Financing Program for Geothermal Projects.

GLOBAL GEOTHERMAL DEVELOPMENT PLAN
OCTOBER 23-24, 2014
UN City Copenhagen FN Byen, Marmorvej 51
DENMARK
Geothermal Energy.

Advantages.

- **Viable**: Is a Proven Technology and economically feasible.
- **Efficient**: Sufficient Supply (base load power).
- **Clean**: Avoids CO₂ Emissions (positive externality).
- **Economic**: Low levelized cost (US$0.04 – 0.10/kWh).
- **Possible**: México occupies the 4th Global position with a 840MW of installed capacity. Only behind the EEUU, Filipinas and Indonesia.

**Mexico’s Potential**: 10 to 11 GW.

- North – Center, the best sites.

Risks.

<table>
<thead>
<tr>
<th>Project Stage</th>
<th>Risk Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Studies</td>
<td>LOW</td>
</tr>
<tr>
<td>Early exploration</td>
<td>VERY HIGH</td>
</tr>
<tr>
<td>Site development and production tests</td>
<td>HIGH</td>
</tr>
<tr>
<td>Construction and plant operation</td>
<td>MEDIUM-HIGH</td>
</tr>
</tbody>
</table>

There may be Power generation from 150 °C.
Financing scheme proposed.

Source of funds

Program's instrument

Project phases

Secure grant equity

Secure secured loan

Debt ordinary/soft subordinated debt guaranties contingent lines of credit

Surface studies

Early exploration

Site development and production

Plant construction and operation

Promoter

IDB

Clean Technology Fund

Munich RE
Scheme's diagram of flow.

**Early Exploration**
- Drilling (well 1)
- OK
- Drilling (well 2)
- OK
- Drilling (well 3)
- OK

**Drill and production**
- Drilling (well 4)
- Fault
- Drilling (well 5)
- Fault
- Drilling (well 6)
- Fault

**Plant Construction and Operation**

**Financing I**
- for exploration

**Refinance (Financing II)**
- Loan
- Repayment

**Refinance (Financing III)**
- Loan
- Repayment

**NAFIN / IDB / CTF**

**Scheme's diagram of flow.**
Program's Sources and applications of Funds.

<table>
<thead>
<tr>
<th>Technical Assistance</th>
<th>Early Exploration</th>
<th>Productive Exploration</th>
<th>Program's Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>• CTF</td>
<td>2.8</td>
<td>• SENER</td>
<td>11.5</td>
</tr>
<tr>
<td>• CTF</td>
<td>20.0</td>
<td>• CTF</td>
<td>31.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2.8</td>
<td>TOTAL</td>
<td>31.5</td>
</tr>
<tr>
<td>NON-REFUNDABLE SUPPORT</td>
<td>28.6%</td>
<td>LOANS</td>
<td>71.4%</td>
</tr>
</tbody>
</table>

Millions US dollar figures.
Geothermal Energy Act.

- The Act provides for three stages: prospecting, exploration and exploitation.

- Exploration permits and exploitation concessions may be granted to individuals of Mexican nationality or companies incorporated under Mexican Law.

- The record of survey shall be resolved by SENER in a period not exceeding 10 working days.

- The term of registration is 8 months and SENER may decide if the holder is eligible to obtain an exploration permit for 3 years, extendable for 3 years, for the only time.

- Through the figure of concession, CFE, other productive state enterprises and individuals, shall work to exploit geothermal areas.

- The titles of concession, given the nature and maturity needed projects will have a term of 30 years and may be extended in the opinion of the Secretariat of Energy.

Exploration, by individuals, CFE and other productive state enterprises, require prior permission granted by SENER.