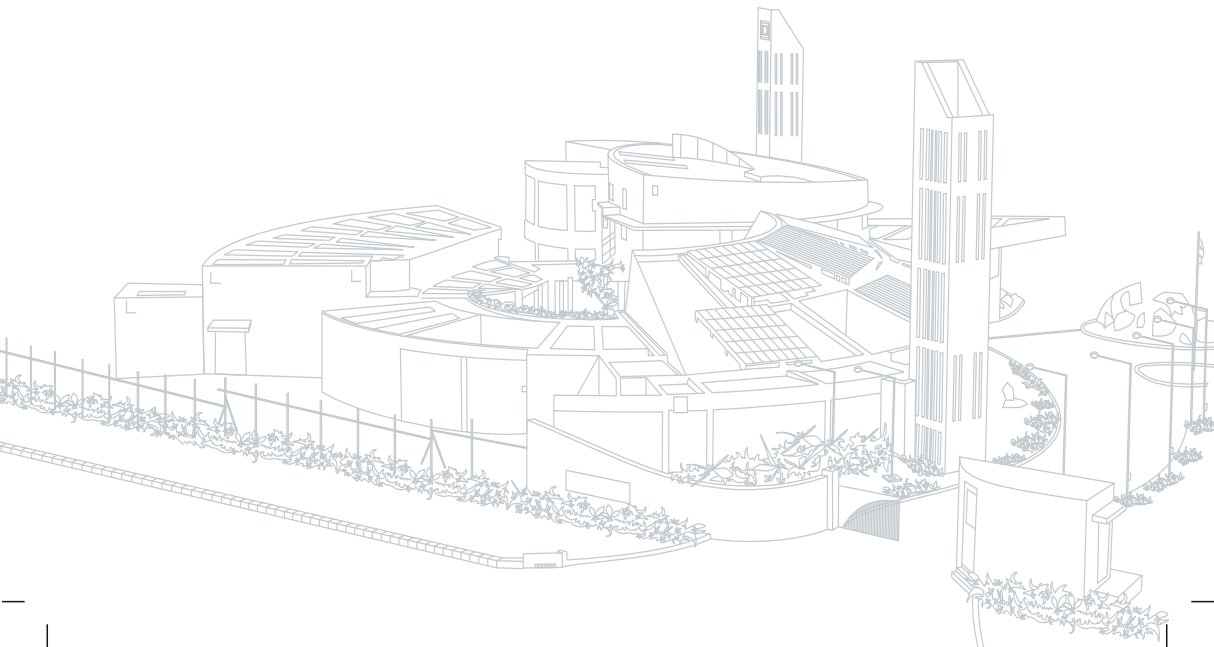




Confederation of Indian Industry

# Forging New Partnerships

## Towards Greener & Sustainable India



## Rating Systems



Green Company Rating  
[www.greenco.in](http://www.greenco.in)



**IGBC**

Indian Green Building Council  
[www.igbc.in](http://www.igbc.in)



Green Product Rating

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The selection and description of the projects in the document are to illustrate CII Soharbji Godrej Green Business Centre engagement with objective of demonstrating the thematic variety, capabilities and scope of CII – Soharbji Godrej Green Business Centre's activity.

If you have any comments or have noticed any error please write back to us at: [encon@cii.in](mailto:encon@cii.in)

CII Sohrabji Godrej Green Business Centre (CII-Godrej GBC) was established in the year 2004, is CII's Developmental Institute on Green Practices and technologies, offering world class advisory services on conservation of natural resources. CII Godrej GBC works closely with the stakeholders in facilitating India emerge as one of the Global Leaders in Green Businesses by 2022, by demonstrating Green makes Business Sense. CII Godrej GBC is housed in India's first Platinum rated Green Building.



CII Godrej GBC, with the support of all the stakeholders plays a catalytic role in introducing new green growth models in India. CII Godrej GBC adopts a holistic approach in developing ecologically superior and economically viable business models. Thought leaders of Indian industry are part of CII Godrej GBC and they play a vital role in developing new growth models. CII Godrej GBC adopts a multi-disciplinary approach and focuses on various aspects of green business- energy efficiency, green buildings, renewable energy, waste management, clean technologies, etc.,



Today, CII Godrej GBC has the unique distinction of pioneering and spearheading the 21st century green building movement in the country. India with over 3.8 Billion Sq.ft is the 2nd country in the world with largest registered green building footprint. Launching CII GreenCo Rating System, the first of its kind in the world is another key initiatives of CII Godrej GBC . GreenCo will rate the Companies on the Green front and also suggest on the way forward.



CII Godrej GBC is CII's Centre of Excellence. It is home to pool of technical experts who are equipped to develop & handle various green business models. The team offer advisory services to Indian industry and in the process facilitates them to gain the competitive advantage. CII Godrej GBC as part of its growth & outreach strategy forges various National & international collaborations and partnerships in taking forward its vision of facilitating India emerge as one of the global leaders in green business.



## Key achievements\*



3,800 Registered Green Buildings  
3.90 billion ft<sup>2</sup> green building footprint



