

ADITYA BIRLA



BIRLA CARBON

MAXIMIZING OUR POTENTIAL

THROUGH SUSTAINABLE
OPERATIONAL EXCELLENCE

BIRLA CARBON
SUSTAINABILITY REPORT 2016





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Welcome to the 2016 Birla Carbon Sustainability Report

This is our fourth Sustainability Report since we began reporting in 2013 and our second online report. We present the progress made during the Fiscal Year 2016 (FY2016) in realizing our Sustainable Operational Excellence (SOE) strategy. The icons above represent our six focus areas.

Sustainability at Birla Carbon



Sustainability is no longer just about minimizing our risks: it is about maximizing our potential. Birla Carbon's sustainability journey has been all about realizing this potential."

Dr Santrupt Misra, Chief Executive Officer



We continue to make good progress on our sustainability goals while refining our approach, even though the global business environment has changed dramatically."

Kevin Boyle, Chief Operating Officer

Our key figures



100%
employees completed Code of Ethics training.



5.3%
profit reinvested in R&D.



\$33.4M
invested in process improvements related to energy efficiency and reducing GHG emissions.



93%
share of total costs spent on suppliers who have received our Code of Ethics in their own language.



Best safety record
in 170 years.



100%
facilities participate in community engagement.



Our approach



Sustainability is no longer just about minimizing our risks: it is about maximizing our potential. Birla Carbon's sustainability journey has been all about realizing this potential."

Dr Santrupt Misra, Chief Executive Officer

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Sustainable Operational Excellence

Our sustainability approach is driven by our Sustainable Operational Excellence (SOE) strategy. SOE helps us improve operating standards, manufacture carbon black as efficiently as possible, minimize adverse impacts on natural resources and the environment and maximize our positive impact on society, while continuing to deliver excellence to our customers. It influences all aspects of our business decisions, from designing and operating our plants to engaging with our customers, our employees and the communities where we operate.

Message from Joe Gaynor



At Birla Carbon we are committed to remembering our past and building our future. We have been in business for over 170 years. We want to be here for the long term and we are actively working toward this goal. By taking proactive steps, we can ensure that Birla Carbon is the preferred supplier for our customers – and the preferred employer for our people."

Joe Gaynor, Chief Legal, Sustainability and Risk Officer



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Aditya Birla Group sustainability vision



By 2017, the Aditya Birla Group endeavors to become the leading Indian conglomerate for sustainable business practices across its global operations, balancing its economic growth with environmental and societal interests."

Kumar Mangalam Birla, Chairman Aditya Birla Group

Our SOE Philosophy

Engage

Engaging with our stakeholders

To take business decisions that ensure operations remain sustainable, we frequently engage with our employees, customers and the local communities. We listen to our stakeholders to remain aligned to the relevant issues.

Enable

Enabling our people

Real change is only possible when it occurs at all levels. We invest in creating the optimal governance structure and providing the necessary resources that enable our people to adopt and be a part of our sustainability vision.

Act

Walking the talk

We set ourselves business targets that require us to be agile in our operations. Through **responsible stewardship**, Birla Carbon adopts the best internationally recognized standards and tries to improve on them. Leadership in our industry demands continuous improvement and we are determined to be benchmarks of these measures.



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The story of carbon black

What is carbon black?

Carbon black is an ingredient that is essential to making many of the products we use every day stronger, deeper in color and longer lasting. In its pure form carbon black is a fine black powder, essentially composed of elemental carbon; it is produced by partial burning and pyrolysis of low-value oil residues at high temperatures under controlled process conditions.

Carbon black is mainly used to strengthen rubber in tires, but can also act as a pigment, UV stabilizer, conductive or insulating agent in a variety of specialty rubber, plastic, ink and paint applications. Apart from tires, other everyday uses of carbon black include hoses, conveyor belts, plastics, printing inks and automotive coatings.

How is it made?

At Birla Carbon, we produce carbon black in a high temperature reactor through a tightly controlled flame-synthesis process that uses oil, and sometimes natural gas, as feedstock. The oil is usually a residue derived from crude oils or coal and is purchased from refineries, petrochemical plants and coal tar distillers. [Birla Carbon Manufacturing Film](#).

By making adjustments to the reactor conditions – such as temperature, flow rates, reaction time and reactor design – we are able to produce a wide variety of carbon black grades with different morphology (specific surface area and structure level) to meet the diverse needs of all of our customers. Throughout the manufacturing process, we use distributive control systems to ensure our products meet the highest quality standards.

The carbon black manufacturing process produces large quantities of hot reactor tail gas with a heating value that can be utilized to make steam and electricity. We recover as much as possible of this tail gas energy for our own internal energy needs, but we also supply our energy surplus to businesses and homes around our sites. This greatly reduces our net greenhouse gas emissions and provides a valuable resource to our neighboring communities and partners.

Carbon black and its challenges

Like many manufacturing industries reliant on naturally occurring raw materials, carbon black faces challenges at various stages of its production, transport and utilization, as well as public perception. Birla Carbon works to proactively overcome and educate our stakeholders about these challenges and we have addressed many of them in this report.



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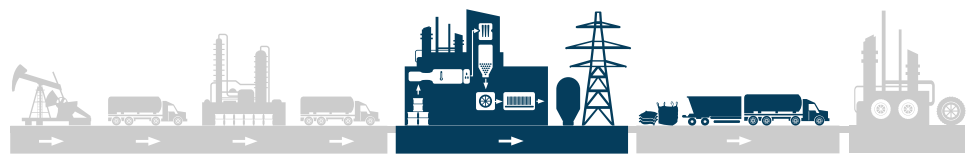
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The carbon black manufacturing process

Our six step manufacturing process

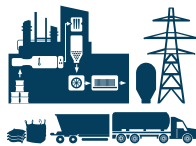


Carbon extraction, refinement and transportation

Manufacturing process

Transportation to customers

End product



Feedstock oil

To begin the process, preheated air and oil (and sometimes natural gas) are fed to the reactor in tightly controlled amounts.



Reactor

Inside the reactor, the air and hydrocarbons undergo a complex set of reactions – partial combustion, thermal decomposition, particle nucleation and particle growth/aggregation. These reactions occur in temperatures up to 1,800 degrees Celsius and can take less than 0.01 of a second.



Water injection

Water is then injected to stop the reactions by reducing the temperature of the carbon black 'smoke' stream leaving the reactor.



Separation

This 'smoke' stream is then routed to a baghouse that separates the carbon black from the reactor tail gas using hundreds of fabric filter bags. The carbon black is a light, fluffy powder as it exits the baghouse and is transported to an accumulator tank.



Pellet formation

The carbon black powder is mixed with a binding agent and water in a pelletizer to form pellets, which are then dried in a rotary drier. This process increases its bulk density by up to five times, allowing for more efficient transportation to our customers.



Storage and packaging

In a final step, the carbon black pellets are packaged in a variety of containers, ranging from 10 kg paper bags to 60 tonne railroad cars for transportation to our customers.



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Dr Sanrupt Misra, Chief Executive Officer



Sustainability is no longer just about minimizing our risks: it is about maximizing our potential. Birla Carbon's sustainability journey has been all about realizing this potential."

The importance that Birla Carbon places on sustainability is signified by its presence as an integral part of our stated vision, which is "to be the most respected, dynamic and sustainable global carbon black business."

With every passing year, we are able to further explore the finer nuances of sustainability, both as Birla Carbon, the world's largest carbon black producer and as the Aditya Birla Group, its parent organization. Sustainability is no longer just about minimizing our risks – it is about maximizing our potential. The Birla Carbon sustainability journey is all about realizing this potential and creating new opportunities.

Birla Carbon was the first business in the Aditya Birla Group to establish the role of Chief Sustainability Officer (CSO), who drives the sustainability agenda at Birla Carbon. Similarly, Birla Carbon has been the first in its sector to passionately formulate a sustainability agenda and publish the first Sustainability Report. No wonder, therefore, Birla Carbon is now recognized by its customers and is invited to engage in dialog and joint development programs to address industry issues around sustainability. We have taken part in several such exercises to help define materiality strategies in FY2016 with leading global customers. Industry forums are also taking note of our sustainability commitment.



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Our employees too, play a vital role in recognizing and meeting sustainability challenges. For example, our employees are beginning to embrace substantive changes to our approach to safety. We can see the results with Birla Carbon's recording its best year ever for safety performance. Furthermore, our employees are getting younger – 30% are currently under 40 years-old. The younger generations are more open to embracing change and are more conscious of their responsibility towards the environment and the larger community. They will drive our move towards greater sustainability, speeding the adoption of newer standards within Birla Carbon. We are making necessary investments to make them the Champions.

We continue to work to develop better relationships and connect with the communities we operate in. Birla Carbon's corporate social responsibility (CSR) programs vary depending on where we operate and the needs of the relevant community; we do not have a cookie-cutter approach to our community engagement, but deploy tailor-made initiatives, involving local stakeholders to make these projects sustainable.

By being part of the Aditya Birla Group, Birla Carbon is able to share resources and best practices across sustainability issues. We both draw on and contribute to the Group's sustainability vision as characterized by our Chairman, Mr Kumar Mangalam Birla: "By 2017, the Aditya Birla Group endeavors to become the leading Indian conglomerate for sustainable business practices across its global operations, balancing its economic growth with environmental and societal interests."

Birla Carbon, together with the industry at large, is facing serious headwinds due to low oil prices, new regulatory environmental standards, currency instability, and political uncertainty. Nonetheless, we are committed to harnessing our passion and expertise to enable us to better serve our customers. We will continuously innovate our manufacturing practices and business process to create unique value for our stakeholders. This innovation also allows us to meaningfully contribute to the 17 Sustainable Development Goals (SDGs) set by the United Nations (UN). We are committed to supporting the outcomes of COP21; our continuous improvement in converting carbon to carbon black is just one example of how we are working in this area.

I invite you, as you go through our fourth Sustainability Report, to identify opportunities where we can contribute more and be more effective.

Dr Santrupt Misra, Chief Executive Officer



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Kevin Boyle, Chief Operating Officer



We continue to make good progress on our sustainability goals while refining our approach, even though the global business environment has changed dramatically."

A year of reassessment

We have been reporting on our sustainability efforts for several years and, over this time, Birla Carbon has evolved: we continue to make good progress on our goals while refining our approach. However, the global business environment has changed dramatically, which has had a big impact on our operations, as well as the pricing of our product. FY2017 is the right time for us to reassess where we are and in which direction we are going to make our business more sustainable.

The biggest external impact has been instability in the oil market, with prices falling dramatically over the last year. This has affected us in a number of ways, such as restructuring our operations in Europe and North Africa to adapt to new conditions. We have also been affected in ways which are not necessarily obvious. For example, although our plants use a lot of oil, we also generate electricity, which we use in our own operations or sell to local utility companies. In some parts of the world, such as India, local power boards are requesting that we no longer produce as much energy as we have, because they have reached capacity. This has an impact on what we do – on how we run our operations, and in how and where we invest.

This poses a lot of questions for us. In general, low energy prices tend to spur consumption, while high prices hinder it. Energy conservation tends not to be a priority when prices are low. Should we try to sell more energy or is there an alternative? Should we just be looking at how to be more efficient – or is it time to look ahead? We are reassessing our sustainability targets for the longer term – and how we are trying to meet them.

Adapting our business to market changes

Although markets are in a state of flux, we can predict steady growth for our industry. As long as vehicle demand grows, there will be demand for carbon black. We continue to ensure that we can produce carbon black by investing in our business: we currently spend US\$50–70 million per year on our facilities. However, around the world, more attention is increasingly being paid to environmental issues, such as smog, pollution and greenhouse gases.



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One such place is China, where new regulations should be in effect for all companies by 2018/19. This has had an immediate impact on our new greenfield plant in Jining, which, when it starts operations in FY2017, will be fully compliant with the new regulations and have the lowest environmental footprint of any carbon black facility in the world.

Our achievements in FY2016

Best safety year

Operating safely and driving safety are core values for Birla Carbon and FY2016 was the safest year in our almost 170-year history. Safety is more than just a company value: it is a personal initiative and commitment that each individual at Birla Carbon is expected to make.

Embedding ethical business

Another personal commitment that we ask our employees to make is to ethics. Our continued aim is to ensure that our employees are trained in our Code of Ethics and they understand the behavior that we expect. In FY2016, 100% of our employees were trained in the Code of Ethics. We have also updated our Terms and Conditions for working with suppliers, to include a paragraph on our Code of Ethics and the behavior that we expect our partners to comply with. The new Terms and Conditions will be rolled out early in FY2017.

Minimizing our environmental impact

We have made good progress on the environmental front, such as continuing to reduce the CO₂ emission intensity of our operations by a couple of percentage points; we have also made progress on recovering the energy we generate. Furthermore, while we have had success producing fewer air emissions, we have also generated greater quantities of associated waste. In terms of water, we've made significant investments in ensuring that all employees have access to clean drinking water in our facilities by 2018 through the WASH pledge.

Good relationships, sustainable operations

We have aligned our sustainability strategy to the Aditya Birla Group's three-step agenda for ensuring long-term sustainability, which focuses on responsible stewardship, stakeholder engagement and future-proofing.

Responsible stewardship is an approach that we have adapted across our focus areas. We continue to seek efficient product development that can meet our customers' needs, while minimizing our environmental and enhancing our social impact.

We seek to enhance our **stakeholder engagement** by more closely aligning to our customers' sustainability strategy and by building better relationships with other groups that we impact. This is an area we are still working on.

We need to start looking at future-proofing, or how we prepare for coming changes to the market. We are working to ensure our sustainability over the long term by assessing the impact of wider megatrends on our business and industry.

It's one thing to talk about goals and it's quite another to present demonstrable, continued progress. I would like to thank you for taking the time to read our Sustainability Report, our opportunity to show you how far we have come on our sustainability journey.



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Joe Gaynor, Chief Legal, Sustainability and Risk Officer



By continuing to take proactive steps, we can ensure that Birla Carbon is the preferred supplier for our customers – and the preferred employer for our people.”

Driven by a constant desire to be better

At Birla Carbon we are committed to remembering our past and building our future. We have been in business for over 170 years and there are many reasons why – particularly our committed focus on our customers, employees and shareholders. We want to be here in the long term and we are actively working toward this goal. By continuing to take proactive steps, we can ensure that Birla Carbon is the preferred supplier for our customers – and the preferred employer for our people.

As a key member of the Aditya Birla Group, we are fortunate to be part of a wider organization that has focused on being better since it came into existence. This focus has influenced our own efforts; Birla Carbon’s corporate social responsibility (CSR) activities are designed to bring positive change to the lives of many around the world. On a personal level, I find it rewarding to see the communities in which we operate change for the better, thanks to our involvement and leadership.

