Carbon Pricing & Energy:
Private sector investments, competitiveness and social equity

GDF SUEZ ENERGY LATIN AMERICA
Philipp Hauser – VP Carbon Markets
philipp.hauser@gdfsuezla.com
Tel: +552139745443
GDF SUEZ Energy International global presence
Strong position to deliver sustained growth

Ownership capacity at 100% as at 30/06/2014
Note: Total Gross capacity (100%): 73.2 GW; Total Net Ownership capacity: 37.7 GW
GDF SUEZ among Global Compact Carbon Pricing Champions

Key principles

- **Set an internal carbon price high enough to materially affect investment decisions to drive down greenhouse gas emissions;**

- **Publicly advocate the importance of carbon pricing through policy mechanisms that take into account country specific economies and policy contexts.**
Global climate policy failed by (m)any means

Growth of GHG emissions has accelerated.

Source: IPCC 5th assessment report – WG III
GHG emission growth in developing countries outpaces Annex I mitigation

Past progress is being reversed

Decomposition of the Change in Total Global CO₂ Emissions from Fossil Fuel Combustion

Source: IPCC 5th assessment report – WG III
PMR members with huge differences in development needs

Capita specific Power Consumption, GDP & HDI on log scale

Source: UNDP and World Bank Data Bank (2011)
Importance of a global carbon market

Perspective and objectives of emerging countries:

- Energy Security & unconstraint economic growth
- Social & Environmental Costs & Benefits
- Minimum ST-Cost

OECD perspective:
- Mitigation requires gradual reform of infrastructure
- Mitigation cost to be contained by substituting depreciated assets with new technologies
- Mitigation Potential is insufficient when compared to emission grow of non OECD countries
Importance of a global carbon market

Perspective and objectives of emerging countries:

- Energy Security & unconstraint economic growth
- Social & Environmental Costs & Benefits
- Minimum LT - Cost
- Global Climate Compliance

OECD perspective:
- Mitigation requires gradual reform of infrastructure
- Mitigation cost to be contained by substituting depreciated assets with new technologies
- Mitigation Potential is insufficient when compared to emission grow of non-OECD countries

Carbon Market & Finance

- OECD needs time for smooth transition and asset rotation
- Non-OECD needs immediate incentives for clean growth
The challenge ahead according to the WEO 2011

“If we do not change course, by 2017, 100% of the permissible energy sector emissions will be locked in.

Maria van der Hoeven - Executive Director IEA

- In a policy driven scenario to achieve 450 ppm CO₂ prices in:
  - OECD will converge to $120/t in 2035;
  - BRICS is to rise from $10/t in ‘20 to $95/t in ‘35.

- Cost is time dependent and increasing: Each US$ investment delay will cost 4.5 US$ investment in 2020.

- Though no direct link between markets expected before 2035, all systems have access to offsets (indirect linking), leading to price convergence

- If all countries began immediate mitigation, establish a single global carbon price and use of all technologies, economic costs is limited to 0.06% reduction in annual consumption growth until 2100 (IPCC 5th AR WG III)
Outright Carbon Pricing is out of fashion, but costs are rising
Carbon Price regulation in reality: A combination of policies

- Different regulations co-exist and have to be made compatible to ensure economic efficiency.

- Where an ETS applies, the policy overlap will determine the explicit price level.

- Smart regulation and good enabling environments will lower the cost of mitigation.

- Fossil fuel incentives cause distortion and increases price level.
**How to use existing tools & minimize cost**

*According to Economic Theory each market failure requires a specific instrument.*

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantify external cost and benefits</td>
<td>Sound MRV for GHG emissions and emission reductions ensure global comparability</td>
</tr>
<tr>
<td>Pricing external costs &amp; benefits</td>
<td>CDM &amp; NMM are globally coherent steps to build an international carbon market.</td>
</tr>
<tr>
<td>Inefficient Capital Markets</td>
<td>Development Banks &amp; Green Climate Fund can bridge financial barriers.</td>
</tr>
<tr>
<td>Lack of enabling environment</td>
<td>NAMA policies with international support need to improve clean investment environment</td>
</tr>
<tr>
<td>Lack of access to technology and organizational knowledge</td>
<td>CTCN and bilateral organizations are available to support host countries on request</td>
</tr>
</tbody>
</table>
GDF SUEZ Experience with clean energy & support policies

- 16 Projects registered under the CDM
- 16 Projects are supported by national policies (NAMA)
- 7 Project financed by Multilateral Development Banks
- Uruguay NAMA LNG project seeking MDB financing

Combination of incentives mitigates individual policy risk
Principles to promote domestic early action & prepare for a global carbon market

- Focus on clean expansion and efficiency of existing infrastructure.
- Major share of GHG mitigation is related to avoided emission growth.
- Early action avoids building-up of future GHG liabilities, but requires large capital investments today.
- Domestic Carbon tax or Cap & Trade can generate demand for domestic offsets, set a minimum price for investors and satisfy demand for net mitigation.
- Clear commitment to honor early action and emission reduction results will attract new and existing investors and anticipate mitigation investments.
- Gauging Price & Coverage allows leveraging incentive for clean expansion.
- Combining CDM with NAMA policies allows development of sectoral mechanisms and facilitates scale-up.
- Solid bottom up MRV will demonstrate efforts and results and attract results based climate finance.
- Use of the CDM or the future NMM allows flexibility and paves way for indirect linking in preparation for a global carbon market.
A global vision to orient domestic action
Building a global carbon market from bottom up action

Domestic & International Offset Bubble for indirect linking of domestic & International market

Source: Adapted from Linking emission trading systems (Climate Strategy - 2009)
Conclusions and suggestions for discussion

**Problem:** Capital intensity and long term maturity of clean infrastructure is the biggest barrier to green growth and a risk to our climate.

**Urgency:** Early action needed to avoid fossil fuel lock-in.

**Solution:** Transformational change now, requires global cooperation and use of existing mechanisms to address all market failures at once.

**Role of the CDM:** Offer comparable & solid MRV & flexible mechanism,

  i) in support of national policies (NAMA, etc.)
  ii) in complement to Carbon Financing (RBF)
  iii) for domestic offsetting and indirect linking between countries to ensure transformational investments and a move towards an incrementally global carbon market.

**Important CDM reforms and elements of the ADP text:**

1) Recognize KP mechanisms & results under the future climate agreement.
2) Open access to & promote early action by all parties, IMO & ICAO.
3) Reduce costs & bureaucracy to attract use by developing countries.
4) Establish due tracking and accounting of units.