78 GreenCo Rated Companies



104 Certified Green Products



1,500 Energy Audits Executed



More than 1,000 training programs



100+ Publications



Experience in executing  
multi-stakeholders projects



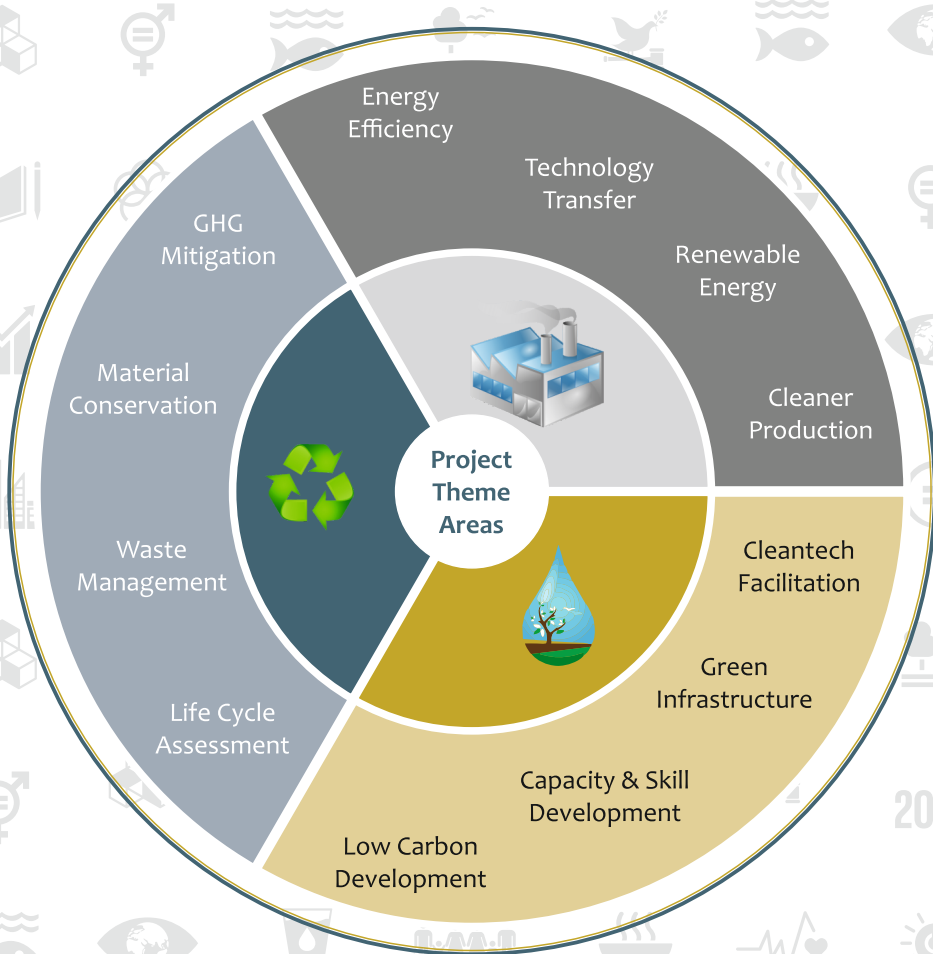
Team of 60 expert professionals



Over the years, CII Godrej GBC's partnerships with various organisations has been excellent and is evoking excellent response. The partnerships has enabled in developing Policy recommendations, cleaner production projects, new business growth models.



\* As on August 2016



2030

2030

2030

# Low Carbon Technology Roadmap for Indian Cement Sector- Phase I

CII, in partnership with WBCSD, IEA and NCB, with support from IFC was involved in development of Low Carbon Roadmap for Indian cement industry. The roadmap, supported by the 27 technical papers developed by CII and NCB, aims at reducing the carbon intensity of Indian Cement industry by over 46%. It outlines a possible transition path for the Indian cement industry to reduce its direct CO<sub>2</sub> emissions intensity to 0.35 tCO<sub>2</sub>/t cement and support the global goal of halving CO<sub>2</sub> emissions by 2050

The 27 technical papers, collectively titled Existing and Potential Technologies for Carbon Emissions Reductions in the Indian Cement Industry, outline the current status of each technology, the impact on energy consumption and anticipated benefits from implementation, the CO<sub>2</sub> reduction potential, main parameters influencing implementation, cost estimation, and the conditions, barriers and constraints of implementation.

Status - Completed

1

## Partner Organizations



## Funded by



### Thematic Area:

Resource Efficiency, Cleaner Production, GHG Mitigation

# Low Carbon Technology Roadmap for Indian Cement Sector- Phase II

The next step of the project was to analyse the plant level feasibility for the identified technologies for GHG reduction. The objective was to translate the technology papers and the roadmap to actual emission reduction at the plant level.

As part of this Phase, CII initiated the study in 5 plants and has identified energy saving potential of over 20 Million USD resulting in atleast 375,631 Ton of CO<sub>2</sub> emission reduction.

The feasibility study indicates that there is significant potential to reduce GHG emission intensity by 130 kg CO<sub>2</sub> / ton of cement and emission reduction potential of 28.8 million tons of CO<sub>2</sub> for entire Indian Cement industry.

Status - On going

2

## Partner Organizations



## Funded by



## Thematic Area:

Resource Efficiency, Cleaner Production, GHG Mitigation



## Green Power Market Development Group

CII, in partnership with World Resources Institute (WRI) supported by Shakti Sustainable Energy Foundation is working on an initiative titled -Green Power Market Development Group (GPMDG-India).

GPMDG was launched on a nationwide basis at New Delhi in January 2014. GPMDG initiative aims to rapidly scale up renewable energy uptake by commercial and industrial energy consumers in their overall energy consumption. This will be accomplished by addressing the policy and market barriers that currently impede the growth of renewable energy in the Indian industry.

GPMDG initiative seeks to create a demand for renewable energy among corporate and help companies in meeting their renewable energy purchase obligations and also make them sustainable in the long term. GPMDG also focuses on sharing share best practices and collaborate with Government, technology providers and financiers to develop a stronger business case for diversifying the energy mix with clean energy in the organisation.

GPMDG works closely with the Government and other relevant institutions to help member companies set and achieve their renewable energy goals.

As on April 2016, GPMDG has facilitated over 209 MW of Green power procurement by the Indian industry.

Status - Ongoing

3

### Partner Organizations



### Funded by



**Thematic Area:**  
Renewable Energy,  
Market Development



# Smart Power for Environmentally Sound Economic Development

The Smart Power for Environmentally Sound Economic Development (SPEED) aims to create a positive impact on the lives of rural communities in India through delivery of more affordable, reliable and clean energy services and thus improve overall quality of life.

This initiative aims to provide clean fuels and green energy to rural areas using cell phone towers and micro enterprises as anchor loads.

One of the main objective of SPEED program was to promote Decentralised power production using the renewable energy technology with assured demand and creation of conducive environment for investment in rural electrification.

SPEED aims to create new business models and to support scalable demonstration pilots of off-grid renewable energy generation and distribution systems that harness the power demand of mobile phone infrastructure and other local enterprises to provide electricity services and spur economic growth in rural communities. The mobile phone towers will provide anchor demand for power generated by rural power plants, thus increasing their commercial viability so that they can generate and distribute affordable power to rural communities.

Already 50 projects are up and running in Bihar and U.P. and the aim is to implement 1000 projects in the next 3 years. Under this initiative, CII has interacted with solar PV system manufacturers, EPC players and entrepreneurs to engage them with the SPEED initiative

Status - Completed

4

## Partner Organizations



## Funded by



Rockefeller Foundation

Innovation for the Next 100 Years

## Thematic Area:

Renewable Energy,  
Market Development



# India GHG Program

The India GHG Program launched in July 2013, aims to facilitate effective GHG management in Indian industry and in the process promote sustainable and competitive business growth models.

