with a dedicated pool of technical experts in-house.
- In 2013, the EBRD launched Sustainable Resource Initiative which includes SEI, materials efficiency and water efficiency.

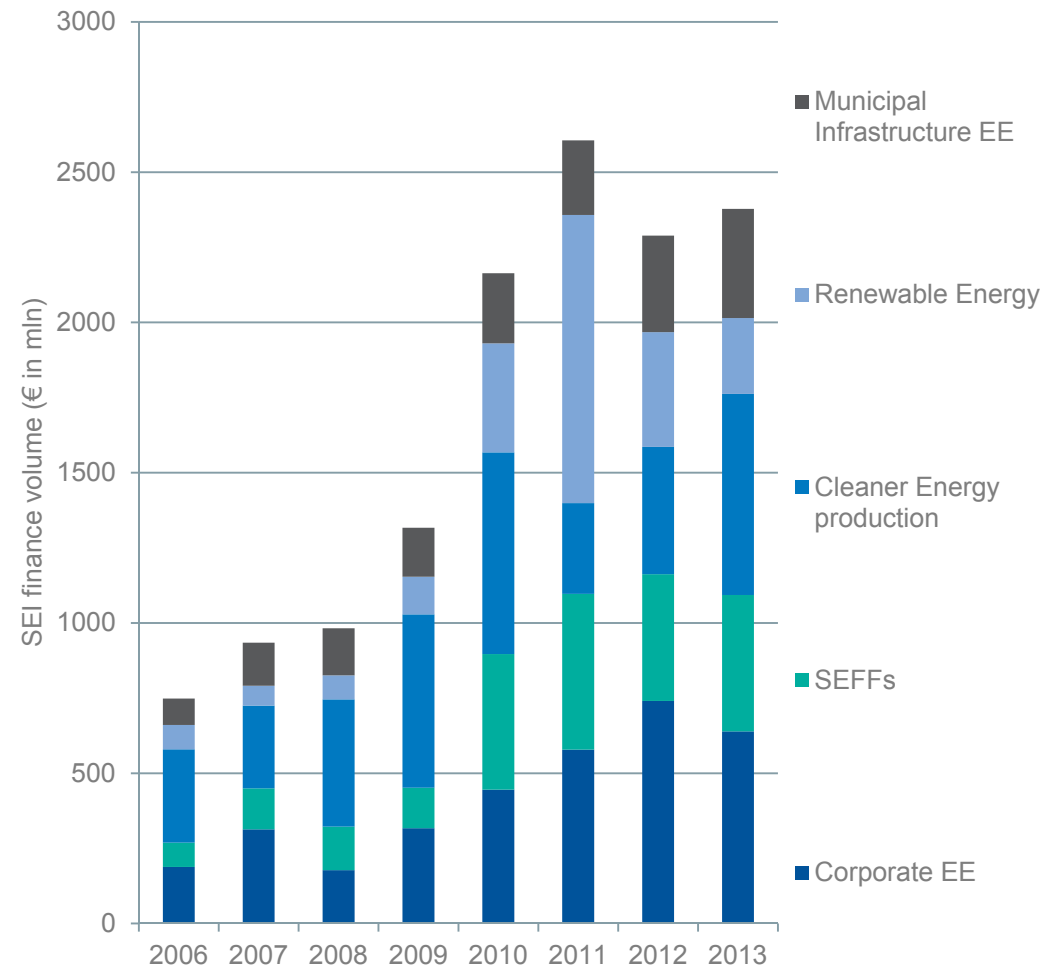
The EBRD's engagement in the context of its countries of operations:

- high share of heavy industry
- ageing infrastructure
- high energy and carbon intensity
- a lack of market-based pricing for energy
- substantial renewable energy resources

SEI finance by business areas

- From 2006 to 2013, SEI finance amounts to €13.4 billion.
- SEI business volume has shown an increasing trend since 2006, with a peak in 2011 (€2.6 billion).
- Cleaner energy production and corporate EE account for the bulk of SEI investments since 2006.
- **Since 2006, the share of SEFFs and renewable energy projects has increased significantly.**

SEI business volume split by business areas



SEI Ingredients to Success

Mainstreaming: SEI Projects across Bank's Investment Portfolio (set investment targets)

PROJECTS AND INVESTMENTS

Enabling Regulations:

Working with governments to support development of a strong institutional and regulatory framework that incentivises sustainable energy (carbon pricing, energy efficiency regulations, feed-in tariffs)

Technical Assistance: to overcome barriers: market analysis, LEME development, energy audits, training and awareness raising

TECHNICAL ASSISTANCE / INCENTIVES

POLICY DIALOGUE

Incentives: (grant co-financing) to reward performance, attract early adopters / demonstration projects and address affordability constraints

Need technical support to address behavioural and technology-related barriers to SEI investments:

- Information barriers: consumers have a high discount rate for decisions on EE investments (based on initial costs rather than lifecycle savings)
- Limited market availability of energy efficient technologies
- Limited expertise in evaluating energy efficiency projects

EBRD's Technical Assistance (TA) programmes help to mitigate against barriers:

- Energy audits: to provide technical assistance to the corporate clients or municipalities in assessing and preparing big-scale energy efficiency investments.
- “List of Eligible Measures and Equipment” (LEME): to provide fast-track procedure with a pre-defined list of eligible investments for finance of small and simple energy efficiency investments.

