

The background of the image is a low-angle shot of a tall, blue glass skyscraper, likely the Aditya Birla Knowledge Centre in Hyderabad. The building's facade is made of reflective blue glass panels. In the foreground, there is a large, abstract graphic overlay consisting of flowing, curved shapes in shades of red, white, and beige. The text "Together we innovate" is superimposed on this graphic in a white, sans-serif font.

Together we  
innovate

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# The Aditya Birla Group

A US \$40 billion corporation, the Aditya Birla Group is in the League of Fortune 500. It is anchored by an extraordinary force of over 120,000 employees belonging to 42 different nationalities. The Group has been ranked Number 4 in the global 'Top Companies for Leaders' survey and ranked Number 1 in Asia Pacific for 2011. 'Top Companies for Leaders' is the most comprehensive study of organisational leadership in the world conducted by Aon Hewitt, Fortune Magazine, and RBL (a strategic HR and Leadership Advisory firm). The Group has topped the Nielsen's Corporate Image Monitor 2012-13 and emerged as the Number 1 corporate, the 'Best in Class'. 50 per cent of the Aditya Birla Group's revenues flow from its overseas operations. The Group operates in 36 countries – Australia, Austria, Bangladesh, Brazil, Canada, China, Egypt, France, Germany, Hungary, India, Indonesia, Italy, Ivory Coast, Japan, Korea, Laos, Luxembourg, Malaysia, Myanmar, Philippines, Poland, Russia, Singapore, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Tanzania, Thailand, Turkey, UAE, UK, USA, and Vietnam.

## Delivering excellence through talent and technology

The Aditya Birla Science and Technology Company Ltd. (ABSTCL) is the global corporate research and development centre for the Aditya Birla Group which is a US \$40 billion Fortune 500 corporation. Located in Taloja, just outside of Mumbai in India, ABSTCL supports the broad diversity of the Group's businesses through multi-disciplinary teams of expert scientists and engineers who lead fundamental and applied research projects. The company aims to be a world class R & D organization enabling the Aditya Birla Group achieve technological excellence and enhance market positions for various businesses.