The primary objective of the India GHG Program is to build institutional capabilities in Indian businesses and organizations. The India GHG Program brings together internationally recognized GHG accounting and measurement tools and methodologies that serve to create a key platform that facilitates national level benchmarking of GHG emissions and incentivises and rewards sustainable business initiatives.

The India GHG Program acts as a 'Centre of Excellence' by disseminating regional, sectoral and global best practices to create a culture of inventorisation and benchmarking of GHG emissions in India.

India GHG Program seeks a multi-stakeholder approach through effective representation of stakeholders (such as other industry associations, sector associations, ministries and government agencies, civil society organisations, and experts) in promoting a standardised approach to GHG accounting.

Over 40 corporate members are part of this Program and the members are working towards promoting effective GHG Management and Mitigation.

For more details, please visit: <http://indiaghgp.org>

Status - Ongoing

## Partner Organizations



## Funded by



based on a decision of the Parliament of the Federal Republic of Germany



PIROJSHA GODREJ FOUNDATION



## Thematic Area:

Resource Efficiency, GHG Management and Mitigation and Capacity Building

# Developing Engagement Plan for Institute of Industrial Productivity (IIP)

The Institute for Industrial Productivity (IIP) is a non-profit organization whose mission is to help decision-makers in governments, financial institutions, and industry develop and implement policies and corporate practices that will dramatically reduce greenhouse emissions and improve economic efficiency in the industrial sector.

CII undertook the task of collecting and reviewing of sectoral information for cement, iron and steel, and pulp and paper sectors. It also included the review and analysis to identify industry growth and sectoral GHG emission trends, stakeholder consultations, estimation of GHG mitigation potential and development of approach for IIP's engagement in India

The project was undertaken to assist IIP in assessing the present situation with regard to energy/resource efficiency of selected energy intensive industry sectors and to identify GHG mitigation opportunities through a scoping study that would help IIP design its interventions in India.

Status - Completed

6

## Funded by



## Thematic Area:

Resource Efficiency, GHG Management and Mitigation and Analytics



## PAT Baseline, Mandatory Energy Audits and M&V Studies

CII-Godrej GBC was involved in the implementation of BEE- PAT Scheme. As part of this scheme, CII conducted baseline energy audits in 107 Designated Consumers across all the eight sectors, over 50 mandatory energy audits and Monitoring & Verification studies in 6 PAT Designated Sectors.

Further, CII Godrej GBC has been continuously working on PAT scheme by organizing awareness programmes, workshops, conferences, bringing out relevant publications, developing sector specific technology compendiums for assisting DC's identify technologies to achieve PAT targets, etc.

CII has also been frequently interacting with industry and BEE on several key areas such as need & methodology for normalization, facilitating several industries achieves PAT targets, etc.

Sector Experience: Cement, Iron & Steel, Aluminum, Chlor-Alkali, Textile, Pulp & Paper, Thermal Power Plant, Fertilizer

Partners: Associated with more than 150 designated consumers

Status - Completed

7

### Partner Organization



**Thematic Area:**  
Energy Efficiency, Monitoring & Verification, Baseline Audits

# Retrofit existing buildings in Cyberabad as Green Buildings

Indian Green Building Council (IGBC), part of CII Godrej GBC is partnering with Telangana State Industrial Infrastructure Corporation Limited (TSIIC) to facilitate Cyberabad emerge as Green Industrial Zone. This project aims to retrofit existing buildings in Cyberabad Zone as Green Buildings.

TSIIC announced a 5-point strategy for retro-fitting industrial parks of the state. As part of this initiative, IGBC undertook the technical feasibility for the selected buildings to retrofit into green buildings.

IGBC also evaluated the various technological options to reduce energy consumption and resource consumption. IGBC also facilitated the supplier and facility manager meeting also to catalyze the implementation of energy conservation projects. IGBC followed detailed methodology for conducting the feasibility study for retrofitting the existing building into Green Buildings.

Status - Completed

8

## Partner Organizations



**NASSCOM®**



Implemented by  
**giz**  
Deutsche Gesellschaft für Internationale Zusammenarbeit

## Thematic Area:

Green Building, Resource Efficiency, GHG Mitigation, Technology Implementation, and capacity building



# Technology Compendium

CII, with the support from Shakti Sustainable Energy Foundation developed technology compendiums for five industry sectors - Cement, Chlor-Alkali, Iron & Steel, Pulp & Paper and Textile.

These industry specific technology compendiums provided information on energy savings options, best practices, better/ latest technologies, etc. with their financial implications.

Key activities undertaken were to complete mapping of each of the sectors in terms of the processes/ technologies being presently employed, the present level of technologies and scope for improvement, keeping in mind the best operating practices worldwide, including identification of the range of technologies, energy efficiency equipment being used, etc. categorised as process specific and utility. The other activity carried out was Identification of national/ international best practices and Preparation of fact sheets for each technology and best operating practice option

The compendiums were distributed among the industry, and facilitated DCs prepare their energy efficiency action plans to achieve their SEC reduction targets under PAT program.

Status - Completed

9

## Partner Organizations



## Funded by



**Thematic Area:**  
Energy Efficiency,  
Technology Implementation

## Perform Achieve and Trade – Widening Study – Auto, Dairy, Beverages and Chemical

The Perform Achieve and Trade (PAT) Scheme launched by BEE covers 8 Energy Intensive sectors. The first cycle of PAT started from 1st April 2012. BEE further plans to widen the coverage of the PAT scheme, in subsequent phases, by adding more new industrial subsectors depending on the energy consumption. For new industrial segments, there is a need to study the energy consumption in detail to establish the threshold limit for the eligibility for the designated consumers. This project was conceptualized for this purpose.

CII as part of the project activity undertook the mapping of energy consumption in automobile (assembly), beverages and distillery, chemical (other than petrochemical, chlor-alkali and fertilizer) and dairy sectors in India.

As part of the project CII undertook the collection, compilation and analysis of energy related data for the sectors, consultation workshops and preparation of overview report of the above sector covering types, manufacturers, production, capacity utilization, policy, energy consumption etc.

CII through this study suggested the sectors which can be included in subsequent phases of the PAT scheme and suggested the threshold energy consumption for the new sectors.