Technical Assistance Activities

To date, 739 Technical Assistances (TA), totalling €230 million, have been carried out under SEI.

Individual TA assignments range from €40,000 to €150,000.

The scope of services includes:

- technical and EE audits,
- preliminary feasibility studies,
- project preparation,
- development and implementation of LEME,
- assistance in implementation of EE projects,
- associated policy dialogue / capacity building.

Type of TA	2009 - 13 (EUR mil)
Industrial energy efficiency audit	21
Sustainable Energy Financing Facility	101
Power sector	21
Renewable energy sector	20
Municipal sector	61
Carbon market development	6
<i>Total</i>	<i>230</i>

SEI Lessons for ADP Technical Review

Mainstream the climate agenda throughout many business activities (not solely focussed on large emission reduction projects)

Large energy and industrial market players need help as well from **professional** experts (a limited amount of donor co-finance can leverage significant investment impact).

Work with (financial) **intermediaries** and ensure alignment of interest throughout the value chain

Standardise and be cost efficient for small scale technologies (“LEME”)

Capacity building for a proper enabling regulatory environment is essential for transformational change, but so is actual project demonstration. Co-ordination between the policy dialogue and actual project delivery is essential.

Reward early adopters, investors that are willing to take a risk to demonstrate a new technology or way of working.

MRV is required and needed, but also provide for auxiliary MRV services (donor supported), to prevent investors from becoming overloaded or becoming desinterested.

Sustainable Energy Financing Facility

Example



FACILITY

Turkish Sustainable Energy Financing Facility (TurSEFF) provides local banks with credit lines for sustainable energy investments in the residential, industrial and commercial sectors (sub-loans of up to €5 million).

TECHNICAL ASSISTANCE

- €2.4 million provided by the Climate Investment Funds and €7.5 million from the EU were used for project implementation support.
- This included supporting partner banks with pipeline development, loan appraisals, energy audits, promoting the facility and training.

INNOVATIVE FINANCIAL MIX

EBRD loans	\$222 million
<i>of which SEI</i>	<i>\$222 million</i>
CTF concessional loan	\$47 million
JBIC loans	<u>\$ 20 million</u>
Total facility value	\$ 289 million



5 PARTICIPATING BANKS

AKBANK

DenizBank

Garanti

TÜRKİYE **BANKASI**

VakıfBank

ESTIMATED IMPACT

Over 370 sub-projects financed through five partner banks by the end of 2012 are estimated to result in:

- Energy savings: 3,300 GWh/year
- Emission reductions: 645,210 tCO₂/year

Climate Technology Transfer

Example

FINTECC FRAMEWORK

Finance and Technology Transfer Centre for Climate Change (FINTECC) aimed at promoting best available climate technologies with low market penetration in Early Transition countries and SEMED countries through a combination of:

- (i) technical assistance,
- (ii) policy dialogue, and
- (iii) incentive grant programme.

DONOR FUNDING

Technical Assistance and Policy Dialogue

Global Environment Facility	USD 3.05 million
Multi donors	EUR 0.5 million

Incentive Grant Programme

Global Environment Facility	USD 7.85 million
SEMED SSF	EUR 5 million

POLICY DIALOGUE AND TECHNICAL ASSISTANCE

- To be delivered through partnerships with other international organizations as well as through consultancy contracts.
- Key focus of technical assistance is on (i) development of market assessment and monitoring techniques, (ii) project assessment techniques for climate change mitigation and adaptation technologies, (iii) creation of networks.

INCENTIVE GRANTS

- Incentive grants provided for projects with underlying EBRD transactions and streamlined into the current project cycle within the Bank.
- Grants committed (so far) for a range of technologies from tri-generation, LED lighting, energy management systems and rainwater harvesting.
- Funding will be leveraged ~ 1:10 with Sustainable Energy Investments (including water efficiency)
- Expected to support up to 25 projects in ETC and up to 15 projects in SEMED

SEI in Agribusiness

Example

CLIENT

The largest sugar producer in Ukraine.

SEI PROJECT

Funds from four EBRD loans between 2008 and 2012 were used for energy efficiency improvements, company expansion, financial support during the economic downturn and a biogas plant.

TECHNICAL ASSISTANCE

€80,000 for 3 energy audits to assist project preparation by identifying best available technology
Funded by the EU Neighbourhood Investment Facility, Italy and UK.

FINANCIAL STRUCTURE

EBRD loans	€47 million
<i>of which SEI</i>	<u>€28 million</u>
Total project value	€50 million



EXPECTED IMPACT

- Energy savings: 34,000 toe/year
- Emission reductions: 60,000 tCO₂/year
- The majority of energy efficiency investments had IRRs of more than 20%

CARBON CREDITS TRANSACTION

CO₂ emission reductions were successfully monetised under the Kyoto Protocol into carbon credits, contracted by the Bank's Multilateral Carbon Credits Fund.

Thank you



Jan-Willem van de Ven

Senior Carbon Manager, Energy Efficiency and Climate Change, EBRD

VandevJ@ebrd.com