Engagement: a preferred partner

Sustainability is a journey for us all. As we proceed on our path to sustainable operations, we are constantly learning and sharing what we learn – not only with other companies within the Group, but also with our peers, who we engage with in platforms such as the Sustainability Leadership Forum and the World Business Council on Sustainable Development (WBCSD).

One of the most rewarding aspects of this journey has been the opportunity to engage with our customers in new and interesting ways. Together, we are developing mutually beneficial approaches to problems that can have a major impact on our shared world. For example, Birla Carbon’s product lifecycle assessment enables us to share concepts and information that can help mitigate not only our own impact on the environment but that of our customers as well. We want our customers to think of us as a supplier who they engage with on sustainability, now and for many years to come. We hope that our customers will see us as more than a preferred supplier: a preferred partner.



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Protecting and inspiring our people

We are very proud of the impact that our sustainability initiatives have on the lives of our employees. It is our goal to make sure that each and every employee returns home safely every day. We are making giant strides in this area; safer employees and our record safety indicators are the tangible result, but it is the underlying work and mindset that is truly impacting the lives of our employees. The individual commitments to safety that we promote apply not only at work but at home.

Furthermore, through our community outreach programs we are able to help our employees participate in the joy of helping others. It is our hope that our employees react positively to the commitment, effort and resources that we at Birla Carbon and the Group devote to our communities. We also want to remain the employer of choice; we believe that our sustainability initiatives show that we are as committed to sustainability as our employees are.

We intend to be here for our customers for many years. That requires intelligent forethought and a commitment to action. As an organization, our sustainability efforts are designed to reflect the better side of ourselves – as a company and as people. Birla Carbon has a proven track record of performance, driven by a constant desire to be and do better. We hope that our Sustainability Report shows the progress that we have made.

Joe Gaynor, Chief Legal, Sustainability and Risk Officer



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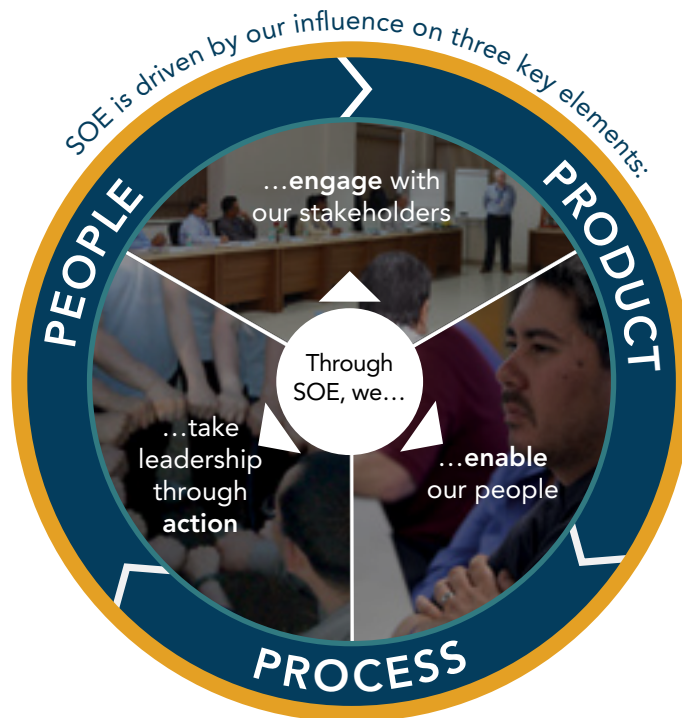
Our vision and strategy

Our vision is to be the most respected, sustainable and dynamic global carbon black business. Achieving this requires we maintain responsible and sustainable practices, while providing a secure, consistent supply of the highest-quality carbon black to our customers across the globe. By embedding sustainable thinking at every level, we meet the evolving needs of our stakeholders regardless of economic volatility, increasing environmental and societal concerns and challenges such as stricter regulatory requirements and changing consumer expectations.

Birla Carbon aims to use natural resources as wisely and efficiently as possible, minimizing any harm to the environment. We further prioritize keeping our employees safe, attracting the right talent and engaging regularly with contractors, customers and local communities. Our approach to sustainability is reflected in the [Birla Carbon Sustainability Policy](#).

Our strategy

Our aim is to achieve sustainable operations. We seek to achieve our aim through our Sustainable Operational Excellence (SOE) strategy.



At an operational level, our SOE strategy is managed through six operational focus areas:



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The world is changing. We have to change with it.

To continue to achieve SOE in the future, we must evolve. In order to meet ever-tightening regulations and increasing stakeholder expectations, Birla Carbon has aligned with the Aditya Birla Group's three-step agenda, which will help us continue to achieve sustainable operations over time. Through our sustainability efforts, we continue to become more responsible stewards of our resources, we are engaging further with stakeholders and we are looking to future-proof our business over the long term.



1. Responsible stewardship

We constantly analyze our operations to ensure that we maximize any resources that we apply and minimize any negative impact to the environment, our employees and the communities in which we operate.



2. Stakeholder engagement

We have built strong relationships with the aim of understanding the externalities and trends that could affect us in the future, by engaging with our key stakeholders, conducting life cycle analyzes of our product and sharing information with peers.



3. Future-proofing

We will adapt to the planetary and social megatrends coming our way. Horizon scanning and scenario planning will be key tools in mitigating potential future impacts and taking advantage of any opportunities that may arise.



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Stakeholder engagement

Interacting with our stakeholders, both the people who can affect our business and those who are affected by it, helps us understand their views and structure our perspectives. We seek to better understand the material issues that affect our stakeholders, which is why we are constantly working to improve our engagement processes. It is by engaging with our stakeholders that we can help them while creating and sharing value.

Our stakeholder groups include:

- Customers
- Employees
- Suppliers
- [Aditya Birla Group](#)
- Communities
- NGOs, civil society, academics
- Regulators and government
- Competitors
- [International Carbon Black Association \(ICBA\)](#)
- Banks and lenders

We have identified a sub-group of stakeholders that have the greatest impact on our business. Our engagement with this group can make a difference and we are currently directing our strategy based on what is material to them.

How we engage	Examples in FY2016
Customers	
Our objective is to develop long-term relationships with customers and become the carbon black provider of choice, based on excellent service and a high quality product. One way in which we achieve this is through engagement on sustainability issues and aligning our sustainability agendas. Our dedicated Global Engagement Managers (GEMs) regularly engage with customers, which we also do through our Key Account Management (KAM) program. We also conduct an annual Customer Satisfaction Survey.	<p>We regularly engage in one-on-one sustainability discussions with our major customers, such as the Global Stakeholder Dialogue with Pirelli to help them develop their sustainability strategy and prepare for future business trends.</p> <p>We implemented the Net Promoter Score (NPS) system to assess how our customers perceive our work and where we can improve.</p> <p>Our customers are welcome to visit our operations, and we invite their comments and feedback. We are routinely visited by our customers, and respond swiftly to all feedback.</p>
Employees	
Our employees provide us with feedback through our bi-annual Vibes survey and we encourage continuous dialogue between managers and employees on a daily basis. We also provide a hotline through which our personnel can air grievances anonymously.	<p>Since the FY2015 Vibes survey, Birla Carbon has developed and implemented regional action plans, on career management initiatives, online education and global on-boarding for new employees.</p> <p>Our Safety culture change initiative has made safety a personal commitment across our operations and seen record-breaking results, demonstrating how our employees have adopted safety as their own responsibility.</p>



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How we engage

Examples in FY2016

Suppliers

As our business depends on suppliers, we work closely with them to develop strong relationships. Our suppliers' behavior reflects on us; we work with them to ensure they uphold our high ethical standards.

We expect our suppliers to follow our ethical business practices, as reflected in the Code of Ethics commitment in our Terms and Conditions.

We regularly review our feedstock suppliers for their sustainability activity.

Aditya Birla Group

Our parent company, the Aditya Birla Group, follows a three-step sustainability agenda: responsible stewardship; stakeholder engagement; and future-proofing.

We have aligned our sustainability strategy with the Group's [three-step agenda](#).

We participate in a weekly sustainability webinar across the Group, in which a business unit presents their progress and initiatives. We regularly communicate our progress through this channel.

We also participate in the annual ABG Sustainability Conference to share knowledge and best practices internally.

Communities

Our approach to community relationships is localized, based on an understanding of the varying regional social and cultural priorities. We focus on delivering long-term socio-economic benefits, such as health, education, social support and charitable giving.

See our Communities section, where we describe our community engagement in greater detail.

NGOs, civil society, academics

We continue to interact with NGOs and wider social institutions that are particularly relevant for our business. This engagement takes the form of face-to-face meetings or participation in events where we share knowledge with our peers.

We engaged in face-to-face meetings with the World Business Council for Sustainable Development (WBCSD) to extend our understanding of how we should shape our sustainability strategy, which we have described in greater detail in this report.

Through the Aditya Birla Group, we have engaged with [Forum for the Future](#), who is helping us to define how we future-proof our business.

We participate in the Sustainable Leadership Forum (SLF), a group representing business leaders from a range of industries who share knowledge on common sustainability issues affecting their business.

As part of the wider dialogue on how companies can help achieve global sustainability targets, we have aligned our SOE strategy to the United Nations Sustainable Development Goals (SDGs). Through our engagement with the WBCSD, we have committed to participate in a working group on developing the [SDG Compass](#), a five-step guide to understanding how SDGs affect businesses.



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Together with our peers on a sustainability journey

Although Sustainable Operational Excellence (SOE) is at the heart of what we do, Birla Carbon is not alone in pursuing strategic sustainability. As we progress on our sustainability journey, we recognize that there are others on the same road, coming across the same issues.

In this context, the [Sustainability Leadership Forum](#) (SLF) offers an ideal platform where companies and sustainability professionals can engage, learn and develop – both relationships and strategies.

As an SLF member since 2010, Birla Carbon actively participates in these small-scale fora, held every two months in one of seven locations in the US and London (UK). Member companies are large corporations representing a wide range of industries, such as financial services, fast moving consumer goods, retail, engineering, chemical, pharmaceutical and service providers.

Before each forum Joseph Dixon, SLF founder, proposes a member as host and works with the company to select an appropriate sustainability topic for roundtable discussion. Dixon then arranges for a recognized external speaker to kick off the subject, distributes relevant background materials and facilitates the sharing of knowledge and best practices. To stimulate openness and guarantee discretion, Dixon ensures that no competitors are present at the same forum.

Birla Carbon has found that the SLF is an excellent opportunity to gain a perspective on what sustainability means for others. The SLF helps us pave the way to different approaches to face common roadblocks. It is by engaging with peers that Birla Carbon can shape a more sustainable future.



I'm not a sustainability expert, but I take pride through the SLF to bring together private sector leaders, who have the power to influence the sustainability of tomorrow's world."

Joseph Dixon, Founder, Sustainability Leadership Forum



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To track the progress of our contributions to the SDGs, we have mapped the relevant GRI indicators to each SDG.

United Nations' Sustainable Development Goals

September 2015, the United Nations (UN) adopted a new sustainable development agenda aiming to end poverty, protecting the planet and ensuring prosperity for all – through partnership.

Birla Carbon is keen to play its part in helping the wider community achieve the new set of [sustainable development goals](#) (SDGs). We have mapped each goal to our focus areas, to show how we are working along the same global sustainability agenda.



Communities

We seek to help improve the health and well-being of the people working in and living around our sites.



Communities

Our education programs aim to impart the skills and knowledge people need to support themselves in the long term.



Our People

We support the World Business Council for Sustainable Development (WBCSD) and signed its WASH pledge regarding access to clean drinking water.



Environment

We recover energy generated by our operations and either use it in our facilities or sell it to end users.



Our People

We provide direct jobs in 12 countries and our business contributes to economic growth through our entire supply chain.



Product Responsibility

We innovate our products and processes to be more sustainable through our Technology Roadmap.



Communities

Through our social investment, we hope to increase opportunities and build infrastructure, enabling people to be involved in the decisions that will enhance their lives.



Communities

We contribute to the sustainable growth of the communities where we operate.



Environment

We minimize the waste that we generate, seek to optimize our oil carbon conversion to carbon black and endeavor to be as efficient as possible with the resources that we consume, including water.



Environment

We focus on carbon stewardship, being net energy positive and reducing our greenhouse gas emissions.



Governance and Ethics

We ensure that human rights are protected and that our employees behave ethically.



Customers and Suppliers

We engage with our customers and work with our suppliers to tackle key sustainability issues together.

We are supported by a robust governance structure based on regional autonomy and fluid communication.

Customers and Suppliers

We promote respect for human rights and business ethics to our suppliers through the Terms and Conditions on our contracts.



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Our stakeholders, and the issues that concern them most, drive our sustainability strategy, as do those areas that have a material impact on how our business will develop. We have chosen to report on those issues that are the highest priority.

Materiality

Birla Carbon continually reviews issues that are of importance to our stakeholders. We assess which emerging issues most influence their views and develop a list of issues to be applied to each group. The boundary for each issue is determined considering the impact within Birla Carbon as well as outside our organization.

During this process, the Sustainability Steering Committee (SSC) utilizes quantitative and qualitative analysis to determine the materiality of each issue. Quantitative analysis looks at available data such as employee surveys and Health, Safety and Environmental, (HS&E) metrics reports. Qualitative analysis includes customer feedback during interviews and community input on the issues that are specifically important to them. The SSC then reviews each issue for materiality by considering the influence of stakeholder assessments and decisions, and the significance of our economic, environmental and social impacts.

To validate our assessment and ensure our reporting achieves Global Reporting Initiative (GRI) Principles of Completeness, we regularly evaluate the scope of our material issues, the boundaries identified for each and the timescale considered. The SSC has attributed each of its material issues to a relevant material aspect, occurring internally or externally to the organization, as per the GRI G4 guidelines. The final result of the process is approved by Joe Gaynor, Chief Legal, Sustainability and Risk Officer, on behalf of Birla Carbon's Senior Management Team (SMT).

[Learn more about our Governance Structure.](#)



ERM guided Birla Carbon through the process of conducting a materiality assessment, in alignment with GRI's G4 principles. This included the identification of stakeholders; a review of each aspect and its relevance to Birla Carbon and its stakeholders; the prioritization of issues; and an evaluation of stakeholder feedback and its impact on materiality. Furthermore, ERM provided insight on Birla Carbon's materiality analysis, based on customer and competitor benchmarking, wider sector and global trends and potential emerging issues. By undertaking this robust process, Birla Carbon developed its understanding of the material issues that are significant for its operations and to its stakeholders."

Jeff Bilkert, Partner, ERM

We group our material issues by our six focus areas: Governance and Ethics; Product Responsibility; Environment; Customers and Suppliers; People; and Communities.

The issues listed below were identified as the most relevant and significant for Birla Carbon and our key stakeholders. They are ranked by the level of interest to stakeholders and business impact.