Status - Completed

10

### Partner Organizations



### Funded by



### Thematic Area:

Energy Efficiency and analytics



# Monitoring and Verification for Implemented Energy Saving Measures in Indian Small and Medium Enterprises

As a part of Global Environmental Facility (GEF) Programmatic Framework Project for Energy Efficiency (EE) in India, a project has been launched with the objective of increasing the demand of Energy Efficiency investments in targeted Micro, Small and Medium Enterprise (MSME) clusters and to build their capacity to access commercial finance.

Phase -I of the project involved conducting energy audits, identifying energy saving opportunities and assisting the units in implementing energy savings projects. These activities was carried out by individual consultants.

CII was appointed to undertake the Monitoring & Verification for the implemented measures. The Monitoring and Verification activity not only covered evaluating the energy savings achieved but also covered in brief about the evaluating the environment and social benefits achieved by the company by implementing energy saving projects.

CII conducted M&V in more than 450 units and submitted the unit -wise individual reports, Cluster wise reports, and Environment & Social Management Framework (EMSF) cluster profile report. As part of the project CII also conducted more than 40 capacity building workshop in more than 30 clusters.

Status - Ongoing

11

## Partner Organizations



Thematic Area:

Energy Efficiency, Technology Implementation, Monitoring & Verification



# Up-Scaling Energy Efficient Production in Small Scale Steel Industry in India

UNDP is implementing a project titled- “Up-scaling energy efficient production in small scale steel industry in India”. The objective of this project is to scale-up adoption of energy efficient technologies in small scale steel industry in India.

Through this project, UNDP seeks to facilitate the diffusion of energy efficient technologies in the small scale steel industry to bring down end-use energy level, improve productivity and cost competitiveness and to reduce associated emissions of greenhouse gases (GHG) and related pollutant levels.

CII carried out Monitoring & Verification activities, including post implementation measurement for SRRM units to quantify the energy savings, production and productivity improvement achieved through this engagement. The units were located in area of Wada, Nashik, Goa and Silvassa clusters.

Status : Ongoing

12

## Funded by



*Empowered lives.  
Resilient nations.*

## Thematic Area:

Energy Efficiency, Technology Implementation,  
Monitoring & Verification



## Foster GHG Emission Reduction Technologies in Indian Cement Industry

This project aimed at identifying and implementing measures that can bring down GHG emissions from cement industry.

Key activities undertaken under this project included- offering services to facilitate companies achieve the GHG Reduction over 50,000 Tons of CO<sub>2</sub> in Indian cement industry.

Based on the international missions and taskforce meetings, a 'Best Practice' manual was published highlighting the GHG reduction potential was released.

Further, four workshops for sharing best practices and identifying replication potential opportunities were organized. The outcome of the project served as a background study to develop Low Carbon Roadmap for Indian cement industry.

Status - Completed

13

Funded by



**Thematic Area:**  
Energy Efficiency, Technology Implementation, GHG Mitigation

# Addressing Waste Management Challenges by Promoting coprocessing in Indian cement industry

CII is working on an initiative to address waste management challenges by increasing use of Alternative Fuels & Raw materials (AFR) in Indian Cement Industry.

The main objective of this project is to facilitate increased AFR usage in Indian Cement industry through capacity building, policy advocacy, increasing data availability and facilitating exchange of waste by working closely with industry, Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCBs), thereby reducing environmental impacts of waste generation and raw material usage.

As a result of the concerted efforts, the overall utilization of Alternate Fuel and Raw material has increased for overall sector and current TSR stands at 4% and highest is 19%, which was less than 1% in 2010.

Status : Ongoing

14

## Partner Organizations



## Funded by



## Thematic Area:

Energy Efficiency, Technology Implementation



# Sustainable Recycling Industries (SRI)

Plastic recycling efficiency, performed by the Indian informal sector, surpasses recycling systems of many developed countries. However, some hazardous additives such as Brominated Flame Retardants (BFR) in plastics are not removed, thereby contaminating valuable resources destined for new products. Secondary plastics bought in the markets is thus often contaminated.

The SRI project in India aims to identify an alternative mechanism for handling of BFR plastics, develop technical standards for the handling, transport and destruction of BFR plastics, create a pilot take-back mechanism to segregate & prevent BFR plastics from entering the secondary value chain and design and implement a monitoring system.

SRI builds capacity for sustainable recycling in developing countries. SRI improves local capacity for sustainable recycling together with private and public institutions, as well as the informal sector in India, Colombia, Egypt, Ghana, Peru and South Africa.

The project stakeholders include representatives from electronic goods manufacturers, plastic & e-waste recyclers, standards bodies, regulatory agencies, research institutions, etc. CII – Godrej GBC involves stakeholders to guide and contribute to the project. The stakeholder committee functions through continuous information exchange and regular stakeholder interaction.

Status - : Ongoing

15

## Partner Organizations



## Funded by



## Thematic Area:

Recycling, Waste Management, Capacity Building and Research & Development.

CII- Godrej GBC has been assisting several Indian States to estimate their carbon footprint and in the process enable the States to plan for Low Carbon Development.

The main objectives of studies are to:

- Enable the state develop emissions inventories following internationally recognized GHG accounting and reporting principles with detailed attention to the unique context of local government operations
- Develop a carbon footprint to serve as a basis towards state's climate goals
- Estimate current carbon emissions and project emissions profile by 2020 in Business as Usual (BAU) scenario
- Identify mechanisms for intervention for the state to reduce carbon intensity across various sectors like energy, agriculture, industry, transport, etc.
- Develop a Low carbon roadmap for State

CII has worked with Tamil Nadu, Andhra Pradesh (Before Bifurcation), Odisha and Meghalaya.

## Partner Organizations

### State Governments

#### Thematic Area:

Energy Efficiency, Climate Change,  
Low Carbon Development



# Life Cycle Inventory Database

CII Godrej GBC is the Regional Coordination Centre for LCI & LCA in India, part of the local/ regional network of LCI experts created by ecoinvent, Switzerland. As regional coordinator, CII Godrej GBC aims to actively support ecoinvent in developing regional LCA/LCI expertise, in collecting regional LCI (life cycle inventory) data, and in reaching out to experts in India and the surrounding region.

As part of this activity, CII Godrej GBC has already organized a series of webinars and capacity building workshops, to familiarise industry and other stakeholders with the concept of LCI and LCA (life cycle analysis). It has also begun to develop LCI datasets for the Iron and Steel sector in India. In the future, similar datasets for other sectors, specific to India, are expected to be developed.

