

SRF's experience with CDM

Presentation at
Indian Chemical Council Seminar 2006, Mumbai

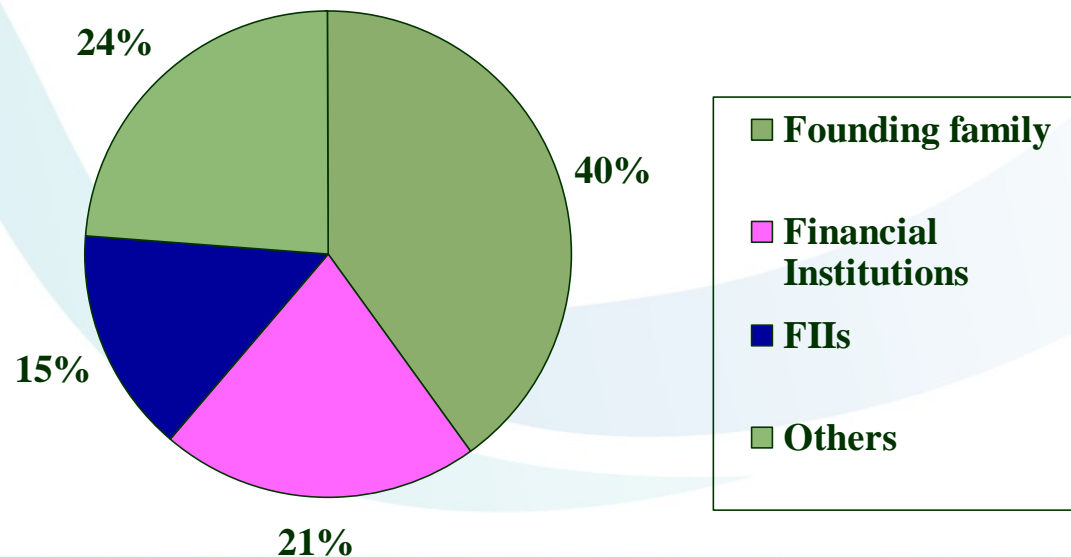
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- CDM Process – Key steps
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SRF Group

- Group Revenues: US\$ 350 mn
- SRF Market Cap: US\$ 330 mn
- Shares actively traded on NSE & BSE
- Shareholding pattern (as of 30 Sept, 2006):



SRF Group and its businesses



SRF Group
USD 350 mn.

SRF Limited

SRF Polymers Limited

Fluorochemicals Business

Pharma Chemicals Business

Technical Textiles Business

Packaging Films Business

Engineering Plastics Business

Fish Net Twine Business

Business Leadership

□ Domestic leadership

- Tyre Cord Fabric
- Refrigerant Gases
- Belting Fabrics
- Fish Net

Market share

- ~ 38%, No 1 in India
- ~ 40%, No 1 in India
- ~ 70%, No 1 in India
- ~ 78% No 1 in India

□ Global position

- Belting Fabrics
- Tyre Cord Fabric

Third
Eighth

Our Fluoro Chemicals Business

Manufacturing facility

Location: Bhiwadi, 75 Kms from
New Delhi

Plant Area : 70 Acres/300,000
sq. metres

No of Employees : ~ 350

Power Generation
Captive : 6.5 MW

Plant Capacities :

Refrigerant CFC/HCFC: 12,500 MT in HCFC terms

Refrigerant HFC 134a : 3,500 MT

Chloromethanes : 35,000 TPA

Hydrofluoric acid : 8,500 TPA



Product Packaging - Refrigerants



Our Refrigerant Customers...



Our Refrigerant Customers...

DAIKIN

ETA General



BLUE STAR



VIDEOCON



Carrier

INDIA

VOLTAS



National
Room Air-conditioners



LG Electronics

expand your life

Our Refrigerant Customers...

We Also Meet The Stringent Specs Of Pharma Customers Like ...

Cipla



In the Pharma Industry , FLORON is used as aerosol propellant for anti - asthma inhalers

Our Chloromethane Customers...