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Major

- Business Continuity
- Ethics
- Human Rights
- Product Safety
- GHG
- Water
- Energy
- Product Consistency
- Safety

Significant

- Management Team
- Reputation
- Supply Chain
- Waste
- Employee Engagement
- Community Engagement

Moderate

- Governance Framework
- Transparency
- Product Stewardship
- Resource Consumption
- Air Emissions
- Employee Wellness
- Employee Retention
- Philanthropy

A crucial aspect of our materiality process is how we perceive the development of future issues and trends. Through horizon scanning, we aim to identify the wider impact that specific issues could have on our business. This process, which we describe as future-proofing, will enable us to plan scenarios for the long term by developing our future materiality matrix.



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Future-proofing

After several years of work, we now feel that Birla Carbon has reached a mature stage in our sustainability journey. We continue to invest in people and technology, making strong progress on our key performance indicators, which in turn enables our operations to be sustainable for the short to medium term.

It is now time for us, aligned with the Aditya Birla Group three-step agenda for ensuring long-term sustainability, to future-proof our approach and assess the resilience of our business for the decades that lie ahead. It is for this reason that we have engaged with [Forum for the Future](#), a specialized non-governmental organization, to help us identify the risks and opportunities that could impact our business in the years to come. While we have been aware of and responded to these issues over the last 170 years, we believe it is time to provide more structure to our thinking in this area.

To help us prepare for the potential realities that we could face, Birla Carbon has identified a preliminary set of megatrends that we believe could have a real impact on how our business develops. The process is just beginning and will take some time; we will begin to explore it over FY2017.

The megatrends that could affect Birla Carbon

Although our analysis of these key global megatrends is at a preliminary stage, we present here several potential implications that the same megatrends could have on our business and our pursuit of SOE throughout Birla Carbon.

Climate change

The release of greenhouse gases into the atmosphere is arguably having an impact on the climate worldwide. Climate change could potentially have a dramatic impact on our facilities – particularly those that are situated close to water and those where water scarcity could pose a threat in future. Birla Carbon already currently deals with extreme weather conditions and annual flooding issues in some areas. We must prepare and adapt our business to these potential risks.

Resource scarcity

As populations grow, and subsequently the demand for food, water and energy, as well as transport and comfort, it is important that industries take a greater role in safeguarding natural resources and show more responsibility for their use. It is important that we optimize our use of natural resources and recycle as much as possible. This is especially important in terms of non-renewable resources such as oil and gas. The proximity of Birla Carbon's operations to communities requires us to take great care of how we treat natural resources, particularly water and energy.

Demographic shifts

According to the UN estimates, the world's population will reach over 9 billion by 2050. This is a global change but one that will particularly affect the developing world, including South-East Asia and Africa. With a strong global presence, especially in India, Birla Carbon is well placed to help support rapidly growing societies. However, accelerated growth could easily have an impact on political stability in the regions affected. Furthermore, imbalanced population growth could cause fluctuating workforce demands as more countries require younger employees; it is important for companies such as Birla Carbon to be prepared for changing employment contexts.



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Rapid urbanization and the developing world

With accelerated growth comes accelerated development. On the one hand, more than half of the world's population now lives in cities, placing new demands on infrastructure and society. On the other, the developing world is expected to overtake the purchasing power of the current leading economies within the next 15 years, according to the United Nations Population Fund (UNFPA).

An expanding middle class presents both great opportunities and serious challenges for all industries. Bigger cities will require more of what we already have, from cables to vehicles, which suggests that the future of the carbon black industry is bright and especially for Birla Carbon. Indeed, enhanced purchasing power implies an increased demand for cars – so long as the infrastructure has developed to support more vehicles. Furthermore, it is not guaranteed that cars will even be a mode of transport of choice in the cities of the future; it is possible that social and societal behavioral changes will see the demand for cars reduce in the foreseeable future. This is a clear concern for Birla Carbon; our ability to foresee and adapt to the changing demands of a new social structure will be crucial.

Disruptive innovation

New technologies allow economies to create more value with less input, which is sometimes described as disruptive: the new technologies supplant established methods of doing things, rendering skills and approaches redundant. Such disruption can have a massive impact on the way that people live their lives and also in the way that companies approach their business.

Birla Carbon is no exception. Changing patterns of consumption could have an impact on how the company develops, forcing us to change how we work. Traditionally, we have invested in state-of-the-art technology to develop carbon black, but our innovations depend on how quickly we can show improvements. With instability in the oil market, technological investments are becoming more challenging to our business.



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We continue to build long-term relations with our customers. This is only possible through continuous investment in our people, our processes and the technology that we use. To meet our vision, we have reviewed and adapted our set of key performance indicators (KPIs) and targets for FY2020 and launched projects that will advance our business.

Our targets and progress

➡ On track to meet target

⬇ Behind schedule

✅ Target met and retained

	Performance			Progress towards target	Target
	FY2014	FY2015	FY2016		FY2020
Business Continuity/Reputation Maintain our leadership position in terms of carbon black production capacity	No. 1	No. 2	No. 2	➡	No. 1
Business Continuity Approximately double our annual capital spending against FY2012 baseline to reach \$100M	\$64.1M	\$64.4M	\$69.4M ¹	➡	>\$100M
Ethics 100% of employees to receive Code of Ethics training	100%	100%	100%	✅	100%
Air Emissions Reduce our direct emission intensity (tCO ₂ /t _{carbon black}) by over 22% against 2005 baseline	90.7%	90.1%	90.2%	➡	<78%
Energy Increase our absolute energy conversion efficiency to 80%	69.8%	70.6% ²	71%	➡	80%
Water Reduce our water withdrawal intensity (m ³ /t _{carbon black}) by 50% against FY2012 baseline for our high- and medium-risk sites	80%	81%	87%	➡	50%
Product Stewardship Record zero environmental releases year on year	1	4	2	⬇	Zero releases each year
Safety Zero recordable injuries (report on TRIR progress)	0.81	0.43	0.40	➡	0
Management Team 100% of Birla Carbon managers to have stated and measured goals set annually	100%	100%	100%	✅	100%
Community Engagement 100% of our facilities to participate in community engagement	100%	100%	100%	✅	100% each year

1 The amount does not include the funds invested in our greenfield Jining project.

2. Revised values based on improved calculation methodology.



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We take pride in the recognition we receive for our achievements on our journey towards Sustainable Operational Excellence. Here are some of the awards Birla Carbon has received in FY2016.



Location

Awards

Location

Awards



Treocate, Italy

Singular Female Company Award from Local Chamber of Commerce



Asia

Asia's Most Transparent Report from CSR Works

Asia's Best Materiality Report from CSR Works

Asia's Best Online CSR Communications from CSR Works



Tiszaujvaros, Hungary

Werner von Siemens Efficiency Award



Multiple

ABG Chairman's Business Excellence and WCM Group Awards



Alexandria, Egypt

Pioneer Businesses to Achieve Sustainable Development 2015 from the Federation of Egyptian Industries Environmental Compliance Office and Sustainable Development



South America

Top Rubber Award from Borracha Atual

Associate of Affairs Environment Award for Environment Protection, 16th Conference of Water and Wastes Integrated Management Cairo House



Hamilton, Canada

Energy Saving Champion from Horizon Utilities' saveONenergy Program



Thailand

National QC Promotion Award 2015 from the Minister of Industry of Thailand

Excellence in Corporate Social Responsibility from the American Chamber of Commerce



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Our fourth report draws on performance highlights from April 2015 to March 2016 (FY2016) and covers the full scope of our global operations. It contains a detailed analysis of our sustainability performance over the past year and highlights specific targets for the future.

Birla Carbon acknowledges that sustainability is a learning process and we welcome all suggestions and feedback from our stakeholders, including customers, employees and suppliers. We aim to fully embed sustainability into the core of our business. Sustainable Operational Excellence drives our continued progress across all the dimensions of sustainability and corporate responsibility programs. We aim to continue producing an annual Sustainability Report to document our progress and challenges in this area. This report was approved by Birla Carbon's Senior Management Team. [Learn more about our Governance Structure.](#)

This report is in accordance with the international standards of the Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines at Comprehensive level. A GRI content index can be found at [Download](#) our GRI Index. The Index has been updated to include reference to the relevant Sustainable Development Goals affected.

Previous sustainability reports

Birla Carbon's [2015 Sustainability Report](#) was published in July 2015.

Birla Carbon's [2014 Sustainability Report](#) was published in July 2014.

Birla Carbon's [2013 Sustainability Report](#) was published in July 2013.

Boundary

We have attributed each of our material issues to a relevant material aspect outlined in the Global Reporting Initiative (GRI) G4 Guidelines. Below we have outlined the boundary for each of our aspects. Where the aspect has been identified as relevant within the organization it applies across all entities of the Birla Carbon business. In order to tailor this list to our stakeholders, we have used Birla Carbon terminology to describe each of the aspects.



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Our material aspects	Material to stakeholders		Relevance outside the organization
	Internal	External	
FOCUS AREA: GOVERNANCE AND ETHICS			
Human rights performance	YES	YES	Human rights issues can occur along the supply chain, especially in countries identified as high risk.
Ethics	YES	YES	Ethical issues can occur along the supply chain and in the communities around our operations.
Management team	YES	NO	Not applicable.
Governance framework	YES	NO	Not applicable.
Business continuity	YES	YES	Business continuity is important to our customers as they require a secure supply of carbon black. Our suppliers and the communities around our sites also have a vested interest in our business.
Reputation	YES	YES	The reputation of Birla Carbon has an impact on the reputation of both the Aditya Birla Group and our customers.
Transparency	YES	YES	The transparency of our business is important to our customers and regulators, who put their trust in our business and play a role in monitoring our performance.
FOCUS AREA: PRODUCT RESPONSIBILITY			
Product safety	YES	YES	Product safety controls are critical to the health and safety of our customers and end consumers.
Product stewardship	YES	YES	Product stewardship ensures we provide customers with products that are safer, more efficient and specific to their needs. This also has an impact on end consumers who look for greater value from products.
FOCUS AREA: ENVIRONMENT			
Energy	YES	YES	We strive to develop more efficient grades of carbon black to support customer sustainability objectives. Our strategy to remain energy positive means we also provide low carbon energy for local energy grids.
GHG emissions and air emissions	YES	YES	GHG and other air emissions can be produced during extraction and transport of raw materials from our suppliers and during distribution to customers.
Water discharge	YES	YES	Water use and discharge has the potential to impact communities around our operations. This is particularly material in areas where water scarcity is a potential risk.
Waste management	YES	YES	Waste from our operations has the potential to impact the communities and environment around our operations if it is not managed appropriately.
Resource consumption	YES	YES	We use non-renewable feedstock from fossil origin, which has potential environmental impacts. These impacts can occur along the supply chain from extraction to refinery and delivery to our production facilities.



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	Internal	External	
FOCUS AREA: CUSTOMERS AND SUPPLIERS			
Supply chain development	YES	YES	It is important to engage with each of our suppliers to ensure they uphold our environmental and ethical standards. This applies to global and regional suppliers.
Product standards and consistency	YES	YES	Our customers require consistent quality from our products, as this has an impact on their own operations and end products.
FOCUS AREA: OUR PEOPLE			
Safety performance	YES	YES	The safety of all people visiting our sites is of high priority. This includes guests such as customers, contractors and third-party partners.
Employee retention	YES	YES	Providing employment in the communities where we operate is important for our social license to operate.
Employee wellbeing	YES	NO	Not applicable.
Employee engagement	YES	NO	Not applicable.
FOCUS AREA: COMMUNITIES			
Community engagement	YES	YES	Building and maintaining strong relationships with the communities around our sites is very important to our business and to local people. Our engagement covers local community and charitable organizations, residents, education systems and local governments.
Philanthropy	YES	YES	Providing philanthropic support is critical to the development of local community organizations around our sites, including schools and health facilities. This can positively impact local people. Our philanthropic activities also enable our employees to engage in events that give back to the communities in which they live, which can help them develop skills and pride in their work.

Feedback

Feedback on our fourth report is an essential component of our commitment to Sustainable Operational Excellence. Comments are reviewed by our Sustainability Steering Committee and will, in many cases, be incorporated into future reports.

Please send your feedback to:
 Dr Gilles Moninot
 Global Sustainability Director
 Birla Carbon

birlacarbon.sustainability@adityabirla.com



Strength depends on structure

A global company operating in multiple local environments requires a strong organizational structure and ethical conduct.



Responsible actions at all levels

We encourage our people to take responsibility for their actions at all levels through leading by example.



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Ethics: the behavior we expect



We ask our employees to make ethics a personal commitment. Our continued aim is to ensure that all of our employees are trained in our Code of Ethics, and they understand the behavior that we expect."

Kevin Boyle, Chief Operating Officer, Birla Carbon

Our key figures



100%

of employees have completed Code of Ethics training in FY2016



5

locations obtained ISO 22301 certification in FY2016



17

calls received through our ethical hotlines



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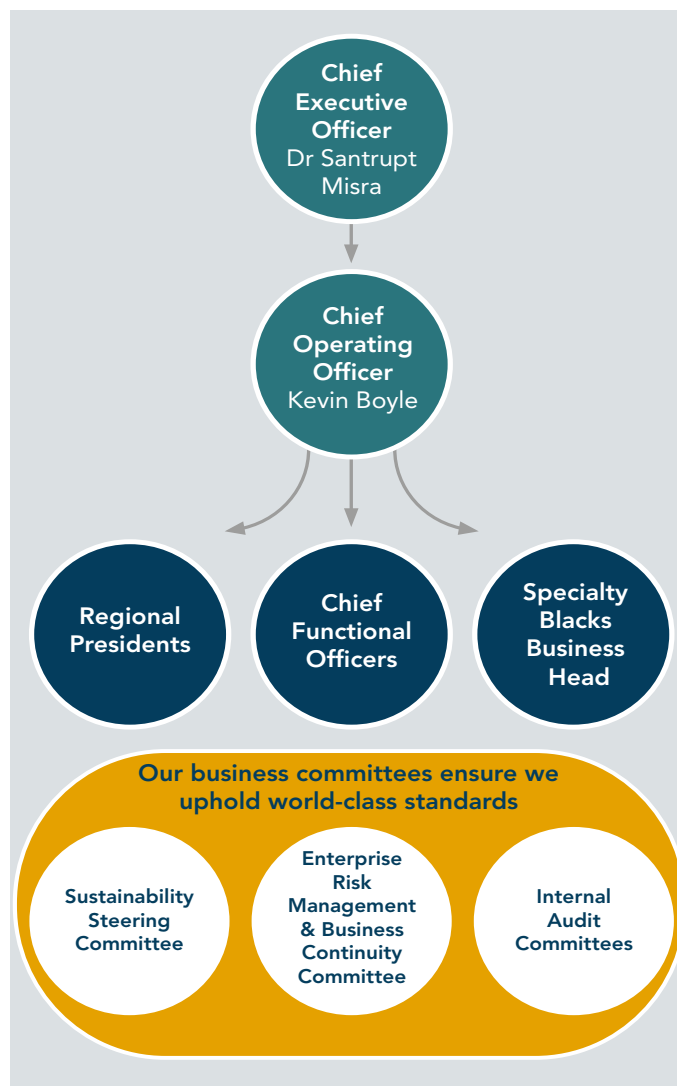
Birla Carbon's success depends on a strong, effective and responsive management structure. Our organizational governance supports regional autonomy for efficient decision making, as well as communication with global functional leaders, to share and implement best practices across the company. This structure also enables the integration of Sustainable Operational Excellence throughout Birla Carbon.

