Green Industries:
Achieving scale through Sustainable Energy Finance
A Perspective on Green Industries

• Energy costs for economic as well as non-economic activity have a growing share in cost structure in industrial, commercial and residential uses

• Opportunities presented by Clean Technology vs. ‘green-ing’ industries

• Prioritizing needs of businesses and consumers in relation to environmental benefits
  - Business and individuals act in their self-interest i.e. profitability and/or cost savings;
  - Focus should be to raise awareness of such opportunities; and
  - Encourage adoption and implementation of ‘Green’ projects
Clean Technology Samples

Legend
Feasible potential by 2020
EUR 100m  EUR 500m  EUR 1,000m

Source: IFC Study
‘Green-ing’ Opportunities

• Manufacturer industries such as cement may consider:
  - Waste heat recovery
  - Fuel switching - gas, solar or biomass
  - Equipment replacement - such as boilers

• Green building technologies for construction and building management sectors may consider:
  - Insulation - windows, roofing materials
  - Energy management and metering systems
  - Efficient lighting and HVAC - CFL, LED, automated

• Opportunities also extend to residential EE financing, small scale renewable energy solutions, among others
• Climate change is a global priority and presents a good business opportunity.

• Emerging markets represent more than half the opportunities available for greenhouse gas emissions reduction globally. Achieving these reductions will involve numerous small emitters whose needs are best addressed through financial intermediaries (FIs).

• FIs are best placed to address the needs of smaller projects/SMEs in climate change. IFC has shown that a major scale up through FIs is possible.

• To date, IFC has committed over $1.3 billion in 25 countries in climate change and sustainability financing through its global network of over 400 financial institutions.
Why Go Green - Market Drivers

- Persistent volatility in fossil fuel prices globally
- High(er) power tariffs as government subsidies are phased out
- Improved efficiency of renewables technology to match/increase performance and energy savings
- New business opportunities for contractors/equipment vendors/Energy Service Companies (ESCos)
- Governmental support, although ad-hoc, is increasingly available for energy and resource efficiency and conservation activities
- Increased environmental awareness and interest of borrowers to invest in energy saving and renewable energy projects and equipment
Sustainable Energy Finance

More efficient use of limited resources

- Cleaner Production (CP)
  - The same industrial OUTPUT with less environmental contamination and/or more efficient use of limited resources
  - Energy saving;
  - More efficient use of water;
  - Waste management;
  - Business process improvement;
  - Emission reduction;
  - Reduced noise pollution.

- Energy Efficiency (EE)
  - Same OUTPUT with less energy consumption or increased OUTPUT using the same amount of energy
  - Opportunities exists across all economic sectors: industry, commerce, transport, residential, public, tourism, services, agriculture, etc.

KEY ENVIRONMENTAL BENEFIT: Avoided Greenhouse Gas (GHG) emissions

Generation of clean energy

- Renewable Energy (RE)
  - Hydropower
  - Wind Power
  - Solar Energy
  - Biomass/Biogas
  - Geothermal
  - Biofuels
  - Others

Carbon Finance
IFC’s Approach to Achieving Impact Through SEF

• Focus on countries in MENA that are:
  - resource poor
  - typically import fossil fuels for power generation
  - considered high on energy intensity scale
  - contributing to national and per capita GHG emissions at an accelerated rate

• Themes to focus on in MENA include:
  - Need to strengthen legal, regulatory and institutional frameworks in target countries
  - Assist public and private stakeholders in understanding, identifying and acting on SEF opportunities
  - Promote innovative financing schemes / instruments to enhance access to finance for industrial, residential and individual consumers
Complexity of SEF - Perceived or Real?

• Project Size & Diversity
  » Large numbers of small projects
  » Many technologies promoted by different vendors
  » Many end-use sectors: industry, commerce, residential, agriculture, etc.
  » Diverse approaches: replacement, retrofit, extension, greenfield

• Regulatory Influence
  » Energy prices: gas, oil, coal, heat, electricity
  » Environmental laws and subsidy schemes
  » Licenses and permits

• Large number and diverse market players
  » Policy makers and regulator
  » Equipment manufacturers, product retailers
  » Installation contractors, engineering consultants
  » Banks and leasing companies

• Awareness issues
  » Lack of attention to environmental issues
  » Common belief that sustainability requires subsidies
  » Focus on increasing revenues as opposed to reducing costs
  » Lack of engineering knowledge in banks
Opportunity for Financial Institutions
Key Benefits for Financial Institutions

**Expanded market share through new business line**
- Significant, yet untapped market opportunity
- Innovative product/first mover advantage
- Sell on value to customer, not pricing
- Monetize existing client base, attract quality new clients

**Improved risk profile of portfolio**
- Improved risk profile and competitiveness of portfolio clients
- Short pay-backs with improved debt coverage of borrowers
- Compliance with national regulations and mitigation of environmental risks

**Positive social and environmental impacts**
- Positive image and market differentiation by being “green”
- Enhanced brand reputation and other PR benefits
- PR opportunities
How Banks should be Involved?