Serving leading  
companies in the  
**industry**

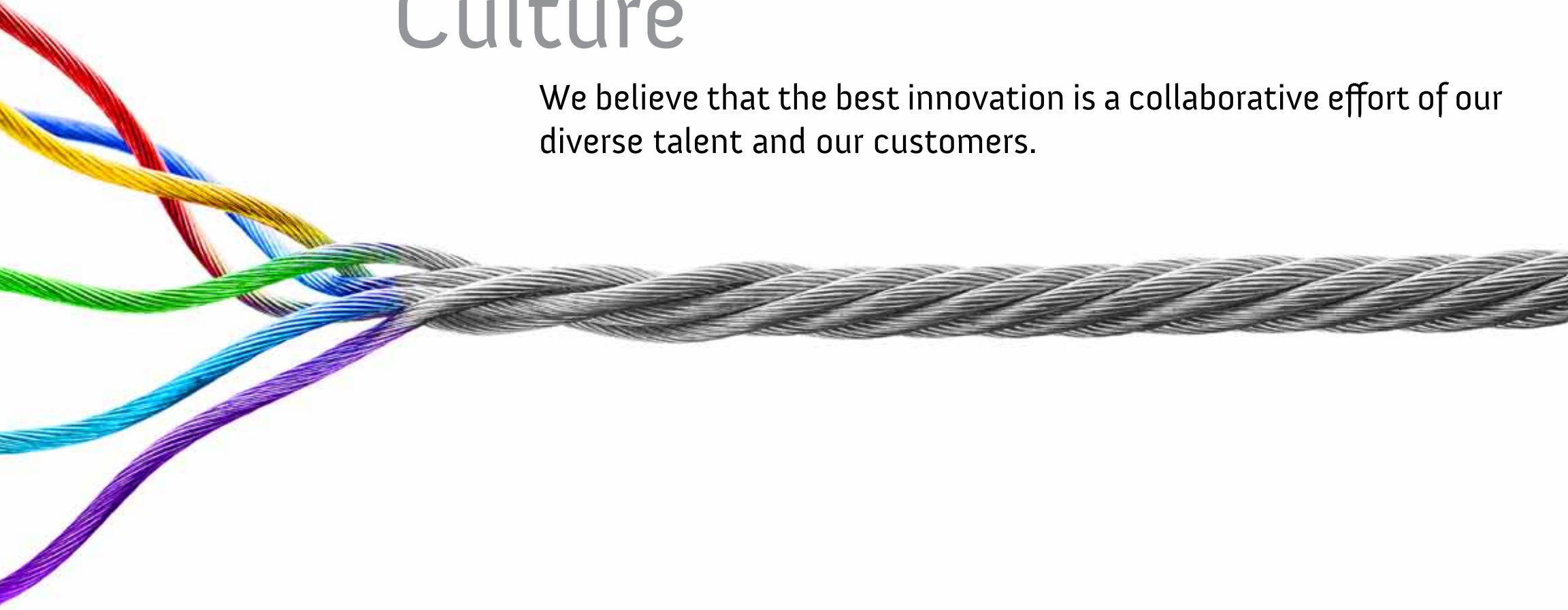


# Vision

“To develop technologies and products that differentiate, protect and grow market share and profitability of our businesses.”

# Culture

We believe that the best innovation is a collaborative effort of our diverse talent and our customers.



# Commitment

We always deliver excellence by turning global challenges into opportunities through connecting people and technology.





**METALS**



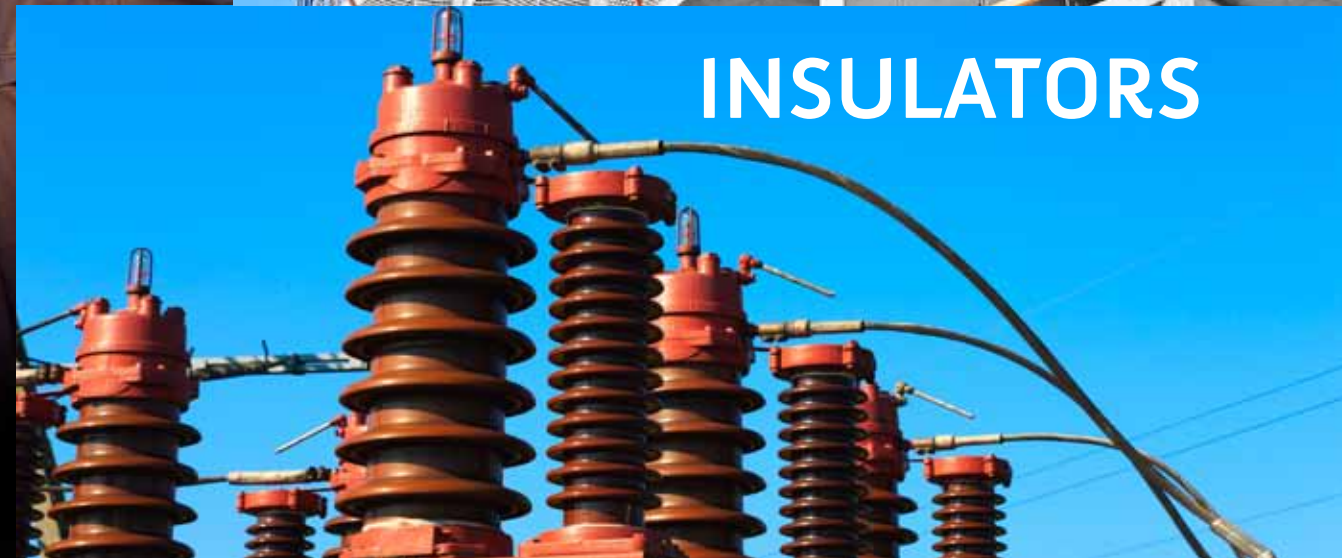
**CEMENT**



**CHEMICALS**



**PULP & FIBRE**



**INSULATORS**



**CARBON  
BLACK**

**Key  
Business  
Areas**

## Areas of Expertise

### Material Science

Enhancing raw materials sustainability, improving productivity, new product development, reducing energy consumption and environmental impact, and technology revamping.