How is our governance organized?

Each of the various legal entities that comprise Birla Carbon is governed by a Board of Directors, led by our Senior Management Team (SMT). The SMT is made up of Chief Executive Officer, Dr Santrupt Misra; Chief Operating Officer, Kevin Boyle; five Regional Presidents; Chief Functional Officers; and a Specialty Blacks Business Head.

The diagram below illustrates how we organize our governance.

Governance structure





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Sustainability steering committee

Our sustainability strategy is directed by the Sustainability Steering Committee (SSC). The SSC has a dual role: reporting, which it fulfills through the annual Sustainability Report, quarterly meetings with the SMT, and through ad hoc communications to Birla Carbon employees; and influencing the integration of sustainability concepts into the company's strategic business decisions.

The SSC establishes working groups to focus on specific subjects, consisting of the sustainability team, subject experts, non-SSC employees with relevant expertise and occasionally third-party advisors. Through the SSC working groups, we identify areas of opportunity to integrate sustainability further into the business and develop action plans for implementation. The working groups maintain contact throughout the year and meet when needed. Ideas and plans generated by the working groups are ultimately presented to the entire SSC and evaluated.

The SSC also ensures that Birla Carbon's sustainability strategy is aligned with the [sustainability vision](#) and approach of our parent company, the Aditya Birla Group.

Key topics discussed by SSC in FY2016	Decisions made	Impact on business
FOCUS AREA: CUSTOMERS AND SUPPLIERS		
Supplier sustainability risk: how to make our supply chain more resilient.	We defined supplier criteria, which we will trial in North America through SAP.	A more resilient supply chain will enable us to achieve business continuity.
Supply chain ethics.	We modified the Terms and Conditions of our contracts with suppliers to include a paragraph on business ethics.	Ensures our suppliers uphold our values and meet regulatory requirements and protects our reputation and that of our customers.
FOCUS AREA: ENVIRONMENT		
Reviewed the relevance of our solid waste KPI due to the evolving air emission control regulations that force us to adopt new technologies generating large amount of inert solid waste.	We decided to remove our solid waste KPI and reassess the issue with the engineering group.	Transparency on the relative success and relevance of our KPIs makes our business more robust and more trustworthy.
Revisit and refine water management issues at a more local level and consider it more as a risk to manage.	We refined the Aqueduct assessment for our high risk sites.	By focusing on the areas where water issues are most significant, we can have a greater impact on the preservation of this essential natural resource.
Focus on the costs associated with our water cycle.	We have started working with our engineers to determine the overall cost of water at our various locations.	



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Key topics discussed by SSC in FY2016	Decisions made	Impact on business
FOCUS AREA: OUR PEOPLE		
Wash Pledge (Phase 2)	We implemented WASH Pledge action plans based on the preliminary assessments through local multidisciplinary teams composed of HS&E, HR and utility professionals. We have also initiated various projects of different scales to help improve our WASH Pledge efforts.	As part of our commitment to employee wellbeing, we are working to fulfil the WASH Pledge to provide safe access to drinking water to all Birla Carbon employees by 2018.
Employee engagement	We publish three new stories on our sustainability webpage every quarter to stimulate employees' appetite for sustainability issues.	As part of our employee engagement, it is important that we keep our people fully informed about our sustainability activities.
FOCUS AREA: GOVERNANCE AND ETHICS		
Future-proofing	We began preliminary discussions with Forum for the Future via the Aditya Birla Group.	Through this engagement, we hope to begin the process of future-proofing our business by considering potential future trends and their impacts.

Internal Audit Committees

Under the guidance of our Internal Audit Department, various internal teams carry out regular audits and investigations across the business, covering financial, compliance and operational reviews. In addition, regions complete key control tests. The findings are submitted to the SMT on a quarterly basis for review and direction if any actions are required.



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Enterprise Risk Management and Business Continuity Committee

Ensuring that we maintain uninterrupted operations and a constant supply of carbon black to our customers is a key priority. Our Enterprise Risk Management (ERM) system helps us to identify and anticipate risks across our business, enabling preparation for possible disruptions.

ERM Committee

The ERM committee, which meets three times per year, engages annually with regional and corporate function directors to identify potential risks and define mitigation strategies. The Chief Risk Officer then presents these risks and strategies to the SMT.

Participants from other business areas may be invited to attend specific parts of or entire ERM committee meetings, to clarify points under discussion or provide input on specific issues that require expert views. Furthermore, ERM committee meetings now include the evaluation of risks identified by the SSC. At least one Regional President is invited to attend each meeting.

Business continuity planning

Each of Birla Carbon's locations has a comprehensive Disaster Recovery and Business Continuity Plan (BCP) to prepare for interruptions due to natural disasters or other types of business disruption. Our business continuity approach has been developed over the years with a built-in local aspect, where each plant has focused on key prevention elements and the ability to maintain our supply should disruption occur. Read more in our [BCP statement](#).

In early FY2015, we began an initiative based on ISO 22301, which serves as the new international standard for Business Continuity Management System (BCMS). The BCMS will form the cornerstone for specific recovery strategies for processes and activities deemed to be most crucial to our business and ensuring the continuous supply of product to our customers. In FY2016, our Europe and Africa region, comprising five manufacturing facilities, gained ISO 22301 accreditation.



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Planning for the unexpected: Europe and Africa lead the way

Our customers need to know that Birla Carbon is future-proofing its business: not just for the long term, but also for any potential disruption. Customers increasingly focus on resilience in their supply chain, which in turn enables us to demonstrate excellence in terms of our own preparedness.

Our Business Continuity Plans (BCPs) are designed to safeguard our operations and ensure that we can serve our customers, whatever may occur. The plans are centred on two main aspects: identifying threats and areas of risk to the business; and ensuring that operations can continue in a crisis.

We ask each facility to identify the following through a business impact analysis:

- Their core services.
- What and who they depend upon to provide these services.
- What the impact on the company would be if these services were disrupted.
- What resources are required to keep these services running.

The BCPs formulated as a result contain incident response and management procedures, and a designated business continuity team with clearly defined recovery objectives. These are regularly tested through drills, and are audited against a recognized benchmark.

The Europe and Africa region has led the way in test-driving BCPs. The five facilities and headquarters in this region are now ISO 22301-certified, which has been well received by our customers.

BUSINESS CONTINUITY MANAGEMENT TEAM

GOVERNANCE FRAMEWORK



All locations have a comprehensive Disaster Recovery and Business Continuity Plan (BCP) to prepare for interruptions due to natural disasters or other types of business disruption.



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16 PEACE AND JUSTICE STRONG INSTITUTIONS



We ensure that human rights are protected and that our employees behave ethically.

We are supported by a robust governance structure based on regional autonomy and fluid communication.

Ethics and compliance

The integrity of our business depends on how we operate as a company, and the behavior of our people. Birla Carbon expects its employees to conduct business in alignment with our values: Integrity; Commitment; Passion; Seamlessness; and Speed. Upholding these values at all levels of how we do business, from our interaction with customers to our protection of our own people, is fundamental to ensuring we remain a trusted business partner.

Conducting business with ethics

Birla Carbon's approach to ethics includes aspects that support our business activities: human rights; antitrust and anti-corruption; grievance measures; and collective bargaining. We ensure that ethical conduct is embedded across our operations, and expect our employees, contracted workers and external partners to follow it at all times.



Our five key values, aligned to the Aditya Birla Group, drive everything we do: Integrity; Commitment; Passion; Seamlessness; and Speed.



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Human rights

We respect human rights in all our business activities and strive to comply with the laws and regulations in place wherever we operate, as well as adhering to international standards and our own Group standards. We strive to proactively prevent and address any negative impacts we may have on the rights of people we employ, do business with or interact with.

Antitrust and Anti-corruption

Birla Carbon is committed to complying with the antitrust and anti-corruption laws of all the locations where we conduct business, and we intend to preserve the competitive, free-enterprise system while prohibiting payments or promises to pay anything of value to officials of any government in order to obtain or retain business. In FY2016, one incident of corruption was raised and investigated within Birla Carbon, which led to the termination of an employee.

Grievance measures

We expect our employees, contractors and suppliers to voice any concerns or grievances they have about our operations, our employees or our products, and we offer reporting channels to encourage them to do so. We have a hotline that enables our employees to anonymously report, via text message or email, any illegal or non-compliant behavior they observe. The hotline is run by an independent third party, 24 hours a day, 365 days a year and escalates issues to our Internal Audit Department and Chief Legal Officer.

Employees have the opportunity to ask questions concerning actual or potential situations, and calls made to the hotline will be handled in full compliance with local law. Depending upon the type of issues, these are then investigated by a team of auditors and/or human resources professionals. The hotline program is now available at all of our 17 plants.

Birla Carbon received 17 hotline calls in FY2016, 16 of which were investigated (the last did not require further examination). Of those investigated, nine did not require any corrective actions, five were resolved through collective bargaining agreements and two results in appropriate disciplinary actions, up to and including dismissal. No formal community grievances were filed in FY2016.

Grievances may also be filed at the local level through Human Resources, tracked separately from the hotline calls. In FY2016, 15 labor grievances were filed at the local level, four of which were determined to be relevant and resolved. One human rights grievance filed in FY2015 was resolved, and four environmental grievances were filed and resolved.

Collective bargaining agreements

We are committed to absolute fairness when it comes to employee concerns such as wages, working hours, benefits and conflict resolution processes. As such, we sign legally binding collective bargaining agreements to ensure we operate fairly and consistently with all our staff. In FY2016, the number of unionized Birla Carbon sites remained the same, at 71%. In the event that conflict issues occur, we have communications and conflict resolution measures in place for our employees to make their concerns known.



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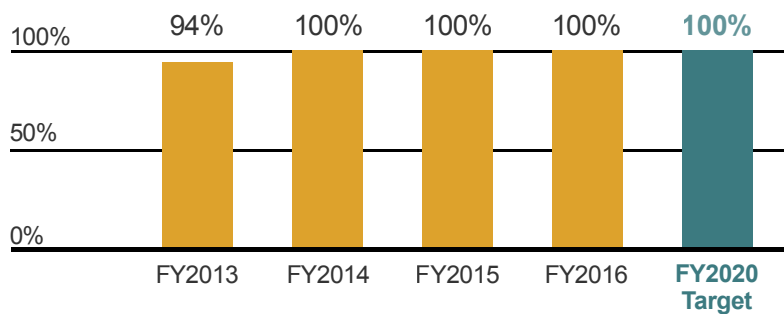
How do we embed ethical conduct?

To embed high ethical standards across our operations, each employee is required to go through our formal online training program and sign a document confirming their compliance with our [Code of Global Business Ethics and Compliance Standards](#) (Code of Ethics). The Code of Ethics covers our policies on fair competition, antitrust, freedom from discrimination and harassment or other abusive situations, as well as anti-money laundering. In FY2016, we achieved our target of training 100% of employees in the Code of Ethics.

Progress towards target



Target: 100% of employees to receive Combined Code of Ethics training



FY2013	FY2014	FY2015	FY2016	FY2020 target
94%	100%	100%	100%	100%

We expect our external partners to adhere to the same standards and principles of ethics and integrity as we do. It is vital that every member of our supply chain can demonstrate responsibility and transparency. In FY2015, we reached out to our major suppliers and sent them a copy of the Code in their own language. This year, we reviewed the contractual Terms and Conditions that we expect our suppliers to agree to, which we revised to include a paragraph on business ethics, covering human rights issues, such as child labour, and expected business behaviour, reflecting what is already contained within our Code of Ethics.



OUR APPROACH

GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



ENVIRONMENT



CUSTOMERS AND SUPPLIERS



OUR PEOPLE



COMMUNITIES



GOVERNANCE AND ETHICS

Governance

Ethics and compliance



“The highest standard anywhere will be the minimum standard everywhere.”

In 2011, Birla Carbon developed a [Code of Global Ethics and Compliance Standards](#) (Code of Ethics) to ensure that all of our workforce has a shared set of policies to guide their daily actions and reaffirm our commitment to the highest level of ethical and legal conduct.

In consultation with legal and compliance experts, and together with affiliated companies, our Legal Department devised our Code of Ethics, which was endorsed by the Senior Management Team (SMT) in FY2014.

Our Legal, Audit and Human Resources Departments worked with external compliance experts to develop a new e-learning module in our 11 local languages illustrating the Code of Ethics through anecdotes and hypothetical cases.

The online course was successfully completed in FY2016 by over 2,000 employees, while the remaining participants completed it in a classroom setting.

ETHICS

HUMAN RIGHTS

TRANSPARENCY

REPUTATION



17 calls received through our hotlines



Creating high-quality products

Our success depends on our product. We want to build a reputation for manufacturing high-quality products.

Keeping carbon black safe

We work closely with the industry, our customers and academia to ensure our product is safe and effective.



PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality

Our commitment to product stewardship



My role is to foster our approach to product safety, starting at the production process. Everyone has to take responsibility in ensuring that our carbon black continues to meet the same safety standards. We encourage our employees to stop and think about product safety implications during the development of production processes."

Megan Morgan, Global Product Stewardship Manager Business

Our key figures



5.3%

profit reinvested in R&D in FY2016



>2,000

letters sent in response to customer product safety requests



100%

of customer cases receive initial response in one day



PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality

Product safety and stewardship

Our product is used in a broad range of industries and is found in countless technical applications. As product is one of the three key levers of our SOE strategy, it is important that we help our customers to handle and use carbon black effectively and safely. This is achieved through responsible product stewardship, and by ensuring that we act responsibly across all of our operations and value chain.

How do we create safe products?