- Using existing SME/corporate/retail products
- Traditional SME/corporate/retail finance deal (no difference to non-EE projects in terms of financing)
- Beneficial to establish dedicated product
  - Dedicated procedures within the bank - easy sell
  - Strong marketing tool (specific marketing channels (targeted), PR stories)
  - Easy to be communicated outside/inside
- Verification of bankability (internal x external)
- Improved risk profile (risks mitigation)
- Cash-flow from savings part of the risk package
1. Wholesale financing
   » Simple Financing
   » Vendor Finance
   » ESCO finance

2. Project finance
   » Large corporate EE/RE/CP projects
   » RE - Independent Power Producers (IPPs)
Vendor Finance

- Sustainable Assets driven financing
- Sale of energy efficient equipment
- Financing package at the point of sale
- Partnership between Vendor and FI
- Loan taken by the end user
- Assets owned and operated by end-user
- Particularly suited for leasing

Most common examples: lighting, air-conditioning, refrigeration, industrial equipment (boilers, generators, motors, heat exchangers, compressed air systems, chillers), complete production lines, co-generation units, renewable energy equipment, transport vehicles, etc.
- ESCO - “Energy Services Company”
- Most advanced form of financing energy efficiency - ESCOs sell energy efficiency
- Service driven approach - outsourcing of energy services
- Turn-key reconstruction of the energy systems to maximize energy savings
- ESCO’s role: marketing, evaluation, planning, installation, operation, monitoring and financing - no CAPEX for company
- Assets may be owned and operated by ESCO
- “Third party finance” or “Performance Contracting” - savings finance investment
- Company and ESCO shares savings - ESCO guarantees performance
Project Finance

**Large Corporate Deals**
- Complex EE reconstruction of large industrial companies
- Large and unique industrial equipment purchases
- Case-by-case analysis and financing

**IPPs**
- Independent Power Producers
- Grid-oriented power generation (renewable energy or co-generation)
- Project is put in an SPV and it is financed based on future cash flows
- Generated electricity is sold to the national grid under long term Power Purchase Agreements (PPAs)
- Heavily dependent on favorable regulatory requirement
  - Free access to the grid to IPPs
  - Fixed formula for electricity price determination

(IFC)
IFC’s Investment and Advisory offering
US$1.3 billion invested to EE/RE thorough 53 FIs, 245 GWh/pa RE produced, 15,700 GWh/pa saved, 17.5 Mtons GHG/pa avoided
# IFC Financing Products for SEF

## Financial products tailored to the needs of diverse markets

<table>
<thead>
<tr>
<th>Type of product</th>
<th>Impact/solution</th>
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</thead>
<tbody>
<tr>
<td>Risk Sharing Facility (unfunded / funded)</td>
<td>Risk management and exposure, collateral shortfall</td>
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<tr>
<td>Credit Line</td>
<td>Liquidity</td>
</tr>
<tr>
<td>Long term credit line</td>
<td>Liability matching/liquidity</td>
</tr>
<tr>
<td>Sub-debt/mezzanine financing</td>
<td>Risk appetite/Equity shortfall</td>
</tr>
<tr>
<td>Investing in Private Equity Funds</td>
<td>Risk capital for climate friendly projects</td>
</tr>
<tr>
<td>Trade Guarantees</td>
<td>Trade risk mitigation</td>
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</tbody>
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## Advisory to help build a profitable SEF business

- Market analysis and product development
- Training for loan officers, credit risk managers, marketing personnel
- Marketing strategy
- Pipeline development (work with engineering firms / ESCos / vendors)
Why wholesaling through FIs?

- Leverage through private sector
- New market niches for FIs
- Sustainable business after IFI intervention
- Market transformation effect
- Multiplication by followers
- Maximize outreach to MSMEs, retail
- Development of innovative mechanisms

*ESCO - Energy Service Company
Maximizing IFC’s SEF Outreach

Approach 1

Risk positions at the level of the Bank:
- Credit lines
- Equity
- Subordinated debt
- Currency swap
- Trade finance

Approach 2

Risk positions at the level of the underlying assets:
- Guarantees
- Portfolio Risk Sharing
- RE Mezzanine Facility

Financial Products
Local Financial Institution
Bank Loans to EE/RE Projects
Project A.
Project B.
Project C.
Portfolio of EE/RE Projects
Thank You

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