HETERO DRUGS





*Kyoto... window of opportunity
for developing countries*

Kyoto Protocol

- The Kyoto Protocol ... agreement made under the [United Nations Framework Convention on Climate Change \(UNFCCC\)](#).
- [Countries](#) that [ratify](#) this [protocol](#) commit to reduce their emissions of [carbon dioxide](#) and five other [greenhouse gases](#), or engage in [emissions trading](#) if they maintain or increase emissions of these gases.
- The Kyoto Protocol now covers more than 160 countries globally and over 55% of global greenhouse gas (GHG) emissions.
- Key principles:
 - underwritten by governments and governed by global legislation enacted under the UN's aegis
 - two general categories:
 - developed countries, referred to as Annex 1 countries (who have accepted GHG emission reduction obligations); and
 - developing countries, referred to as Non-Annex 1 countries (who have no GHG emission reduction obligations)

Kyoto Protocol

- Any Annex 1 country that fails to meet its Kyoto target will be penalized by having its reduction targets decreased by 30% in the next period.
- By 2008-2012, Annex 1 countries have to reduce their GHG emissions by around 5% below their 1990 levels
- Kyoto includes "flexible mechanisms" which allow Annex 1 economies to meet their GHG targets by purchasing GHG emission reductions from elsewhere. These can be bought either from:
 - financial exchanges (such as the new EU Emissions Trading Scheme) or
 - From CDM projects in non-Annex 1 economies, or
 - JI projects in other Annex-1 countries.

CDM – Key steps

- Identification of project
- Contract with project participants
- Development of Project Design Document (PDD)
- Validation by DOE
- Application for Methodology to EB (if new)
- Approval of project by host DNA
- Application for Registration to EB
- Implementation
- Monitoring and Verification
- Application for issuance of CERs to EB

Our CDM Project

- HFC 23 is a waste stream from existing HCFC 22 refrigerant plant
- HFC 23 a high GWP gas (eqvt to 11700 of CO2)
- Otherwise a harmless gas and no local legislation prohibiting its emission
- Project is to capture HFC 23 emissions and incinerate;
- Sustainable development around Project site
 - Natural Resources Management
 - Education
 - Health (HIV/ AIDS)
- PwC, India and UK are our global transaction advisors; AZB are our legal advisors

Our CDM project: Current status

- HFC-23 thermal oxidation plant (incinerator) commissioned Aug'05 with technology transfer from Solvay, Germany
- Project registered with UNFCCC on 24 December 2005
- Seven issuances have already taken place
 - 6.84 mln CERs issued...38% of CERs issued globally
 - Rs 370 crores approx. realised from CER sales till end Sept' 06

Our CDM project: Focus on Sustainable Development

- Natural Resources Management:
 - Afforestation
 - Soil and water conservation
 - Water harvesting
- active participation of community
- part contribution from them
- Improvement in educational infrastructure of schools in the vicinity
- Creation of HIV/AIDS awareness amongst high risk groups

Project Participants

1. Barclays Bank UK
2. BNP UK, France
3. Climate Change Capital Carbon Fund, UK
4. EDF Trading UK
5. Enel Italy
6. ICECAP UK
7. KfW Germany
8. Nuon Netherlands
9. Shell Trading International UK
10. Solvay Fluor GmbH Germany

Demand for CERs...

- How tight or liberal are the NAPs for Phase 2 perceived to be
- Actual emissions
- Country-wise caps on use of CERs/ ERUs
- weather
- prices of input fuels
- Whether and when the US would sign-up and join ETS

Supply of CERs...

- Project approvals/ registrations
- Issuances...strictness displayed by UNFCCC
- Prevailing prices of CERs
- Framework enabling flow of ERUs from Russian/
CIS JI projects

CER quality/ price depends on...

- Country's rating in terms of country risk, credibility and performance of NCDMA
- The status of the project
- The size of the project / offerings of CERs
- The history of the project in honouring its commitments to buyers
- Credit rating and standing of the project developers
- No. of Project participants
- Reputation of Project Participants
- The work done by the project proponents in terms of sustainable development

Our approach to sale process

- Maximise long term value
- Manage risk
 - Regulatory, Market, Transaction, Counterparty, Operational
- Timing
 - Market/ Regulatory developments
 - Corporate finance needs
- Professional positioning
 - Carbon markets
 - Capital markets

Approach to risk

- Every risk that is passed on to Buyer has a cost implication
 - Accept those risks that we can manage better
 - Risks over which neither we nor Buyer has control identified as Condition Precedent or FM events
- Portfolio approach
 - Types of Buyers
 - Geographies
 - Fixed and Floating prices

Strategy

- Multiple project participants to mitigate regulatory and counterparty risk; and to have multiple routes to market
- Credit quality of the counterparty and possibility of long term relationship a key criteria for shortlisting
- Phased tranches to mitigate market risk and capture value as project develops
- Delivery priority and Delivery guarantee as instruments to optimise value and manage risk
- Transparent process
- Flexibility on early ERPAs

Some recent developments...

- EB getting stricter in determining additionality and application of approved methodology
- Issuances going under review...how much to reveal in the Monitoring reports
- At current CER price levels...some projects may not remain as profitable
- Pressure on India and China to expect binding targets beyond 2012



Making our nation proud

Thank You

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