CII Godrej GBC is also working on LCA studies for companies in the cement, paper and other sectors.

Status - : Ongoing

17

## Partner Organizations



## Funded by



## Thematic Area:

Environment Sustainability, Life Cycle Assessment, Capacity Building and Research & Development.

CII was appointed to undertake the post commissioning evaluation study for the energy efficiency project financed by IREDA and ICICI Bank

The main objective of the project was to evaluate energy saving of the projects and compare the realized savings with respect to the projections in Detailed Project Report.

CII undertook the detailed measurement for the energy efficiency projects and calculated the actual savings achieved by the units.

CII did the evaluation study for more than 10 projects funded by the banks for energy efficiency.

## Partner Organizations



### Thematic Area:

Energy Efficiency, Financing,  
Monitoring & Verification



# Mission on Sustainable Growth

The core purpose of the Mission on Sustainable Growth (MSG) was to promote and champion conservation of natural resources in Indian Industry without compromising on high and accelerated growth. As a first step in the direction of fulfilling this mission, a CII Code for Ecologically Sustainable Business Growth was developed, which aimed at involving the top management to seek voluntary commitments to reduce resource consumption and emissions intensity.

The CII Code had ten natural commandments, including energy intensity reduction, specific water consumption reduction, GHG emissions intensity reduction, reduction in waste generation, utilization of renewable energy, increased rainwater harvesting, green purchase, life cycle analysis, clean technologies, product stewardship and reduction in consumption of other natural resources.

450 companies participated in this programme and some companies reported savings of Rs. 1802 Million/Annum. The initiative created a greater access to -

- Adopt environment friendly technologies
- Explore new opportunities for the Indian industry
- Adopt latest technologies & equipment, productivity improvement, resource efficiency

As a national interest, this initiative will help to create a long term strategies for the sustainable development of the country. MSG facilitated in launching the GreenCo Rating System, a first-of-its-kind in the world rating system.

## Partner Organizations



## Funded by



Status - : Completed

21



## Thematic Area:

Resource Efficiency, Environment Sustainability, Voluntary Framework



# Review of Best Practices by Eco-Industrial Parks in India

In 2013, UNIDO commissioned a project to document best practices for eco – industrial parks in developing countries. As part of the project, CII has identified & selected three industrial parks in the country and visited the eco- parks to understand various practices followed by the park owners and unit located in the parks.

Thereafter, CII developed three case study documents covering best practices for environmental management followed by the eco- park owners and also highlighted the innovative approaches followed by park. The document also covered various RECP initiatives by units located within the park.

CII also prepared a policy review document for various policies in India promoting Eco Industrial parks and highlighted the areas where further interventions are required.


Status - Completed

22

## Partner Organizations



## Funded by

 Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra  
  
Swiss Confederation  
  
Federal Department of Economic Affairs,  
Education and Research EAER  
State Secretariat for Economic Affairs SECO

## Thematic Area:

Energy Efficiency, Technology Transfer,  
Cleaner Production, Capacity Building



## Feasibility for Green Ports

CII was appointed as consultant for developing a feasibility report developing existing port into green port. As part of this activity, CII undertook a baseline survey of existing infrastructure at the Port and environmental management practices. The feasibility study aimed at evaluating the solutions for ensuring the sustainability of port operations and the necessary requirements to meet the Green port capabilities.

CII also suggested a Green Port Strategy highlighting the focus areas. The feasibility Report covered the critical areas of port operation such as water usage, energy, air, waste management, sustainable development and sustainable business practices.

CII suggested the following:

- Developing a Green Port Strategy
- Implementation of effective waste management systems
- Implementation of global initiative on Environmental Ship Index to encourage cleaner ships
- Green belt preservation
- Implementation of EMS (Environmental Management System) – ISO 14001
- Exploration of on Shore Power Supply (or) Cold ironing
- Greenhouse Gas Inventorisation
- Dust Control Systems
- Energy Efficiency
- Renewable Energy

### Partner Organizations



Status - Completed

23



**Thematic Area:**  
Green Infrastructure, energy Efficiency,  
Technology implementation, Capacity Building

The Aviation Climate Leadership Initiative aimed at facilitating Indian Aviation industry leadership on climate change by introducing GHG accounting measures and the development of emission reduction roadmap for low carbon growth of the sector.

The objective of the study was to assess the risk with respect to GHG performance of the sector.

The project also focused on developing a strategy to demonstrate compliance with GHG related future policies and regulations. As part of project, probable scenarios were analyzed to carve out normative framework for actions.

The findings of the project was presented in form of report and it included following:

1. Overview of marked based compliance programs as compared with environment taxes
2. Extent of monetary incentives that airline could potentially realize by adopting international programs on fuel efficiency improvements
3. Commonly available fuel efficiency measures that aviation industry can adopt
4. Cost savings through fuel efficiency improvement was compared with cost of compliance with stringent policy measures

## Partner Organizations

firstclimate<sup>2</sup>

## Funded by



Foreign &  
Commonwealth  
Office

## Thematic Area:

Green Transport, Climate Change, Energy Efficiency, Capacity Building



# Climate Technology Initiative – Private Financing Advisory Network (CTI PFAN)

CII-Sohrabji Godrej Green Business Centre (CII Godrej GBC) partnered with USAID-supported PFAN Asia to facilitate financing for renewable energy developers, manufacturers & energy efficiency projects in India – both in terms of debt and equity.

This was done through the organization of targeted workshops in three cities, participants for which were preselected through an application process. Workshop participants were primarily entrepreneurs with products or projects that required financing. About 200 companies were identified to participate in these workshops, and approximately 75 companies participated.

Workshops were followed by one-on-one sessions with PFAN on potential support that PFAN would be able to provide to those companies.

Status - Ongoing

25

## Partner Organizations



### Thematic Area:

Green Infrastructure, energy Efficiency,  
Technology implementation, Capacity Building

# Asian Cleantech Msme Finaning Network (ACMFN)

This project is aimed at building and leveraging a cleantech financing ecosystem to spark improved access to finance for Asian Cleantech MSMEs in order to enhance sustainable consumption and production patterns in Asia.

Under this project, the lead partner: ADFIAP with technical partner: adelphi and National Focal Points viz CII in India, PUPUK in Indonesia and CEESTA in China, are going to support the uptake of cleantech innovation and to improve access to finance for cleantech MSMEs across Asia.