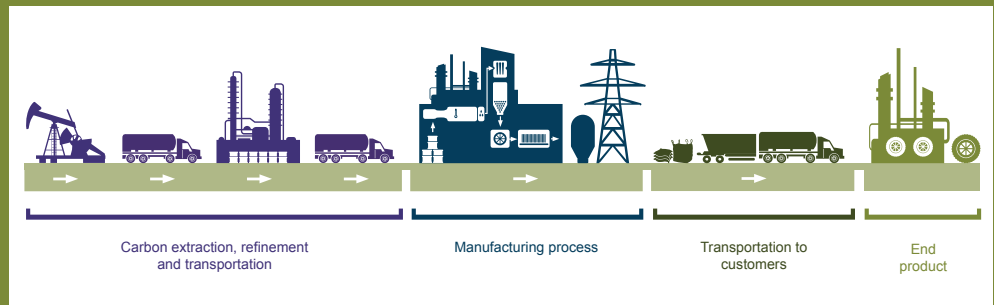
Our business depends on maintaining our customers' trust. This trust begins with the safety of our product. Birla Carbon works hard to ensure our carbon black meets and exceeds all relevant regulatory standards. We also endeavor to keep abreast of the latest market initiatives and industry developments so we can support our customers in meeting their own regulatory obligations.

Product responsibility

We provide our customers with high quality, thoroughly tested carbon black that meets or exceeds health, safety and environmental requirements and can be handled safely.

Product responsibility across the value chain

We divide our value chain into four areas:



Carbon extraction, refinement and transportation

Extraction and refinement:
This carbon feedstock sourcing stage is not controlled by Birla Carbon. We expect our suppliers to maintain the highest ethical and environmental standards in their activities.

Transportation:
We have health, safety and quality controls in place for handling all raw materials.



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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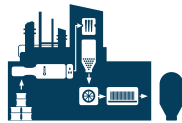
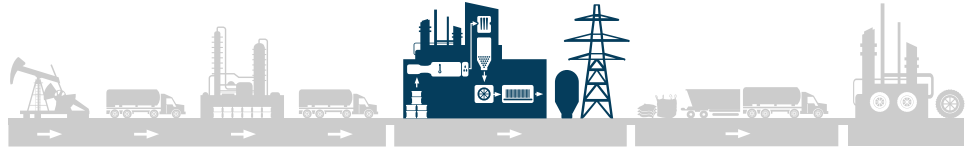
PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality

Manufacturing process



Reactor:
State-of-the-art technology enhances production efficiency.

Baghouse:
The best possible control of emissions and the containment of our carbon black powder is ensured through the use of the most advanced filter bags.

Rotary dryer:
Strict product testing is conducted at this stage to meet customer specifications and safety standards.

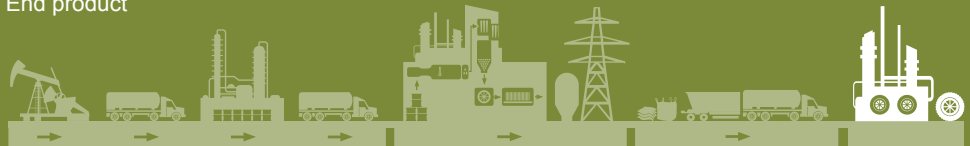
Bulk storage:
Once customer requirements have been met, the product is directed to specific silos and later shipped.

Transportation to customers



Shipping:
Before shipment to our customers, the carbon black is further tested by our quality department, which generates a Certificate of Analysis (CoA) to guarantee product quality.

End product



Customer sites:
Our Safety Data Sheets (SDSs) are continuously updated and provided in over 25 languages. Specific product safety documentation is supplied to customers on request.



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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CUSTOMERS AND SUPPLIERS



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PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality

Investing in safety

Birla Carbon's strategy is to continually invest to meet our customers' requirements for product safety information. We implemented a testing program to proactively identify any information gaps on a per-product basis. The goal is to inform internal and external customers on product characteristics, safe, effective and approved uses, as well as health and environmental risks.

By seeking input and support from all business areas, we facilitate product consistency and compliance from a product stewardship perspective. Through this program, our internal businesses have access to the most current technical information, advice and support. Furthermore, our customers can access accurate and timely information, presented through SDSs, labels and general responses.

An example of our active improvement work can be seen in our structural testing process, where we have completed the substitution of dibutylphthalate (DBP), a plasticizing chemical used to measure the structure of our product, with a safer alternative at all locations.

Enhancing customer understanding

Customers and end consumers want to understand more about carbon black. In FY2016, Birla Carbon received in excess of 2,000 queries related to product safety and compliance with specific environmental or food contact regulations. In 100% of cases we were able to send an initial response within one business day. We also continuously educate our sales and distribution network about carbon black product safety and its regulated applications.



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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OUR APPROACH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Creating more sustainable processes and products through our Technology Roadmap.

Improving our processes

We invest in research and development to maintain leadership in our industry and build for the future through innovative and state-of-the-art processes. Our development and use of the best available technology enables us to improve our product, identify new opportunities for carbon black applications and closely assess our product sustainability. Birla Carbon develops new grades to improve the performance of our customers' products. We also propose new carbon black products that are less energy demanding during the incorporation phase in rubber, plastic, ink or paint formulations.

Our Technology Roadmap is designed to coordinate and reinforce our approach to technology and product development by focusing on three main drivers – growth, sustainability and cost and quality.

The three drivers of our technology roadmap

Growth

- Introduce a standard engineering design package to ensure we build and maintain industry-leading facilities.
- Establish strong relationships with engineering and construction firms in all our locations globally.
- Increase capacity for production of Specialty Black grades.

Sustainability

- Utilize tail gas as fuel commercially.
- Operate high temperature and pressure co-generation units to maximize energy recovery.
- Increase commercialization of low rolling resistance tread material.
- Proactively exceed all environmental regulatory requirements ahead of time.

Cost and quality

- Operate a new carcass black unit to significantly increase yield and quality.
- Commercially utilize alternative feedstock routes.
- Ensure all our plants meet a yield and energy recovery benchmark.
- Highlight our global product capability and consistency as a competitive advantage.



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality

Product stewardship

To foster a culture of product stewardship in our operations, we have established a standardized approach across the company, specifically for our employees at the manufacturing level. Employees are encouraged to stop, think and ask, by seeking advice and support before and during process development and production changes.

Auditing our sites

The challenges we face include consistently aligning all Birla Carbon's sites with our Product Stewardship Standard (the Standard) and vision and helping our employees understand its benefits. The Standard requires enhanced testing intervals for all products and a robust description of which actions trigger product re-testing at a manufacturing site. In FY2016, we modified the product stewardship audits so that they are conducted in conjunction with Health, Safety & Environment (HS&E) audits.

Product Stewards are responsible for monitoring standards and implementing a global training program to equip our workforce with greater stewardship knowledge and expertise. Once a Product Steward has been appointed at each manufacturing facility, the sites undergo an annual self-assessment to measure progress relative to implementation of the Standard. The stewards participate in regional Product Stewardship Committees, who report to a Global Product Stewardship Steering Committee.



PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality



Creating a product stewardship culture

Building any corporate culture requires effort, time, and education. To ensure that product stewardship takes root in our operations, Birla Carbon has developed training programs for all employees who interact with our product. The training, which occurs at a corporate, regional and local level, is designed to ensure that our employees understand how their roles affect product stewardship and how to implement the Product Stewardship Standard.

The training, which is conducted at each site by the Global Product Stewardship Manager, began in FY2016, and has so far covered:

- Sales and Technical Services employees;
- employees at our office in Marietta and North Bend facility, in the United States;
- managers at our plant in Alexandria, Egypt; and
- Quality Assurance personnel in the Europe and Africa and South Asia regions.

Although training is adapted to each group, all courses include a focus on the Product Stewardship Standard concept and requirements. Training for production personnel focuses on how changes in feedstock, processes, equipment and other variables can impact our carbon black, while Sales and Technical Services employees learn more about new products and how to communicate with customers. To date, approximately 100 employees have been trained; Birla Carbon hopes to train all remaining relevant personnel by the end of FY2017.

PRODUCT SAFETY

We have also begun applying the Standard regionally. We started at our speciality products facility in North Bend, which provided us with a useful test case for implementation into an active workflow and processes. Close inspection of the North Bend manufacturing site enabled us to determine when would be best to conduct facility inspections. The test case also encouraged us to add a product stewardship section to certification forms, requiring any future process changes to be considered based on their potential impact on the product.



Over 2,000

letters sent in response to customer product safety requests



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



ENVIRONMENT



CUSTOMERS AND SUPPLIERS



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COMMUNITIES



PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality

The big questions

As an engineered industrial product manufactured from oil and gas, carbon black is sometimes perceived to be a cause for concern for consumers, employees and the communities where we operate. To respond to doubts that consumers may have regarding the safety of carbon black, our industry has invested time and effort over several decades into studying and understanding the potential health, safety and environmental risks associated with our product through robust scientific studies. We welcome every opportunity to share what we have learned about carbon black with our stakeholders.



What is Birla Carbon doing to change how carbon black is perceived?

Because of the confusion between **black carbon** (soot formed through the incomplete combustion of fossil fuels, biofuels or biomass) and **carbon black**, the engineered material we produce is often incorrectly perceived as a polluting, dirty, air contaminating, carcinogenic black dust, detrimental to society and the environment. Birla Carbon is at the forefront of industry investigations into the potential effects of carbon black, both to humans and the environment. Through our work with the [International Carbon Black Association](#) (ICBA), we engage closely with health, safety and environmental officials across the world to ensure that accurate, scientific-based information is utilized in the regulatory process.

What is the ICBA?

We are an active member of our industry association, the International Carbon Black Association (ICBA). Birla Carbon professionals participate in and, in some cases, chair the ICBA's Product Safety and Regulatory Committees for North America, Europe and Asia. These industry groups meet on a regular basis to address the changing regulatory landscape of their specific region. Additionally, the organization sponsors an independent Scientific Advisory Group (SAG), which conducts and participates in product and occupational health investigations, research and analysis. This often results in peer-reviewed publications in internationally recognized journals, relating to the health, safety and environmental aspects of the production and use of carbon black.

We also help our customers conduct research into the safety and efficiency of their own products. Through our quarterly Product Stewardship newsletter, regular engagement with our customers and with our Sales, Marketing and Research and Development teams, we keep our value chain up to date with the latest industry developments.



GOVERNANCE AND ETHICS



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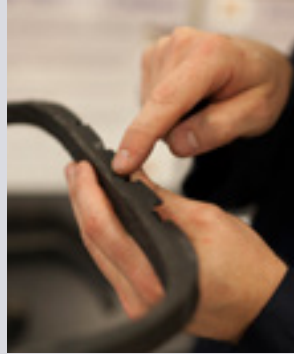


PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality



Can carbon black cause health problems?

Black carbon is a known carcinogen; by association, our product (carbon black) is too often erroneously linked with cancer. Peer-reviewed scientific studies have shown that **carbon black** is neither a toxin nor a carcinogen, and there is no evidence of any adverse health effects on our employees. As the material is fully embedded in the polymeric matrices, consumers are not directly exposed to carbon black through products placed on the marketplace.



Is carbon black harmful to the environment?

Due to the nature of our manufacturing processes, we recognize that our activities can potentially have environmental impacts. Through our practices, we are committed to ensuring that our production facilities do everything possible to prevent the release of any carbon black into the atmosphere. We are working to reduce greenhouse gases (GHG) and other air emissions by proactively studying, experimenting and investing in pioneering air emission control technologies. Furthermore, as carbon black is typically embedded in finished consumer products and difficult to extract from the rubber or plastic polymeric matrix, once these products are disposed of, the environmental impact of carbon black itself is minimal, if any.



PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality

Product quality

The quality of our carbon black and our product expertise has a direct impact on the performance and safety of our customers' own products. As a leading global business focused solely on carbon black production, we are in a strong position to supply our customers with groundbreaking products that are consistently of the very highest quality.

Quality assurance

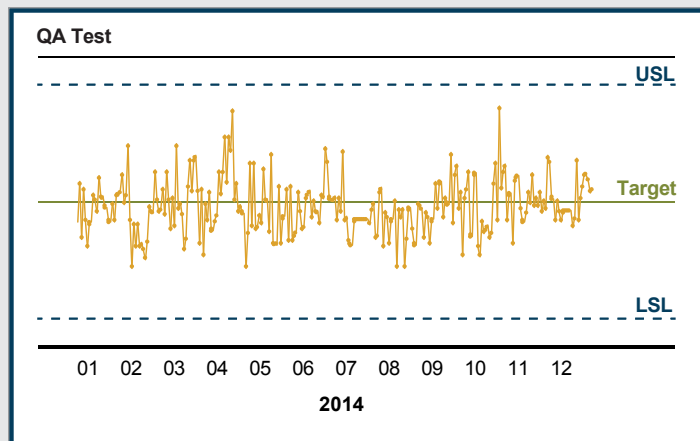
Most of our plants are ISO 9001 registered, certifying that we have established and documented methods for our processes. All of our production facilities have a Quality Assurance (QA) laboratory, which uses state-of-the-art equipment to test our products against stringent shipping specifications. These QA laboratories ensure that the material sent to our customers complies exactly with their specific requirements.

Focus on product consistency



Birla Carbon customers expect a product that consistently meets the highest quality standards. For carbon black, these standards focus on three key areas:

- **colloidal properties**, or those related to the carbon black morphology (microscopic physical characteristics);
- **physical form**, referring to the bead quality (size and hardness) of carbon black; and
- **cleanliness**, in terms of the purity of our product.



Birla Carbon rigorously tests its carbon black through internationally recognized test procedures and processes. Based on customer requirements, and regular reviews of the correlation between our customers' laboratories and our own, we define Upper Specification Limits (USL) and Lower Specification Limits (LSL) for each test. Our products only leave our gates if all of the required parameters are tested and the product is certified within these limits.

PRODUCT CONSISTENCY



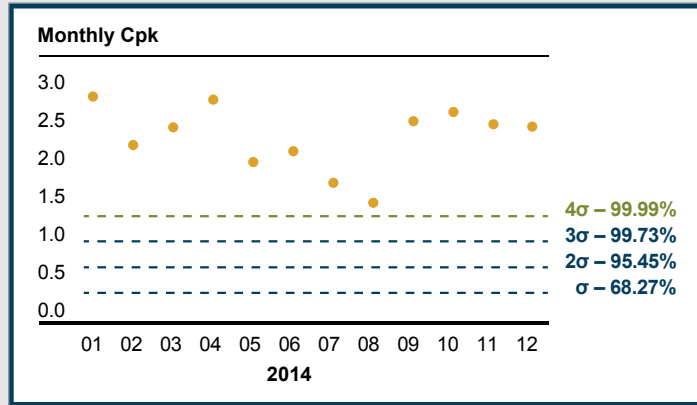
PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality

Focus on product consistency



Our testing processes are validated through a process capability index (Cpk), which statistically measures their reliability. All of our testing equipment in our quality departments are regularly serviced, checked and calibrated to guarantee maximum product quality.

Creating business leadership

Business leadership requires the best facilities and processes. Our Research and Development (R&D) activities are based in our centers in Taloja (Maharashtra, India) and Marietta (Georgia, USA), as well as two other regional satellite laboratories in Korea and Brazil. These state-of-the-art technology centers employ more than 50 leading scientists. Our Product Technology group works with our technical service teams throughout the world, and engages daily with our customers to ensure their needs are met.

