General information

- Minerales Monclova (Mimosa) is the largest coal producer in Mexico.
- The coal production in 2007 was 4 million tonnes and 3.5 million tonnes in 2008.
- Mines for the project; mine 5 “La Esmeralda”, mine 6 and mine 7.

<table>
<thead>
<tr>
<th></th>
<th>Mine 5</th>
<th>Mine 6</th>
<th>Mine 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiation year</td>
<td>1982</td>
<td>2001</td>
<td>2001</td>
</tr>
<tr>
<td>Total coal production to 2008</td>
<td>1,202,933</td>
<td>710,589</td>
<td>1,116,914</td>
</tr>
<tr>
<td>Remaining coal reserves</td>
<td>11 Mt, 8 years</td>
<td>11 Mt, 8 years</td>
<td>58 Mt,</td>
</tr>
</tbody>
</table>
Location
Legal and technical history

- Until 2007 the law did not allow mining companies to use or sell the gas from coalbed mine; "all hydrocarbons belongs to the nation and its exploration, recovery, processing and sale can only be done by PEMEX".

- In 2006 an underground mine explosion were caused by high concentration methane. As a result, the mine law changed and now allows the productive use of coalbed gas.

- There is no currently environmental regulations requirements for the treatment of methane gas.

- The rules to implement this new law was published in December 2008.
Project

- The main objective of the project is to capture the methane (CMM) to burn it and generate power. Benefits: safety and environment.

- The content of methane gas in coal mine is 30-60 m$^3$ per ton of coal.

- Only 30% of the methane content in coalbed is collectable (40-60% concentration). The remaining 70% (1% concentration) is drawn into the atmosphere as part of the ventilation safety process. (CMV).

- Today Mimosa only extracts methane gas as a security measure.
Project boundary

Mimosa Mines 5,6 y 7

- Mines
- CMM extraction
- Gas cleaning
- CMM power generation
- CMM flaring
- GRID power
Project

- Once the quality and quantity of methane is established. In the second year, 7 Mw power generators will operate. Mimosa is currently using from CFE 27.8 MW per year.

- The project will contribute to sustainable development in different ways:
  
  **Environment**: reducing emissions of methane gas to the atmosphere. Not increase the consumption of natural resources.
  
  **Social**: Providing a new source of clean energy, jobs generation.
  
  **Technology Transfer**: The burning practice of natural gas is not common in Mexico.
## Project

Estimated reduction of greenhouse gas emissions

<table>
<thead>
<tr>
<th>Estimated emission reduction per year</th>
<th>549,744 (tons CO$_2$e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total project emissions reduction</td>
<td>3,848,206 (tons CO$_2$e)</td>
</tr>
<tr>
<td>Life cycle</td>
<td>7 years</td>
</tr>
</tbody>
</table>
Project Development

2005/2006
• PIN presentation to DNA.
• Intergovernmental panel to climate change approval.
• Companies selection to elaborate the PDD

2007
• PDD elaboration using approved methodology -ACM008
• Public presentation to local stakeholders,
• DOE Validation (DNV).
• PDD web registration in the UNFCCC.
• Amendments to PDD according to recommendations.
• PPD assessor change to a new consulting company in order to continue the process with the company best interest.
Project Development

2008
• PDD in validation process by DOE (DNV).
• Sending PDD to review technical host country (Norway).

2009.
• PDD still in validation process by DOE.
Opportunities

Simplification and cost reduction of the administrative process.

- Carbon credits are important to finance a healthy environmental project for mine methane gas. In order to get them, there is complex administrative procedures “know how”.

- It is a common practice for companies having this “know how” to offer integrated services. Sometimes this is very useful because they provide in addition, capital and / or technology. On the other hand, the mine owners loose part of the property rights of this instruments (carbon credits).

- If the company wants to go alone with investment and/or technology, it is not easy to find assessors to only elaborate and present the PDD in UNFCCC. This is not an expensive work it self.