The action will identify and scale up successful SCP practices in Asia through acceleration of MSME cleantech innovation capacities. The action will also promote investment readiness and financial literacy of MSMEs.

Along the MSMEs, the financial institutions will be capacitated in cleantech financing through technical assistance, peer learning opportunities, collaboration for co-financing, network creation and matchmaking with promising cleantech MSMEs.

The project is at its nascent stage and the expected impacts are:

1. Capacity Building to be received by 400 MSMEs and 200 FIs
2. Developed innovative guidebook consisting of cleantech financial products
3. 20 FIs with updated cleantech portfolio
4. 12 national matchmaking fora between MSMSE and financiers

## Partner Organizations



## Funded by



Programme funded by the  
EUROPEAN UNION

## Thematic Area:

Clean Technology, Climate Change, Energy Efficiency, Capacity Building



# Aluminum Stewardship Initiative

The Aluminum Stewardship Initiative (ASI) was started in 2012 to foster greater sustainability and transparency throughout the aluminum industry.

Spearheaded by several industry players, the ASI is a non-profit initiative that seeks to mobilise a broad base of stakeholders to establish and promote responsible leading practices, across the aluminum value chain, in business ethics; environmental performance; and social performance.

CII Godrej GBC is a member of ASI Standard Group and has contributed to development of ASI's global standard for sustainability.

In December 2014, new comprehensive standard was released with an objective to improve industry's environmental, social and governance performance throughout its entire value chain, including plans to reduce its greenhouse gas emissions.

Status - Ongoing

27

## Partner Organizations



Thematic Area:

Standard, Sustainability Framework

# Fiscal Instruments for Low Carbon Development – West Bengal, Odisha and Tamil Nadu

This project was aimed at supporting the governments of West Bengal, Odisha and Tamil Nadu in adopting fiscal instruments which would mobilize low carbon investments and facilitate low carbon industrial development. The first phase of the project involved developing recommendations based on detailed review of the respective state industrial policy, as well as national and international experiences. Cost-benefit analysis was conducted for these recommendations, and the financial, environmental and social benefits of implementing the fiscal instruments were presented.

The instruments were intended to have no or very low cost to the state exchequer. The second phase consisted of providing support to state governments in implementing the selected recommendations. Capacity building for government officials and stakeholder consultation were also carried out. A report on clean technologies was developed to provide assistance for industries on accelerated implementation of clean technologies:

## Odisha & West Bengal

1. Low Carbon Refunding Scheme - Power & Industry
2. Incentives for Waste Heat Recovery Projects
3. Incentives for Green Buildings, for reduced waste recycling

## Tamil Nadu

1. Green Cess on Electricity
2. Integrating Cess on Waste Disposal with subsidies for co-incineration in cement kiln
3. Reduction of VAT on energy saving equipment

## Partner Organizations

Partners were Jadavpur University, Madras School of Economics and Eunomia Research and Consulting (UK)

## Funded by



Foreign &  
Commonwealth  
Office

Status - Completed

28

## Thematic Area:

Climate Finance, Low Carbon Development, Fiscal Instruments



# India's Ecological Footprint Study – A business perspective

CII undertook a project of highlighting India's Ecological Footprint. The main objective of the project was to create awareness and accelerate action towards ecologically sustainable growth in the country.

The study outlined India's Ecological Footprint and bio capacity, and the implications of current and future trends for Indian industry.

It also examines water consumption and human development concerns and concludes with case studies suggesting opportunities for addressing India's Ecological Footprint.

The report suggested that that business and government intervention are needed to ensure that the ecological debt is reduced, and thus ensure a sustainable future in which India remains economically competitive and its people can live satisfying live

From the analysis of past trend and future projection, it was recommended that to maintain a robust economy and good quality of life, Indian businesses and government must invest in areas such as women's health and education to reduce family size, resource-efficient cities and infrastructure, and increased food system productivity.

Status - Completed

29

## Partner Organizations



Global Footprint Network  
Advancing the Science of Sustainability



**Thematic Area:**  
Natural Capital Accounting, Ecological Foot Print  
Environment Management



With an objective to facilitate market transformation for energy efficiency and energy conservation products & services, a simplified and user friendly manual was prepared for the use of financial institutions and stakeholders.

The manual covered the energy saving potential for industries, technologies available for energy efficiency improvement, equipment suppliers, government policies and incentives available and schemes available by leading financial institution.

The manual outlined energy conservation methodologies and case studies in 10 major industrial sectors and 8 commonly used equipment in the Indian Small & Medium enterprises.

The report highlighted that the MSME consumes more than 8000 MW and has saving potential of more than 1000 MW.

The manual served as knowledge sharing document and contributed in promoting/development of market for energy efficient equipment and suppliers in the Indian Industry.

### Funded by



### Thematic Area:

Energy Efficiency, Technology Transfer,  
Cleaner Production, Capacity Building



## Case Study Bulletins on Energy Efficiency - Three Country Energy Efficiency Initiative

The project- “Developing Financial Intermediation mechanism for energy efficiency projects in Brazil, China and India” aimed to substantially increase investment in energy efficiency by the domestic financial sectors.

As part of the project CII Godrej GBC prepared 50 case study bulletins of the implemented energy conservation measures in the industry.

The bulletins covered case studies which can be implemented across the sectors such as waste heat recovery, air fogging system, energy efficient motors, installation of VFD and many more.

The bulletin covered in detail about projects, implementation, financing of projects and benefits in terms of cost, energy and environment impact reduction were highlighted.

The case study bulletins was shared among industry and stakeholders to accelerate energy efficiency projects implementation.

Status - Completed

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### Partner Organizations

**UNEP RISO CENTRE**  
ENERGY, CLIMATE AND SUSTAINABLE DEVELOPMENT



### Funded by



### Thematic Area:

Energy Efficiency, Technology Transfer, Cleaner Production, Capacity Building

## Manual on VFD and Manual on Pump

In 1999, CII initiated a project on promoting energy efficiency in Indian Industry, energy efficiency in pumping systems and use of Variable Speed Drive. As part of the project activity CII prepared two manuals:

1. Manual on VSDs - A comprehensive manual prepared to promote awareness and disseminate information on successful implementation of variable speed drives in the Indian industry. This project was supported by Energy Management Centre, Ministry of Power, Government of India.
2. Manual on Pumps - A single source reference manual on approach to energy conservation in pumping systems along with actual implemented case studies.