Working with ASTM

Each of our laboratories receives regular audits from our material analysis group and is assessed twice a year through participation in an international proficiency testing program: the Laboratory Proficiency Rating System (LPRS). This program, organized by the [American Society for Testing and Materials International \(ASTM International\)](#), provides us with an opportunity to internally compare our laboratories with more than 100 centers worldwide. Should any anomalies or deviations be found through this LPRS, we conduct investigations, with support from our two central laboratories. This commitment to sharing best practice ensures our laboratories meet the very highest global standards.

Birla Carbon actively participates in the [ASTM D24 Technical Committee](#), which develops internationally recognized and accepted test standards applicable to carbon black. The ASTM standards play a key role for our products in areas such as composition, properties, classification, nomenclature, analysis and quality assurance.



PRODUCT RESPONSIBILITY

Product safety and stewardship

The big questions

Product quality

Our global quality management approach



Certificate of Analysis (CoA)

A CoA contains the required product quality information for our customers and contact details.



Guaranteed consistency

We work with our customers to establish rigorous consistency tests to guarantee that the characteristics of our carbon black lie well within the specification limits.



Customer tests

Our customers often conduct further stringent and thorough quality tests to confirm our product's performance.



World-Class Manufacturing (WCM)

Our WCM approach helps us continuously improve the quality of our product through adopting the best available practices and technologies across Birla Carbon.



Manufacturing Systems Analysis (MSA)

We conduct MSAs to closely examine the performance of our testing equipment and lab personnel.



Regional quality organization

Regular meetings are held between the regional quality leadership, the Quality Managers from each plant within the region and the Technical Service Managers to discuss and implement best practices in the quality area.



5.3%

profit reinvested in R&D in FY2016



Responsible stewards of the world around us

Our operations use natural resources such as oil, gas and water, which we manage conscientiously and responsibly.

Optimizing energy recovery in our operations

We prioritize recovering as much energy as possible from our waste gas, while reducing our own energy consumption in our facilities.



ENVIRONMENT

Carbon stewardship

Environmental compliance

Water

Waste

Proactive and preventative



At Birla Carbon, we regard technology as a way to optimize and safeguard natural resources. Our efforts are continuously focused on improving our carbon black manufacturing process and we take our responsibility to the environment very seriously. We aim to be proactive as well as preventative in our activities."

Dale Clark, Chief Technology Officer

Our key figures



\$33.4M

invested in process improvements related to energy efficiency and reducing GHG emissions



45%

of our direct CO₂ emission intensity reduction target already achieved



16 of 17

manufacturing locations of ours use recycled process water and/or rainwater in their operations



ENVIRONMENT

Carbon stewardship

Environmental compliance

Water

Waste

Carbon stewardship

Our carbon stewardship strategy is based on two pillars: converting more carbon from oil into carbon black; and optimizing our energy cycle. Our work is directly influenced by the energy market in general and oil prices in particular; lower oil prices in FY2016 have had significant impacts on our operations, restricting our ability to optimize energy conversion and efficiency.

Our understanding of our product life cycle continues to help us to strengthen our strategy and direct our actions on reducing our carbon footprint and emissions. Our work to reduce our carbon footprint goes hand in hand with our customers' expectations and helps them to improve the life cycle of their own product.

13 CLIMATE ACTION



We focus on carbon stewardship, being net energy positive and reducing our greenhouse gas emissions.

Assessing our total carbon footprint: product Life Cycle Assessment

Over the past three years we conducted a Life Cycle Assessment (LCA) to measure the impacts of our feedstock and carbon black. LCAs review the environmental impacts of all stages of a product life cycle: from raw material extraction through material processing, manufacture, distribution, use, repair and maintenance, to disposal or recycling. Birla Carbon's LCA is, to our knowledge, the first conducted by a carbon black manufacturer.

The scope of our LCA was from 'cradle to gate': from the 'birth' or extraction of raw materials to the delivery of carbon black to our customers' gates following the International Organization for Standardization (ISO) 14040 guidelines. The objective of the assessment was to better understand our impact with regard to CO₂ emissions and identify opportunities to reduce our overall carbon footprint. We looked at four years of feedstock delivery, production and product distribution data to establish a baseline and to better understand where we can reduce carbon emissions most effectively.

The results of our most recent LCA indicated that our overall carbon footprint has decreased by over 9%, relative to the FY2012 baseline.

Understanding our carbon footprint

Our Life Cycle Assessments (LCAs) have taught us that each stage of our manufacturing process has an impact on the overall carbon footprint. It is our responsibility to ensure that we closely monitor our carbon footprint and gain a better understanding of how to reduce it.



GOVERNANCE AND ETHICS



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ENVIRONMENT

Carbon stewardship

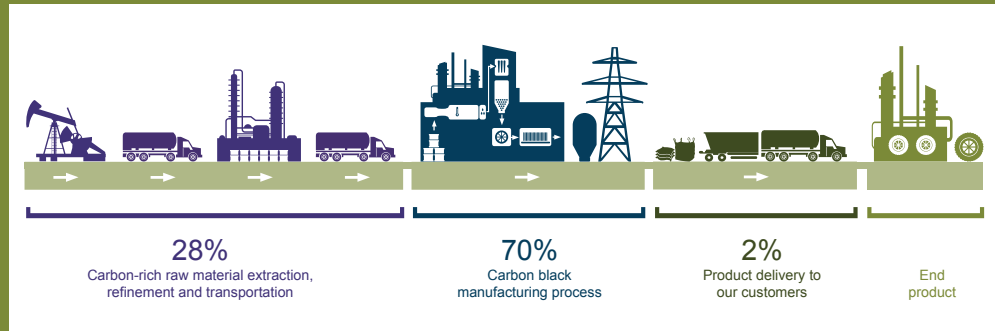
Environmental compliance

Water

Waste

Carbon stewardship across our value chain

Our carbon footprint:



Carbon-rich raw material extraction, refinement and transportation

28%



Birla Carbon has no control over carbon emissions during the extraction and refinement stages.

9%



Extraction:

Carbon-rich crude oil is extracted as a raw material.

11%



Transport to refinery:

The crude oil is sent to refineries for processing.

7%



Refinement:

Through fractional distillation, crude oil is separated into different chemicals including gas, petrol and kerosene. The low-value carbon-rich fraction, a waste product from this process, is our feedstock.

Birla Carbon has limited control over the transportation stage.

1%



Transport to Birla Carbon:

The feedstock is transported to our manufacturing facilities. We source our raw materials from regional suppliers as much as possible, reducing the carbon footprint that we generate through this stage.



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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Carbon stewardship

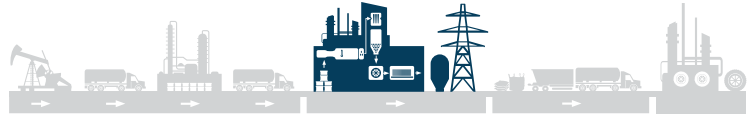
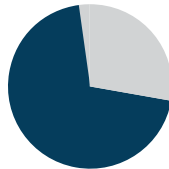
Environmental compliance

Water

Waste

Carbon black manufacturing process

70%



Manufacturing process:

During our manufacturing process, the feedstock oil is converted into valuable carbon black. This stage has the single largest contribution on our overall carbon footprint, and it is the stage over which we have the greatest control.

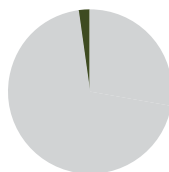


Energy management:

Through co-generation, we convert the tail gas produced into heat, steam or electricity. This recovered energy is used in our own operations, with the surplus distributed through local networks. Although any residual energy is fired, we minimize this where possible.

Product delivery to our customers

2%



Transportation:

Carbon black is delivered to our customers in a variety of containers, ranging from bags to supersacks or bulk transportation.

End product



Carbon black is used by our customers and found in countless different items, from tires to cables, from ink to food packaging. By engaging and working closely with our customers, we actively help them to better understand the carbon lifecycle of their own products.

These LCA results strengthen our efforts to reduce the carbon emissions we produce at the manufacturing stage, which we monitor closely through relevant KPIs. We are committed to ensuring that our operations are globally energy positive, meaning that we generate surplus energy while manufacturing carbon black. We are also actively working with various suppliers to optimize transport routes and reduce further our overall carbon footprint. Though the transport of our carbon black products to our customers represents just 2% of our carbon footprint, we are working to minimize the impact of this process.



ENVIRONMENT

Carbon stewardship

Environmental compliance

Water

Waste

We are currently expanding the LCA to include other environmental indicators such as ozone depletion potential, human health impacts from air pollutants, carcinogens and non-carcinogens and fossil fuel depletion. We hope to share these results with both key customers and suppliers in the near future so that we can engage with them to further reduce our global environmental impact.

Reducing our direct CO₂ emission intensity

We believe that SOE is the right approach to achieve our goal to reduce direct CO₂ emission intensity. Thanks to the implementation of best practice and continuous technology investments, we have achieved 45% of our ambitious FY2020 CO₂ emission intensity reduction target.

These results are accomplished through a series of global, regional and local initiatives. For instance, we are using natural gas rather than light oil, where appropriate, as natural gas contains less carbon per unit of energy, with the additional benefit of less sulfur. New feedstock oil sources have also been identified, allowing us to further reduce our direct GHG and SO_x emissions.



Proactive emission monitoring in India

Our facilities in India have taken their environmental performance to the next level. These improvements were not only a response to a change in regulatory requirements, but also an example of our proactive approach towards emission prevention and environmental care.

This was certainly the case in our facility in Gummidipoondi, Tamil Nadu state. To better monitor our air emissions from the combustor stacks, we commissioned an automatic system to continuously measure the release of SO_x, NO_x and suspended particulate matter (SPM) in the atmosphere. Our monitoring system is connected to a center run by Care for Air India, an organization dedicated to cleaner air, which enables the authorities to track our emissions.

As part of this project, smoke (opacity) meters were also installed in various appropriate locations in the plant, to act as an early warning system for plant personnel to ensure that any deviation from expected levels is notified immediately. Gummidipoondi's employees have also been further trained in environmental awareness, with a specific focus on air emissions. These actions further demonstrate Birla Carbon's commitment to environmental stewardship.

AIR EMISSIONS



ENVIRONMENT

Carbon stewardship

Environmental compliance

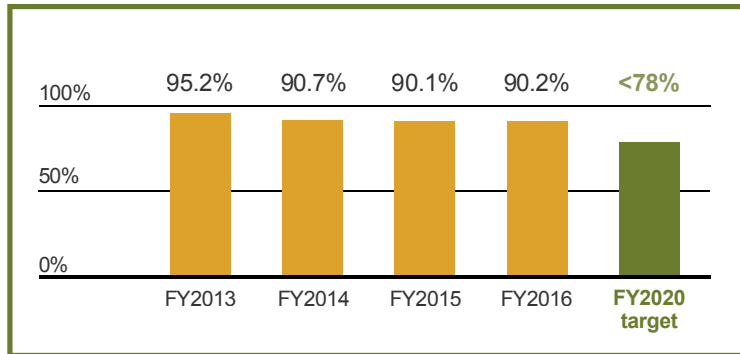
Water

Waste

Progress towards target



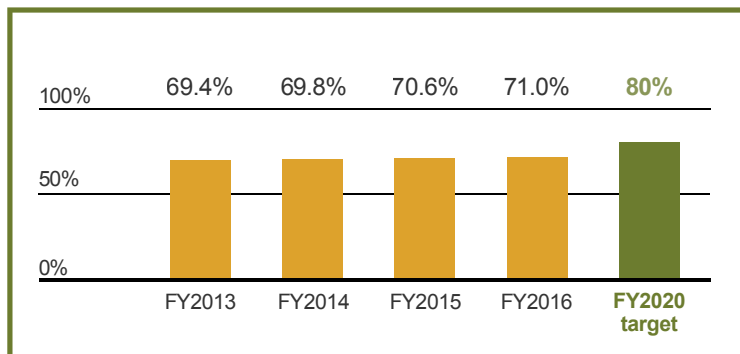
Target: Reduce our direct CO₂ emissions intensity by more than 22%



FY2013	FY2014	FY2015	FY2016	FY2020 target
95.2%	90.7%	90.1%	90.2%	<78%



Target: Increase our absolute energy conversion efficiency to 80%



FY2013	FY2014	FY2015	FY2016	FY2020 target
69.4%	69.8%	70.6%	71.0%	80%



ENVIRONMENT

Carbon stewardship

Environmental compliance

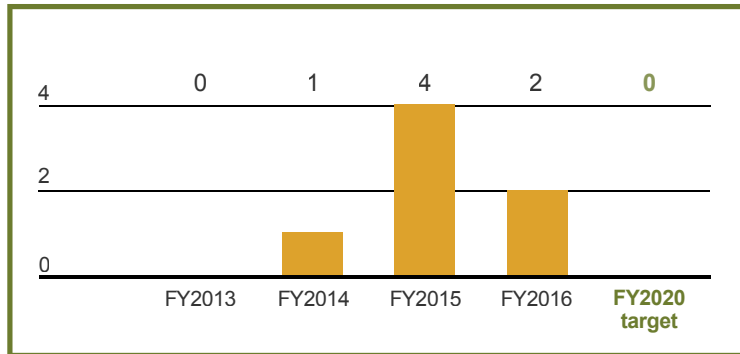
Water

Waste

Progress towards targets



Target: Record zero environmental releases year on year



FY2013	FY2014	FY2015	FY2016	FY2020 target
0	1	4	2	0

The Carbon Disclosure Project (CDP)

The CDP is a non-profit organization that works with companies and shareholders to disclose carbon emissions and the use of natural resources. After encouragement from several stakeholders, we disclosed our performance through the CDP online platform for the first time in FY2016. Birla Carbon will go through this process for a second time in FY2017, reporting on climate change, water and our supply chain.



ENVIRONMENT

Carbon stewardship

Environmental compliance

Water

Waste

Energy: recovery and positivity

Efficient energy use and recovery is critical to our business. In FY2015, we implemented a new energy conversion efficiency KPI, which compares our overall energy output relative to the equivalent energy input in all forms, within our boundaries. The new KPI has since allowed us to monitor our ability to convert energy in greater detail and take better business decisions. The FY2020 target is to increase our absolute energy conversion efficiency to 80%.

In the year since we implemented our new KPI, we have made great progress: our ability to recover more energy from our tail gas has increased, while we consume less energy to produce a ton of carbon black. The energy that we recover within our own facilities, which would have otherwise been wasted, is then used internally to produce carbon black, with the surplus being sold to neighboring facilities and local grids in the form of electricity, steam, tail gas or hot water.

