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# Stakeholder Meeting on: Potential India-UK Cooperation on Energy Efficiency and Trading

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Energy Efficiency & Trading: An Industry Perspective

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# Presentation Overview

- **Energy Efficiency & CII**
  - **Energy Efficiency Benefits to Business**
  - **Energy Efficiency & Trading: India-UK Cooperation**
  - **Energy Efficiency: benefits, opportunities & deciding factors**
  - **Barriers to overcome**
  - **Perceived Risks**
  - **Suggestions for Implementing an enabling certificates and trading scheme**
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# Energy Efficiency and CII

- Energy Management Cell was established in CII in the year 1991 in Chennai
  - In the year 2000, EMC transformed into a Centre of Excellence (CII-Sohrabji Godrej Green Business Centre) providing services in Energy Efficiency, Renewable Energy, Environment & Recycling, Water and Green Buildings
  - The Green Business Centre came into existence in the year 2005 in Hyderabad.
  - It has Energy Efficiency Council and broadly undertakes the following energy efficiency related services:
    - Training / capacity building programs on Energy Management
    - Promoting Energy Efficiency in Indian industry to achieve “World Class” standards while working with National and International agencies
    - Energy Conservation Awards since the year 2001
    - Detailed Energy Audits – 1050 conducted across various industry sectors Rs. 2,000 Million (50 Million USD) Recurring Savings Achieved
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# Energy Efficiency and CII

- We worked closely with Ministry of Power and played key role in:
    - Energy Conservation Act, 2001
    - Setting up of Bureau of Energy Efficiency
    - Standards and labeling program
    - Selection of Certified Energy Auditors
    - National Energy Conservation Awards
  - CII has been closely with the Bureau of Energy Efficiency to enhance Energy Efficiency under the National Mission on Enhanced Energy Efficiency (NMEEE)
  - Facilitating industry interaction and mobilizing views from stakeholders
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# Energy Efficiency & Trading: India-UK Cooperation

Over the last few month, CII engaged and interacted extensively with industry from the following energy intensive sectors

- Aluminium
  - Cement
  - Chlor-alkali
  - Fertilizers
  - Power
  - Pulp and Paper
  - Railways
  - Data Centers
  - Sugar
  - Mining
  - Petrochemicals
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# Energy Efficiency Benefits to Business

- Reduced input costs
  - Enhanced Competitiveness of industrial products and Services
  - Intangible Benefits:
    - Be Sustainable and follow the triple bottom line concept - balance sheet, better environment and fulfilling CSR obligations
    - energy efficient industrial products and services likely to have greater access to markets across geographies
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# Energy Efficiency Opportunities

- Operations and maintenance systems
  - Technologies and best practices
  - Waste Heat Recovery and Steam Utilization
  - Use of Variable Frequency Drives
  - Use of Improved Materials
  - Use of Improved Catalyst (fertilizers for improved chemical reaction)
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# Deciding factors

- Investment Cost
  - Pay Back Periods
  - Long Term Energy Cost Scenario
  - A sound ecosystem with appropriate and stable legislative, policy and regulatory features
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# Barriers to overcome

- Need equal level of awareness across management board to give priority to fund allocation for augmenting energy efficiency
  - Lack of access to easy financing at attractive interest rate
  - Long pay back period
  - Limited experience for certain energy efficient technologies
  - Constraints related to plant shut down and structural lay-out, in some cases
  - Small size companies need to hire external consultants to carry out audits and energy efficiency consultancy, which is an expensive proposition
  - Constraints in selling surplus power through energy efficiency gains
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# Perceived Risks

- Companies may be penalized for the energy efficiency improvement before the framework for ESCerts (Energy Saving Certificates) for the improvements is put into place, so called as penalty for early action
  - ESCerts prices may be too low which may not justify the company's investment
  - Apprehension of sudden increase in price of energy efficient equipment, because of demand created by energy efficiency targets. This might lead to closing down of several plants.
  - Inadequate incentives from the government for adopting energy efficient technologies
  - Companies would like to reduce their risk exposure by sharing risk with energy efficient technology suppliers, who currently are reluctant to share the risk of failure
  - Limited experience of the energy efficient technology suppliers in relevant sector
  - In certain sectors availability of raw material is a constraint, as an energy efficient equipment / machinery will not be helpful unless the particular raw material is not available
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# Conceptualising & Implementing an Energy Efficiency Trading Scheme: Key Ingredients

- The proposed PAT (Perform Achieve and Trade) should not be implemented in isolation. An enabling framework should be first created which should include:
    - ❑ soft capital at 2-3% interest rate
    - ❑ accelerated depreciation for energy efficient technology
    - ❑ zero custom duty on energy efficient product's import
  - A gestation period of 3-4 years is required before the PAT is implemented
  - The PAT system should be well-defined as manufacturers may outsource energy intensive activities thereby manipulating the system
  - Administrative cost under PAT and transaction cost of issuing ESCerts, trading etc should also be considered and it should be kept as low as possible
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## Conceptualising & Implementing an Energy Efficiency Trading Scheme: Key Ingredients

- There should be system-wise benchmarks available within each sector
  - Process level data should be gathered and used in defining the targets also all independent variables such as production volume, technology, type of fuels etc should be utilized to develop several scenarios to define targets.
  - Targets should be different for different units and should not be a sectoral target
  - Improvement targets should be given for each unit for a certain time period which should be modified in subsequent commitment periods
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Thank you.

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