Status - Completed

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### Partner Organizations

#### Industry stakeholders

#### Thematic Area:

Energy Efficiency, Technology Transfer,  
Capacity Building, Market Development



## Promoting investment in energy efficiency and environment projects in select sectors

In 1999, the project was initiated to promote investments in Energy Efficiency and Environment improvement projects in Indian industry with respect to the following energy intensive sectors – Cement, Pulp & Paper, Sugar, Glass & Ceramics, Textile Processing and Fertilizer (Urea).

Important activities carried out included:

1. Development of Manual on Energy Conservation at Design Stage
  - a. This manual included all the energy saving aspects that can be incorporated at design stage for achieving energy efficiency. It covered six energy intensive sectors (cement, paper, sugar, textile, fertilizer, glass & ceramics) and ten commonly used equipment's. More than 100 technical experts were involved in developing this manual
2. Case study booklets on energy efficiency
  - a. Six case study booklets in six energy intensive sectors covering actual implemented case studies were published as part of the project
3. Seminars
  - a. To widely disseminate information about the project and also about latest energy efficient technologies in different sectors, five technology seminars pertaining to Cement, Paper, Sugar, Ceramics and Textile industry were organised.
4. Facilitating Buyer Seller Meet
  - a. To bring both the buyer and seller on a common platform to facilitate interaction for resolving each others problems and enhance investment on energy saving devices, three buyer seller meets were organised.
5. Communication
  - a. Apart from the seminars and various promotional materials, a web-site was also hosted under the project to widely spread the benefits & results of the project and provide access to information related to energy efficiency for industry personnel. The web-site was maintained during the course of the project. The web-site was hosted on March 1999 and it was maintained till March 2001.

Status - Completed

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Funded by



Thematic Area:

Energy Efficiency, Technology Transfer,  
Cleaner Production, Capacity Building

# Estimating Waste Heat Recovery Potential in Indian Cement Industry

Energy Efficiency has taken top priority in Indian Cement industry, but then Waste Heat Recovery (WHR) systems in cement facility was not widely adopted. The study indicated there is a further potential of more 415 MW of WHR opportunity and would create investment opportunity of over USD 724 Million.

The activities undertaken as part of project were:

1. Review of major WHR technologies implemented around the world
2. To identify potential of WHR considering the pyro section, mass flow, and temperature of the gases
3. Highlighting existing application of WHR in India – Success and barriers
4. Mapping of WHR technologies to cement process, potential energy savings and power generation capacity
5. Technical Feasibility and financial viability of the projects
6. Recommendation on roles for major stakeholders in the to facilitate market uptake of WHR technologies in the country

Status - Completed

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Funded by



## Thematic Area:

Resource Efficiency, Cleaner Production, GHG Mitigation



# The Indo - Swedish Innovations' Accelerator Program

The program aims to promote the sustainable business of renewable energy and energy efficiency, between India and Sweden.

The program covers the whole chain of innovations within the area of renewable energy and energy efficiency.

It is a platform to build much needed bridges towards joint innovation research development and deployment which answer shared needs and are of mutual benefit.

Therefore the Innovations' Accelerator targets innovators, inventors, entrepreneurs as well as established business actors and institutions, which share a view to leverage the potential in new and renewable energy solutions.

As part of the program, CII is facilitating B2B meetings among the Swedish companies and Indian Companies. Many workshops, meetings, webinar have been organized to accelerate innovations in green economy, energy efficiency, water conservation, renewable energy and many more.

Status - : Ongoing

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## Partner Organizations



## Funded by



## Thematic Area:

Clean Technology, Climate Change, Energy Efficiency, Capacity Building

# Pilot application for mainstreaming GHG management in select manufacturing sectors

Building on the success of the previous project in Cement & Chemical sector, Paper & Pulp and Engineering sectors were selected for Pilot application for GHG Management.

Considering the potential and impact these sectors have, GHG inventorisation in ten pilot units from Engineering and Pulp & Paper Sector was initiated.

Firstly, the project aims to identify and assess the GHG emission resulting from units operations. Secondly, the development of a structured inventory of energy uses and other activities that produce greenhouse gas emissions will enable to identify areas of improvements such as energy efficiency or improved logistics operation and finally it can facilitate the development of emission reduction strategies that can provide a financial benefit as well as an environmental benefit i.e. the business case of doing GHG inventory.

As part of the project ten units were selected for the pilot. The units were selected based on interest shown by the companies and commitment from the top management for the project activity. Following is the sector wise summary for the pilot GHG studies in the sector. Emission mitigation opportunities were also identified for the individual units.

Through the project more than 500 individuals in more than 60 companies have been trained on GHG accounting and RECP techniques.

Status - Ongoing

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## Partner Organizations



## Funded by



## Thematic Area:

Resource Efficiency, GHG Management and Mitigation and Capacity Building

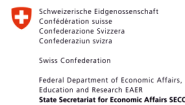


## Member of Global Networks / Initiatives





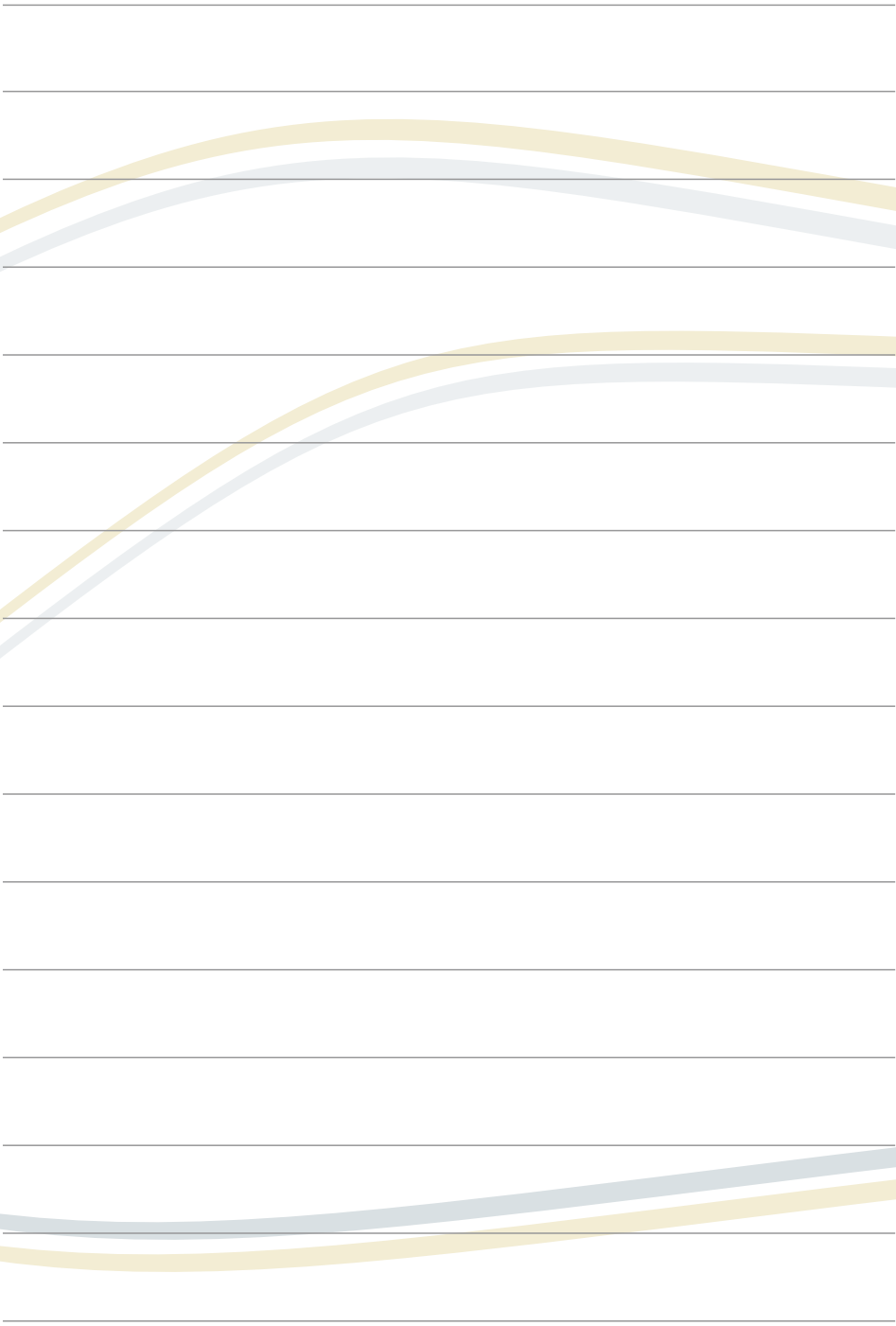
# Partner Organizations

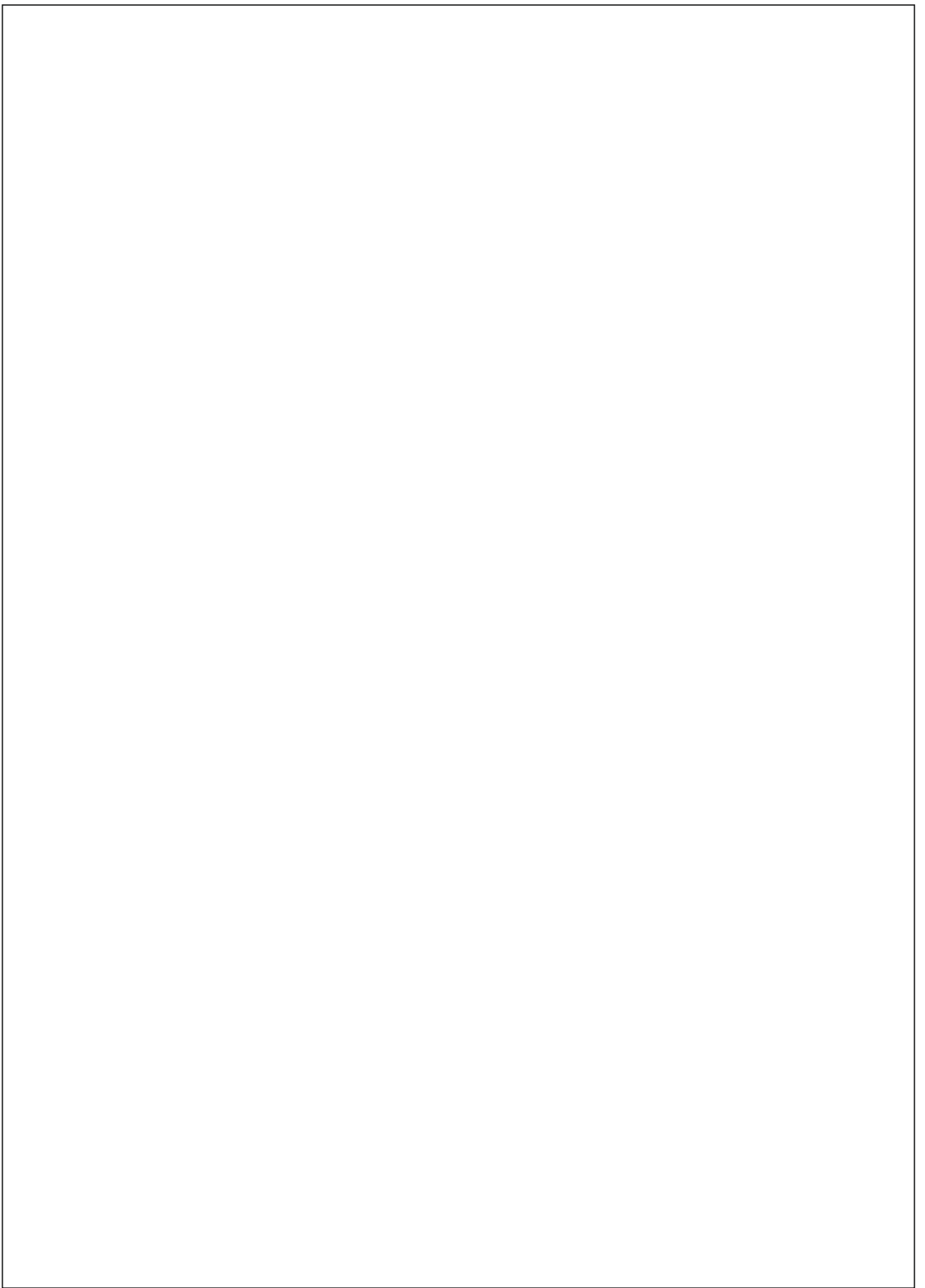


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Notes







For more information on the projects & collaboration opportunities, please contact

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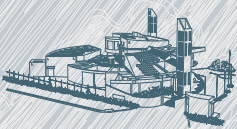
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