Ceramics

Coatings

Corrosion

Refractory materials

Material characterization

Microstructural analysis

High temperature process

### Metallurgy

Providing cost-effective scientific and technical solutions through capacity enhancement associated with processes and equipment, improving production sustainability, waste utilization and minimising environmental impact.

Smelting

Beneficiation

Extractive metallurgy

Physical metallurgy

Mechanical metallurgy

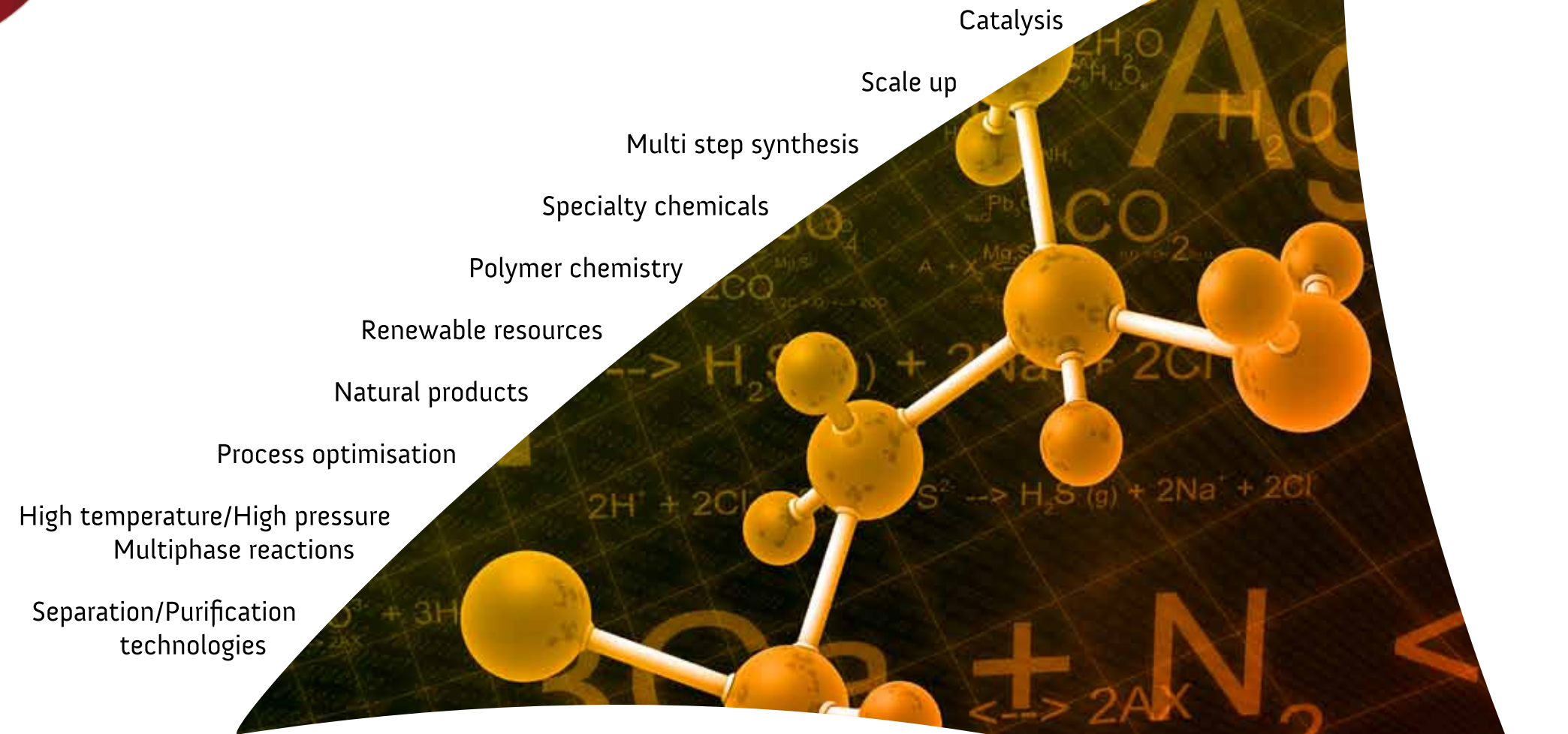
Material modeling

Process metallurgy  
(Hydro, pyro and electro)



# Chemical Science

Developing new products, processes and technologies of high quality for chemical business, improvement of product quality and de-bottlenecking in the plants.



# Fibre

Developing new products, processes and technologies for cellulosic fibres, value-added acrylic fibres and improvement of product quality and process performance.



# Engineering and Simulation Technology

Adding value in terms of process optimization and control, process development, energy usage reduction, process equipment performance improvement, process audits and benchmarking.