In FY2016, Birla Carbon remained energy positive and generated surplus energy while manufacturing carbon black despite some adverse circumstances. In some countries, low energy prices have caused stockpiles and customers could not absorb all of the energy that we recovered.

For example, the nearest neighbor to our Weifang facility, China, a coal-fired power plant, was shut down in FY2016 and as a result halted their purchase of our tail gas. Although we are currently using a flare to incinerate the tail gas, this is a wasteful process. For this reason, we are in the process of installing a cogeneration facility, designed to burn the tail gas in a boiler to generate electricity through steam. The project is near completion and should be operational during the first half of FY2017.

Overall, Birla Carbon has made marked progress on the energy front and our absolute energy conversion efficiency increased by a significant 0.4%. It is estimated that if we had not suffered the Weifang difficulty, our energy KPI would have improved to 71.4%. One facility that has seen success is Camaçari, Brazil, where optimization of the dryer system reduced tail gas consumption by almost a third when compared with FY2013.

The introduction of Regional Energy Managers (REMs) to reinforce our energy strategy at our sites in Asia, Europe and Africa has seen success. The REMs assess the energy efficiency of each of our plants and provide local expertise and support as they implement improvement processes. Knowledge gained is then shared across the business, encouraging all of our plants to adopt similar initiatives where possible.



ENVIRONMENT

Carbon stewardship

Environmental compliance

Water

Waste



Record-breaking energy optimization in Spain

Our committed investment since FY2013 towards our energy cycle at our plant in Santander, Spain, is bearing fruit. The energy optimization improvements are not just visible, but record-breaking, setting a new benchmark across Birla Carbon.

The work has been led by a newly hired and dedicated energy manager José Luis Martínez, who mapped the facility's entire energy cycle, extended meter capabilities where required, implemented cutting-edge software for better energy monitoring and identified equipment upgrade opportunities. Furthermore, Martínez holds daily kaizen meetings with his production colleagues to review the energy data for fine-tuning the process parameters.

Over a period of three years, a series of pumps, fans, compressors, heat exchangers and variable frequency drives for electric motors were upgraded and installed, resulting in increased energy efficiency for the plant.

When compared to FY2013, the absolute energy conversion efficiency has improved by a stunning 3.5% (0.1% is generally considered significant). The energy required to produce a ton of carbon black has also decreased by a remarkable 21.4%, reducing energy purchases by 30.1%.

For the record, in December 2015, the plant in Santander achieved the lowest energy consumption levels per ton of carbon black ever registered across the company, setting our new benchmark.



I am very happy with what has been achieved thus far, but we know that there are further opportunities and we will go for these with enthusiasm and confidence."

José Luis Martínez



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



ENVIRONMENT



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In FY2016, our plant in Renukoot, India, received certification in the ISO 50001 standard, bringing the total to seven certified facilities in Europe, Africa and India. ISO 50001 stimulates organizations to establish systems and procedures necessary to improve their energy efficiency, use and consumption. Our goal is for all sites to achieve ISO 50001 in the future.

Thanks to the continuous investments in our workforce and technology, we are confident that we will achieve our FY2020 target in all of our plants. We expect our new greenfield facility in Jining, China, which should be operational by the end of FY2017, to be the showcase for our energy leadership.

Sourcing our raw materials

Intelligent and efficient use of raw materials and feedstock, such as natural gas and oil, is crucial to our long-term viability, as well as helping to reduce our environmental impact. Traditionally, a large percentage of our feedstock oil has come from the US Gulf Coast in the form of Fluid Catalytic Cracker (FCC) oil.

Despite the efficiency advantages of this oil due to its high carbon content, transportation costs and sulfur emission restrictions have led us to identify alternative local feedstock, especially in India and in the South East Asia and Far East region.

7 AFFORDABLE AND CLEAN ENERGY



By recovering energy generated by our operations and either using it in our facilities or selling it to local electricity boards.



Taking the Korean example

We source our feedstock oils from a variety of locations around the world. We have diversified our oil procurement in recent years considering regional suppliers as much as possible. This approach reduces our carbon footprint with no compromise on quality.

One region that has recently reviewed its oil procurement process and feedstock diversification is Europe and Africa. A team led by the regional Technology Manager, David Nuñez, was formed to tackle this situation. Inspired by the success of our Korean sister plant in FY2013, the European team traveled to Yeosu, Korea, to gain a better understanding of how diversification was achieved there through SOE and best practice sharing. The Korean experience showed us that it is possible to find solutions that are closer to our operations and more sustainably viable.

BUSINESS CONTINUITY **SUPPLY CHAIN**



45%

direct CO₂ emission intensity reduction target achieved.



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Environmental compliance

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Environmental compliance

Complying with international laws, standards, codes of conduct and our own business principles is fundamental to Birla Carbon as it helps us to operate responsibly, mitigate risk and build trust with stakeholders. Compliance with laws is also a basic expectation of our customers and stakeholders. We recognize we must act responsibly in our interactions with the world around us. As responsible stewards of the resources that we manage, we adopt international standards to guide our actions and take greater ownership of our role in our industry.

Management systems

All of our operating manufacturing plants are certified to the ISO 14001 Environmental Management Standard. Seven of our plants are already certified to the ISO 50001 standard related to energy management and six have obtained the Aditya Birla Group's Corporate World Class Manufacturing (WCM) certification, a Group-wide initiative that promotes and supports the highest standards in manufacturing and production. Meeting all relevant environmental standards will help us strengthen our industry-leading position and our goal is for all sites to achieve WCM and ISO 50001 in the near future. Our work in the evolving design of our new facility in Jining, China, is an example of the flexibility and ability of our environmental and technological management processes.

The Birla Carbon Environmental Audit Program not only reviews the compliance and implementation of our standards, but also includes biennial safety and compliance audits conducted by Health, Safety & Environment (HS&E) corporate staff and outside auditors. These audits include inspections, employee interviews and detailed reviews of regulatory issues at each plant to ensure 100% compliance with national, regional and local regulations. Any issue identified is prioritized and tracked by the Corporate HS&E Managers on a monthly basis through Enablon, our integrated Sustainability Management tool. In FY2016, we conducted eight audits of our environmental performance.

Investing in world-class facilities

To improve efficiency, we are upgrading and enhancing our old plants, while developing a new generation of facilities. In FY2016, we invested \$33.4 million in state-of-the-art technology to help us maximize the efficiency of our manufacturing processes and enhance our environmental performance.



ENVIRONMENT

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Jining: an example of how SOE works

Sustainable Operational Excellence (SOE) is at the heart of our work and ambition. Construction has now begun on our greenfield project in Jining, China, which we announced in FY2015. To ensure the best possible design, Birla Carbon approached the World Bank's International Finance Corporation (IFC) thanks to the Aditya Birla Group, between whom there is a long-standing relationship. We worked closely with the IFC to earn their financial assistance, conditioned by a set of defined sustainability best practices.

As part of the process the IFC reviewed and critiqued our project in FY2015, scrutinizing not only the Jining site but the surrounding facilities, environment and communities, on the following points:

1. Assessment and Management of Environmental and Social Risks and Impacts
2. Labor and Working Conditions
3. Resource Efficiency and Pollution Prevention
4. Community Health, Safety and Security
5. Land Acquisition and Involuntary Resettlement.

IFC suggestions and comments were taken into account as we refined our design. The facility will now encompass the latest technologies, ensuring best practices for emission controls, water management and energy cycle optimization. On completion, the project is expected to create 140 direct jobs and many more contracted positions, while improving the competitiveness of local industry.

Since the IFC review China's environmental regulations have evolved, with an increased focus on human health. Birla Carbon was forced to adapt to these stricter criteria through reengineering and creative thinking to demonstrate compliance to the local authorities.

Construction is now underway and the project's environmental, health and safety compliance to date has been exemplary. No accidents or environmental violations have been recorded, thanks to close collaboration with our contractors. The design and construction of our greenfield facility demonstrates how we can harness our abilities. Thanks to this example of SOE, we remain on track to produce our first tonne of carbon black by the end of FY2017.

RESOURCE CONSUMPTION

AIR EMISSIONS

WATER

ENERGY



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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Air emissions

We monitor our air emissions to ensure compliance with local regulations where we operate. We have policies and procedures in place so that, in the case of incidents, we can notify the local authorities and take action as soon as possible. To meet and exceed evolving regulatory standards, Birla Carbon continues to work on technology improvements such as state-of-the-art filter materials, which ensure maximum recovery of carbon black particles. In addition, we proactively evaluate innovative global technologies relating to air emissions for applicability to all our operations.

During FY2016, and in response to up-coming regulatory requirements, we have evaluated potential technologies that will more effectively manage flue gas desulfurization. An offset from this process is an increase in gypsum generation, an inert solid waste. We are currently working to support plants to better manage this by-product and find beneficial uses for it, thus keeping it out of landfills.

Empowering our people and sharing best practices

This year, we continued to focus our efforts on sharing best practices across our facilities. The best practices system is a methodology by which the best safety, quality, operating and maintenance techniques can be transferred across all our operating plants, to ensure that all of the plants can perform to their optimum potential.

Progress is measured through quarterly scorecards, detailing how each plant has implemented best practices. In FY2016, three best practice categories were changed or updated and five new categories added, bringing the best practices total to 431.

We hold quarterly reviews with a special focus on energy and emission control. Bi-annual best practice reviews were implemented alongside compliance assessments at seven facilities. In FY2016, we have also circulated specific training modules on boiler and turbine operation and held three regional energy seminars and two training sessions in Marietta, the United States, and Alexandria, Egypt.



\$33.4M

invested in process improvements related to energy efficiency and reducing GHG emissions



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As water is an essential resource that is used by everybody around the world, industries like ours must set an example in its responsible use and management. Effective water stewardship has to be a priority, particularly in water-scarce areas where we operate. With this aim, we recently assessed all of our plants to identify the most vulnerable in order to effectively concentrate our efforts. Our water strategy centers on minimizing the amount of water we draw from natural and municipal sources through reusing process water and harvesting rainwater. Understanding our water cycle will help us reduce our overall footprint and preserve this precious natural resource.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

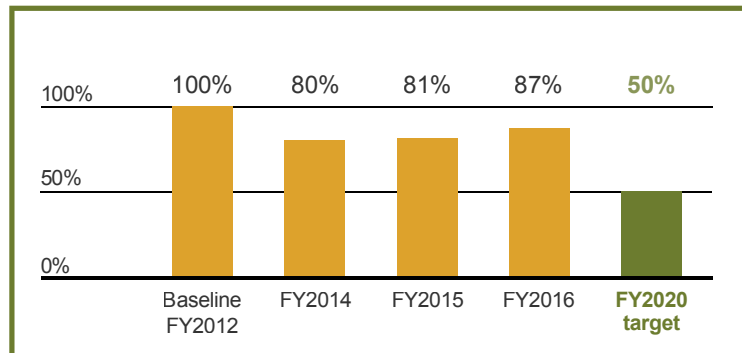


Efficient use of resources we consume, including water.

Progress towards target



Target: Reduce by 50% our water withdrawal intensity ($m^3/t_{\text{carbon black}}$) versus FY2012 baseline for our high- and medium-risk sites.



Year	Water Withdrawal Intensity (%)
Baseline FY2012	100%
FY2014	80%
FY2015	81%
FY2016	87%
FY2020 target	50%



GOVERNANCE AND ETHICS



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Assessing our water footprint

To better focus our water actions, we partnered in FY2015 with the [World Business Council for Sustainable Development \(WBCSD\)](#) and the [World Resource Institute \(WRI\)](#) to assess the water stress level at each of our manufacturing sites. We classified our plants into three risk categories (high, medium and low) using the data generated by the WRI's [Aqueduct™](#) tool. As a result, we have revisited our global water KPI and replaced it with an equivalent focusing on the high- and medium-risk locations.

Although informative, we recognize that the data generated by this KPI is not granular enough to drive dramatic changes. Birla Carbon believes that water risk management needs to be considered at a local level as much as possible.

To achieve more informative reporting, we have established a multi-disciplinary team to map the water risks for the most vulnerable plants and reassess the identified scarcity or flood risks against the Aqueduct™ tool. Following this assessment, this team will work with engineers to try and gain a better understanding of the inherent costs of the water cycle – ranging from the actual cost of water to treatment, internal movement and discharge costs. These considerations will also include a valuation of the social cost of water in specific areas where water is scarce.

Through this assessment, we hope to gain a better understanding of our water use and the cost on the business and the wider community. We recognize that it is unlikely that we will have a clear and definitive answer to these questions within the next year, but we have started the process – a process that will make our business more robust, and more sustainable.



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Our water risks

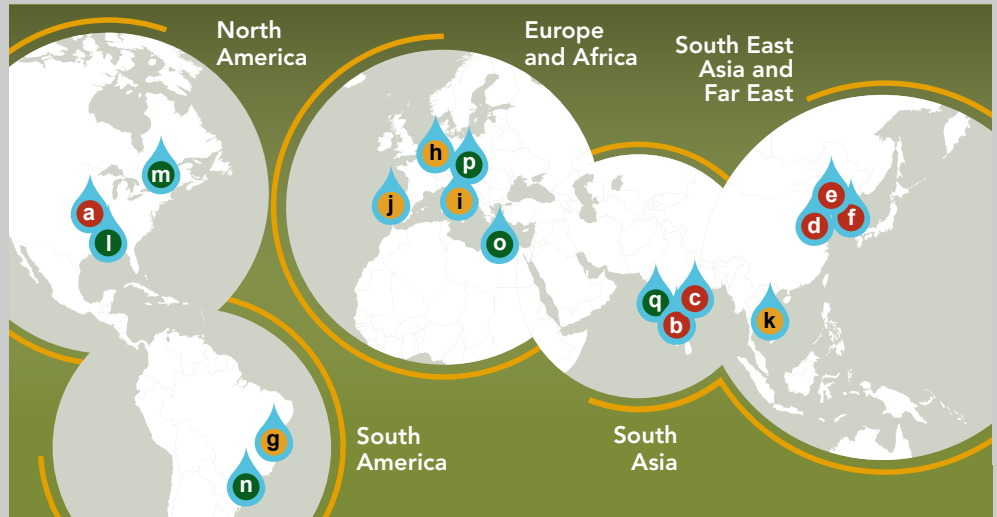
As identified by the Aqueduct Tool in partnership with WBCSD and WRI

All risks

High

Medium

Low



High

North America
a Hickok, USA

South Asia
b Gummidipoondi, India
c Renukoot, India

South East Asia and Far East
d Weifang, China
e Liaoning, China
f Yeosu, South Korea

