

“Utilization of Flared Gas for Power Generation”
CDM PROJECT – A CASE STUDY

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Clean Development Mechanism (CDM) projects

Kyoto Protocol provides a mechanism for emission reductions through trading of CERs.

Basic Criteria:

- **Project must reduce one of the six GHGs**
- **Meet additionality criteria i.e. not a business as usual investment**
- **Uses established technology**
- **No harmful impact on environment**
- **Approved by the host country**



Combined Cycle Power Plant Project in Qadirpur:

- **Unique Project:**
 - **Utilizes permeate gas being flared at Qadirpur gas field**
 - **Conventional thermal power plant producing 223.8 MW**
 - **Project conceived as a CDM project**

- **Provides relief in the current power crises**



Conception of CDM Project:

Engro sorts allocation of poor quality “Permeate Gas” being flared since years

Possible Energy Sources for a Typical Thermal Power Plant

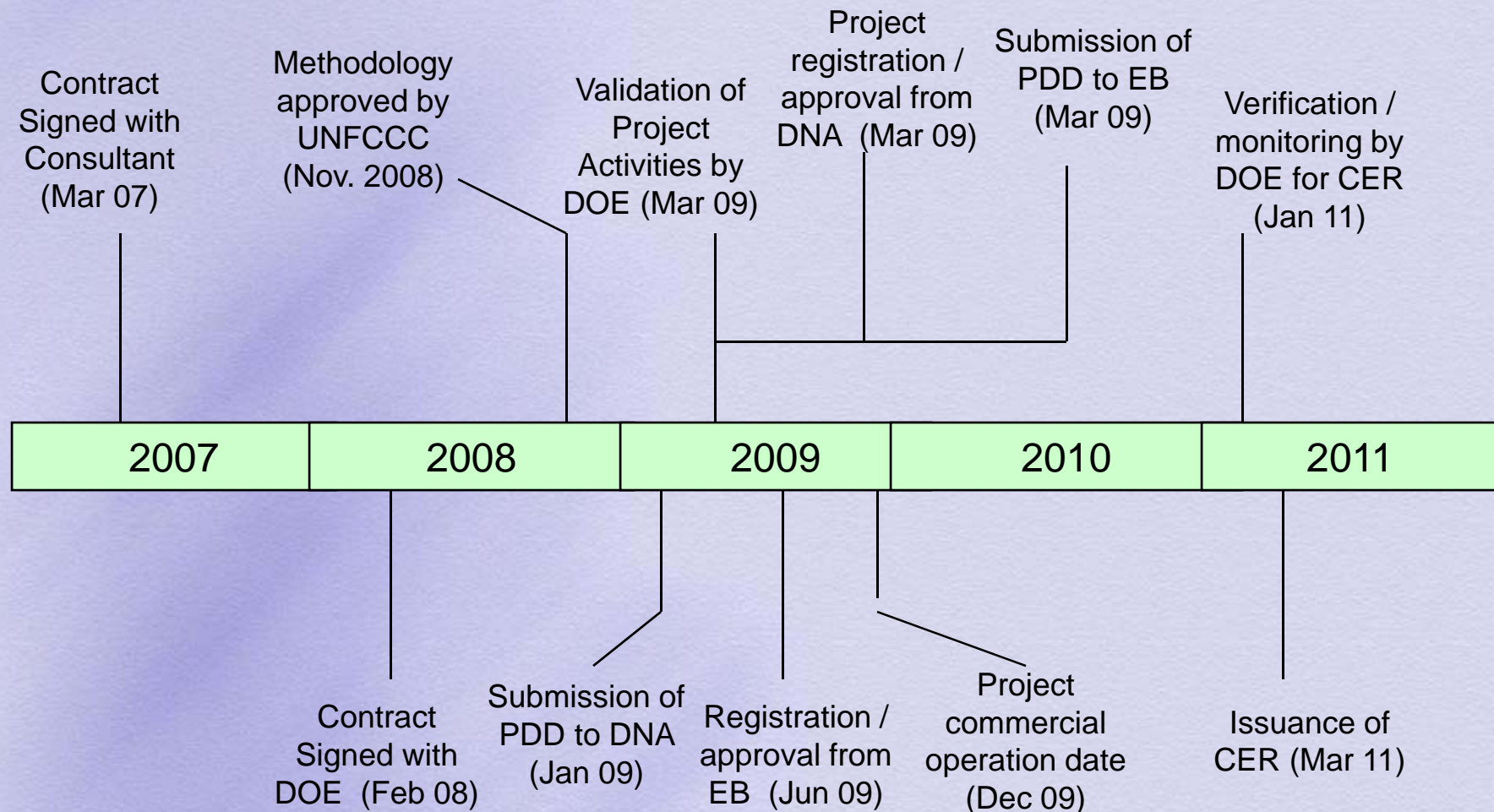
- **Clean Natural Gas (No Surplus Available)**
- **Residual Fuel Oil (Carbon Intensive Fuel)**
- **Coal (Carbon Intensive Fuel)**

Advantages of Utilization of Permeate Gas

- **Avoidance of Coal / Furnace oil burning**
- **Avoidance of flaring of Permeate Gas**
- **Reduction in carbon emissions**
- **Saving of limited natural gas reserves of Pakistan**
- **Creation of jobs in area**



Road Map of Engro's CDM Project:



LEGENDS:

DOE = Designated Operating Entity UNFCCC = United Nations Framework Convention on Climate Change
PDD = Project Design Document DNA = Designated National Authority EB = Executive Board
CER = Certified Emissions Reduction



Lessons Learnt:

- **Work with reputable consultants**

- **Enhance organizational knowledge on:**
 - **Opportunities getting created to address climate change issues**
 - **Knowledge of Kyoto protocol & CDM methodology**

- **New investments plans to keep climate change issues in perspective**



Future Plans:

Engro is actively working on a few new CDM opportunities:

- **Fertilizer business focusing on energy conservation**
- **Energy business focusing on alternate energy generation**
- **Foods business focusing on methane capture options at the dairy farms they are developing**



Questions & Answers:

