



ADITYA BIRLA GROUP

SUSTAINABLE DEVELOPMENT

The Climate for Change

Taking the Renewable Route to Growth

- Pioneer in using **Municipal Solid Waste (MSW)** to generate clean energy in Indian cement industry
- In FY10 cement business substituted natural resources with 20,000 tonnes of waste material as fuel, equivalent to 10,000 tonnes of coal burning every day
- **Cement business** - first in the world to win carbon credits, and earn negative fuel cost
- Cement business works with Central Pollution Boards to define emission norms for the industry
- **Carbon Footprint mapping** for all metals units complete
- Quarterly Sustainability Metrics Report monitors progress closely in metals business
- Modernization of alumina smelter at Muri - a CDM project with 10 years plan of emission reduction of 4.3 lakh tons CO₂ per year
- Collaborated with GSMA and Ericsson to explore use of locally produced biofuels to power mobile base stations in rural areas beyond the reach of electricity grid.
- Would bring cellular connectivity to rural areas that lack reliable power, encourage farmers to earn by planting non-edible plants like jatropha to generate bio-diesel. Telecom and other businesses like cement aggressively pursuing cleaner options like solar energy and fuel cell technology



DG running on B20 Bio Fuel



Bio Fuel Plant



Converted into refuse
Derived fuel



Alternate
Fueling Facility



Base being sorted



Jetropha Plant



Water: Making Every Drop Count

- Use of treated sewage water for gas conditioning tower, cyclone cooling, and dust suppression : a common practice across plants.
- Zero water discharge achieved across all of our cement units.
- Treated effluent used for creating extensive green belts in our plants and colonies
- Cement, metals and fertilisers units - installed rain water harvesting systems in open ponds, mine pits and colonies
- Vikram Cement – taking Public Private partnership route to watershed development in Madhya Pradesh. Collective efforts will bring 5,000 hectares of land under irrigation, directly benefiting 20,000 farmers and their families.
- A business where water is a must is collaborating with the IITs to explore next generation technologies for products without water
- Aggressive water reduction targets - 60% reduction in fresh water intake at Muri achieved through process improvement



Grasim Harihar:
Top Pic – 1959
Below Picture - Today



Vikram Cement – Rain water harvesting in mines



Grasim Forest Institute:
Cloning eucalyptus trees



Reduce. Reuse. Recycle. Case-1

The world's largest producer of Aluminium rolled products is an exemplar of environmental stewardship: promoting recycling worldwide and engaging communities in greening the earth.

- Novelis is the world leader in recycling used beverage cans, recycling about 40 billion cans per year, equivalent to almost 500,000 tonnes of metal.
- Recycling saves 95% of the energy and greenhouse gas (GHG) emissions associated with primary aluminum production.

Through recycling, Novelis has saved 27 million tonnes of GHG emissions in the past four years.



Reduce. Reuse. Recycle. Case-2

- Huge stockpiles of Copper slag and Phospho-gypsum waste (1.5- 2 million tons/annum) are generated during copper manufacturing. The team translated this environment hazard into an opportunity
- **For Agriculture** : Discovered acidity of phospho gypsum can neutralize alkalinity of soil and improve the farm productivity. Went a step further, adding more nutrients to soil. Branded and sold as 'Birla Balwan'.
- **For Cement** - Demonstrated its potential as low cost alternative raw material. Entered into long-term contracts with big cement players, including our own group



Waste to...Wealth



Stockpiles of waste gypsum



No longer a hazard



WITHOUT "PHOSPHO GYPSUM



WITH "BIRLA PHOSPHO GYPSUM

Farmer Education Programmes