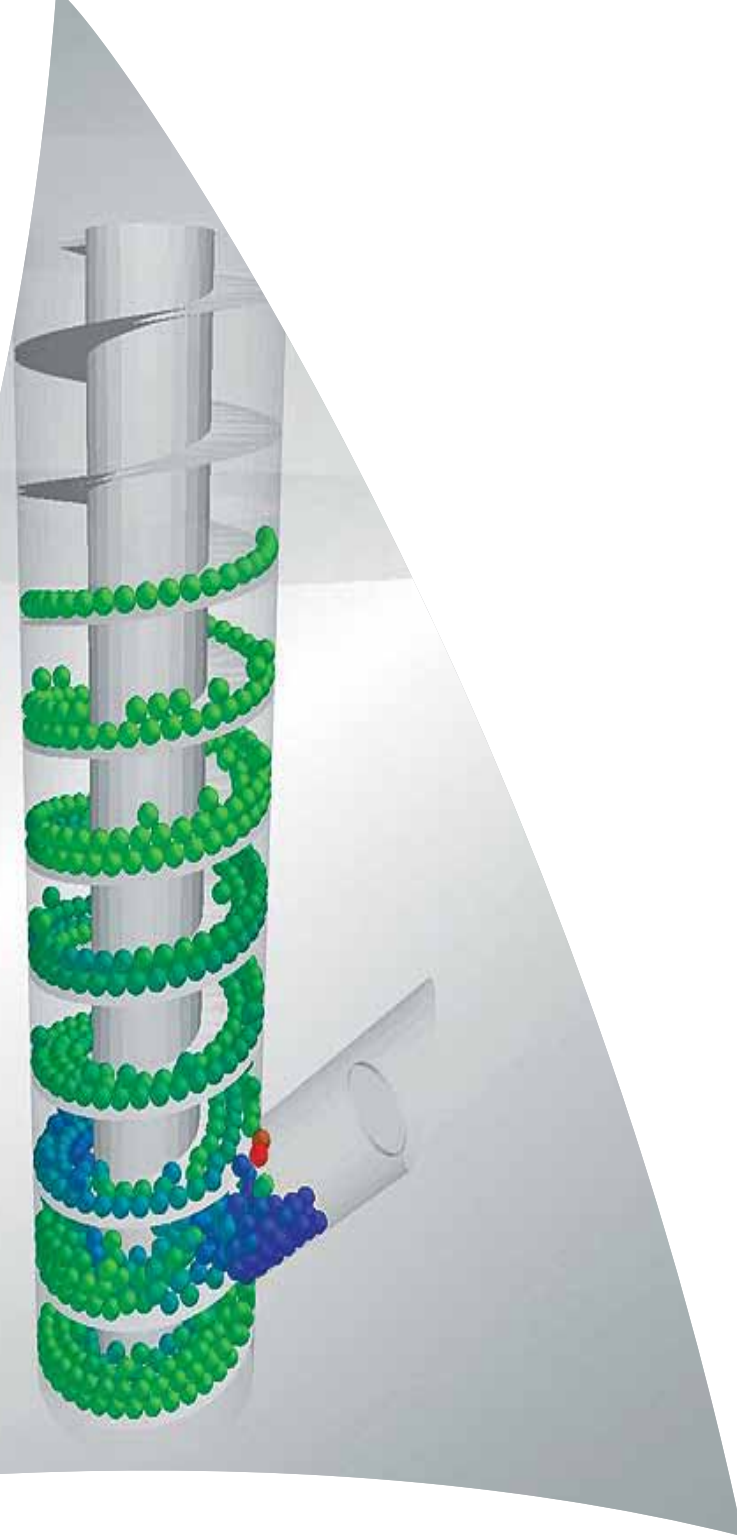
Computational fluid dynamics

Finite element analysis

Discrete element analysis

Advanced process control

Process modeling



## Knowledge Centre

The knowledge centre facilitates protection of intellectual property created by both ABSTCL and Aditya Birla Group's Businesses. It assists our technical team with the prior art search, freedom-to-operate analysis, patent filing and maintenance. Over 50+ patent applications have been filed worldwide by ABSTCL. The knowledge centre houses an extensive collection of books, journals and provides access to leading databases ensuring that our scientists and engineers are on the cutting edge of the latest information and knowledge.

## Value Added Service

### Process Scale-up

Spread across 30000 sq. ft. the process scale-up at ABSTCL is a unique and vital part of the R&D facility with multi purpose reactors that could be customised as per needs. The scale up facility offers a broad range of services across different sections which includes Chemical lab, Fibre lab, Metallurgy Lab, Flow Science Lab, High Pressure Lab and Carbon Black Lab. The pilot plant thus facilitates in ensuring seamless process transfer from laboratory to plants.



# Analytical Science and Technology

ABSTCL hosts a world class Analytical testing laboratory at its Talaja campus. The lab is built on 20,000 Sq. ft. area with state of the art equipments and Quality Management System tools. The lab is ISO 9001:2008 certified since 2010 and recommended for accreditation under ISO/IES 17025:2005 (NABL).

## Method development and validations

*Capabilities:*

High performance liquid chromatography  
Gel Permeation Chromatography  
Gas Chromatography with Headspace and MS  
Spectroscopy and Microscopy  
XRD, SAXS and XRF  
DSC & TGA  
PSA  
Streaming and Zeta potential  
Karl Fisher moisture analyser

## Material characterizations and solid state chemistry/polymorphism

*Capabilities:*

Material Characterizations and polymorphism study using SEM, XRF, XRD, DSC, TGA, and FTIR

## Chemical analysis

*Capabilities:*

Spectroscopic and Microscopy  
Separation and Environmental Analysis  
Quality Control



## Metallurgical testing

*Capabilities:*

Material Characterizations using SEM, XRF, XRD, DSC, TGA, UTM

## Quality improvement programs

*Capabilities:*

ISO 9001:2008  
ISO 17025:2005

## Quality control services

*Capabilities:*

Total quality Control testing using all the world class equipments and technologies available in our analytical labs

## Corporate Technical and Energy Services (CTES)

is a sister organisation of the Aditya Birla Science and Technology Company Ltd and provides global services across the Aditya Birla Group.



### Core Services

- Energy conservation studies
- Captive power plant services
- Waste heat recovery
- Industrial engineering services like value stream mapping
- Fresh water conservation and treatment of waste water
- Electrical power systems analysis for improvement in reliability and design
- Implementation of Energy management system En MS ISO 50001
- Organizing corporate technical seminars and publishing newsletters and informative papers on various technical issues.

WE INNOVATE.  
WE CHANGE.



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