Medium

South America
g Bahia, Brazil

Europe and Africa
h Hannover, Germany
i Trecate, Italy
j Santander, Spain

South East Asia and Far East
k Angthong, Thailand

Low

North America
l North Bend, USA
m Hamilton, Canada

South America
n Cubatão, Brazil

Europe and Africa
o Alexandria, Egypt
p Tiszaújváros, Hungary

South Asia
q Patalganga, India



ENVIRONMENT

Carbon stewardship

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Water

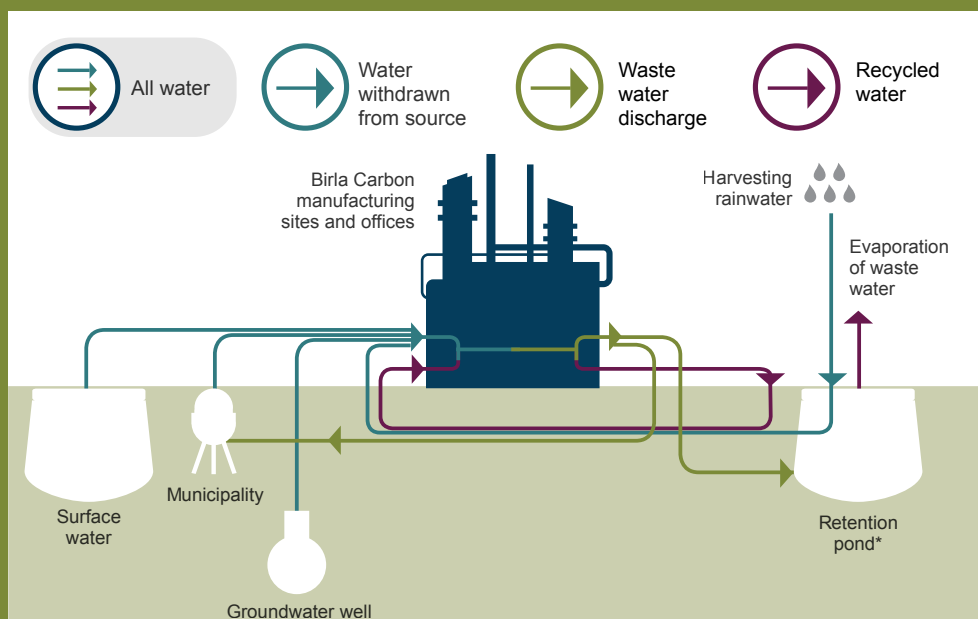
Waste

Water cycle at Birla Carbon Sites

We recycle and reuse water wherever we can. For example, once water has been used in the manufacturing process, it is directed into retention ponds so it can be re-directed into the process. Our water conservation best practices are shared across all of our locations as part of our SOE strategy.

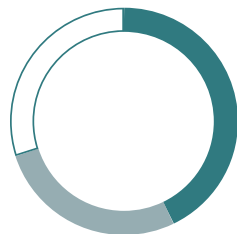
Our water cycle

The water cycle at Birla Carbon sites



*Approximately 3,299,460m³ (17%) reused from retention ponds in FY2016. Recycled process water and rainwater is collected in retention ponds and pumped back into the process.

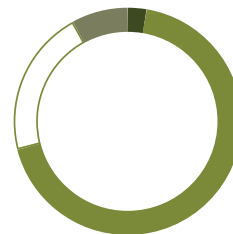
Water withdrawal by source



FY2016
16,563,889 m³

- 43% Surface water
- 27% Municipality
- 30% Groundwater well

Water discharge by destination



FY2016
4,362,225m³

- 3% Sanitary
- 68% On-site retention pond
- 21% Surface water
- 8% Municipal waste water treatment process (WWTP)



GOVERNANCE AND ETHICS



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Smart engineering saves water and money in Canada

Our facility in Hamilton, Canada, is located in an area with a high risk of flooding, which tends to occur annually. Furthermore, the turbine cooling system discharges water into retention ponds, increasing the volume of water around the plant.

Previous attempts to recycle water had involved the implementation of a holding tank, through which water was then reintroduced to the plant via the turbine cooling system. However, the same holding tank also received rejected water from the purification system, which, once mixed with the floodwater, meant that the water in the holding tank was not of a high enough quality to be reintroduced into the system. Any quality shortfalls were supplemented by water purchased from local utility providers.

Engineers at the Hamilton facility responded by modifying the system, ensuring that reject water from the purification scheme was automatically directed to the turbine cooling system, rather than mixing with floodwater. The modifications decreased our usage of local utility water by 24,480 gallons per day, resulting in savings of approximately \$7,400 per month. A simple re-engineering solution therefore reduced the amount of water being stored in retention pools and produced savings by using less local utility water.

RESOURCE CONSUMPTION **WATER**



16 of 17

manufacturing locations of ours use recycled process water and/or rainwater in their operations



OUR APPROACH



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Waste

In any industry, effective waste management and minimization are priorities; carbon black is no exception. Waste is generated at all stages of our industrial process, from manufacturing to packaging, though the quantity involved is relatively small. As international regulations and stakeholder expectations become increasingly demanding, we must implement strategies to reduce, reuse and recycle the waste generated by our processes.

Reporting on our waste

Over the last three years, we reported on our progress towards waste management, focusing on the reduction of our waste generation intensity. New and evolving regulations worldwide have forced chemical industries to adopt technologies on air emission control, which generate a significant amount of solid waste as a by-product. This is the case for the flue gas desulfurization processes that we are implementing at several of our facilities and where, as a consequence, an increasing amount of solid waste, particularly gypsum, is generated.

In this context, the KPI that we used to monitor waste generation intensity is no longer considered relevant. We have decided to reassess the situation with our engineering group and have begun work on a more pertinent KPI, which we will announce in FY2017.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Minimizing the waste that we generate.

Waste management

We aim to generate less waste, or reuse and recycle materials for the same purpose or for a secondary use. Our sites comply with all applicable health, safety and environmental requirements to ensure that any materials are sent for disposal in the most environmentally sound manner. We also work with organizations such as Repasack® to better recycle our product packaging in Europe and provide our employees with waste reduction training in the workplace.

Each of our sites has developed a specific plan for identifying and managing the different types of waste generated by our activities, including metal, pallets, plastic materials, paper and cardboard. We also sent self-assessment questionnaires to the sites in FY2016 to help them review how their operations generate and manage waste. Carbon black that does not meet our high quality standards is reused as much as possible in the manufacturing process, rather than being discarded. We encourage all of our sites to adopt this approach.

We are innovating our waste management initiatives by sharing best practices across our sites. An example of a best practice shared is in Brazil where the superbulk bags, containing up to 1,000 kg, are reused six times before they are sent off-site to be recycled by a third party. Ultimately, we are responsible for the safe disposal of these materials, the wellbeing of our employees and the communities where we operate.



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Making gains from our waste in Alexandria

Our facility in Alexandria, Egypt, generates a significant amount of solid waste, in the form of carbon sludge. Traditionally, it has been very difficult to dispose of, even as solid waste, and no companies or contractors could be found to help us dispose of it. Even after a disposal company was identified, we discovered that it was costly to collect, package and transport sludge for outside disposal. It also took a considerable amount of time to receive disposal approval from local authorities due to the facility's location in a free trade zone.

As a result of these challenges, we decided to work with contractors to find and trial suitable applications for the sludge. Through this process, we discovered that the sludge, once mixed with bitumen, could be used as an insulation material for building surfaces or as a black paint for road curb stones. This solution worked well for us in several ways: we not only saved money that we would otherwise have invested in waste disposal, but we also offset costs by selling the waste to an external buyer. By working closely with our contractors, we were able to find a win-win solution that helped us dispose of solid waste while providing us with economic benefits.

WASTE



26%

solid waste recycled in FY2016



OUR APPROACH



GOVERNANCE AND ETHICS



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Building lasting relationships

Our leadership depends on maintaining strong relations with suppliers and customers.



Establishing an ethical supply chain

We work closely with our customers and suppliers to ensure that ethical standards are maintained across our supply chain.



CUSTOMERS AND SUPPLIERS

Customer engagement

Supplier management

Sustainable longevity



We have been part of industrial development for the last century and will continue to advance through the next. A key element of our progress is our partnerships with customers and suppliers to evolve a resilient and sustainable supply chain."

Madhurima Gupta,
Chief Purchasing Officer

Our key figures



93%

Share of total costs spent on suppliers who have received our Code of Ethics in their own language



Top 10%

of companies ranked by EcoVadis



81

81 trees planted with customers at our facility in Patalganga, India



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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CUSTOMERS AND SUPPLIERS

Customer engagement

Supplier management

Customer engagement

Our business depends on building partnerships with our stakeholders, especially our customers. Our trust-based relationships are driven through our five values: Integrity; Commitment; Passion; Seamlessness; and Speed. By carefully nurturing these ties, based on a consistent high quality product, excellent service and global supply security, we can build strong and lasting links with our customers.

How we engage with our customers

Our objective is to develop long-term relationships through customer engagement that align our sustainability agendas. To achieve this objective, we have established a cross-functional engagement model, through which we deploy our key account management (KAM) program.

This engagement model is designed to increase touch points within the customer's organization, enabling us to remain aligned to their priorities and focus on building truly valuable partnerships. Our success is assessed by the extent to which our product portfolio interests our customers. Based on these engagements, we have also been able to develop timely new products to meet customer needs.

17 PARTNERSHIPS FOR THE GOALS



We engage with our customers to search for more sustainable business approaches.



CUSTOMERS AND SUPPLIERS

Customer engagement

Supplier management

Customer Satisfaction Survey

To facilitate an open dialogue with our customers, we launched a Customer Satisfaction Survey in FY2014. The second annual survey held in FY2015 provided us with valuable feedback: our customer satisfaction levels continue to be high.

In addition, we implemented the Net Promoter Score (NPS¹) in FY2015, which asks our customers to rank Birla Carbon's performance against our peers. NPS is calculated based on how customers respond to a single question: On a scale of 1 to 10, how likely are you to recommend Birla Carbon to a business partner or a friend? The responses are then compiled and compared.

After a year of implementation across all of the regions, it is still too early for Birla Carbon to draw solid conclusions from the NPS. We are continuing to collect responses actively and are working on refining the overall system. Early indicators suggest that our results are good: we have a great deal of pleased and loyal customers across all regions. We have also determined the specific motives behind those who did not score us highly, and we are actively problem-solving with the intention of improving customer loyalty.

Sharing sustainability strategies

Transparency is key to building joint strategic sustainability approaches. Our customers regularly visit our manufacturing locations and offices to conduct audits, during which they review our processes. Our customers highly value global supply security, which our business continuity strategy and risk management approach is designed to ensure.

In FY2016, we engaged with several of our customers and their sustainability teams to discuss and review our materiality assessment. We also discussed our carbon black Life Cycle Assessment approach, supporting their own product LCAs.

We also partner with our customers to better understand their expectations for new products and their sustainable attributes. For instance, rolling resistance is a key concern for our tire customers. Our objective is to develop and commercialize new carbon black grades to further lower the rolling resistance of the next generation of tires. These tires will consume less energy in vehicle propulsion, resulting in greater fuel economy, thus emitting less CO₂.

¹ The NPS model, developed by and registered to Fred Reicheld, Bain & Company and Satmetrix, measures customer loyalty by asking for direct feedback.



CUSTOMERS AND SUPPLIERS

Customer engagement

Supplier management



Engaging with key customers

We are immensely proud of the relationships that we have built with our customers. These mutually beneficial relationships not only provide the foundations for good business, but also for aligning our sustainability vision.

In FY2016, Pirelli invited us to participate in their Global Stakeholder Dialogue, aimed at consulting its stakeholders on their sustainability strategy. Policy-makers, academics, suppliers, the financial community, customers and NGOs took part in this event to help Pirelli validate and refine their sustainability approach.

Mr Filippo Bettini, Chief Sustainability and Risk Governance Officer, initiated the dialogue with a presentation of Pirelli's Sustainability Plan 2020 plan, achievements, and challenges to date. The group then reviewed and discussed Pirelli's materiality assessment, considering the evolving global context with a focus on macroeconomic uncertainty, increasing regulatory framework, changes in social behavior and demographic trends.

With the aim of gathering further information to anticipate and prepare for the future, Pirelli formed three stakeholder working groups, to share perspectives on the evolution of areas relevant to their business:

- Labor and human rights
- Environmental impacts during product lifecycle
- Future mobility.

Birla Carbon joined the product lifecycle discussion, in which raw materials sustainable innovation was faced as a key element towards Pirelli's product carbon footprint reduction targets.

Turning feedback into action

Our customers want to see that we swiftly respond to their feedback through robust processes and procedures. If a product-related issue is brought to our attention, scientists from our technology centers assess the problem before issuing a detailed report. All customer dissatisfaction, whether regarding products, sales or the supply chain, is reviewed thoroughly before responding to the customer.



Key Account Management (KAM) program developed to foster stronger customer relations



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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CUSTOMERS AND SUPPLIERS



OUR PEOPLE



COMMUNITIES



CUSTOMERS AND SUPPLIERS

Customer engagement

Supplier management

16 PEACE AND JUSTICE STRONG INSTITUTIONS



We encourage our suppliers to respect human rights through the Terms and Conditions on our contracts.

Supplier management

Our trusted supplier network includes vendors from around the world. Maintaining close and effective relationships with local, regional and global suppliers is key to Birla Carbon's success. Our suppliers' behavior reflects on us; we have to work with them to ensure they uphold our high ethical standards.

Code of Ethics

Our supply chain must be reliable and ethical. We have established internal standards and principles to provide guidance for our employees – and our suppliers. Our diverse supplier base includes: vendors; service providers; contractors; distributors; and agents.

In FY2014, we rolled out our Global Code of Business Ethics and Compliance Standards (Code of Ethics), a comprehensive document that each employee has to read and sign against the Code of Ethics annually. Over FY2015, we reached out to our major suppliers, representing over 90% of our total global purchases. Each of these suppliers was contacted with an introductory letter, explaining our expectations on business ethics, and sent a copy of the Code in their own language.

In FY2016, we have taken this process further, by reviewing the contractual Terms and Conditions that we expect our suppliers to agree to. The Terms and Conditions have been revised to include a paragraph on business ethics covering human rights issues, such as child labour, and expected business behaviour; reflecting what is already contained within our Code of Ethics.



If we discover a business ethics issue with one of our suppliers, we will discuss the matter with them and then consider whether to terminate our commercial relationship."

Rich Paris, Associate General Counsel



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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CUSTOMERS AND SUPPLIERS



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CUSTOMERS AND SUPPLIERS

Customer engagement

Supplier management

Feedstock supplier sustainability assessment

We aspire to achieve sustainable procurement for our operations. To achieve our ambition, we recently reviewed all of our global feedstock suppliers and their business practices, using publicly available information from their websites and other sources. Our feedstock suppliers are often subsidiaries of larger companies, which we also evaluated. Suppliers were rated based on the quantity and comprehensiveness of the available information.

Response planning and preparedness

To maintain uninterrupted carbon black delivery to our customers, it is important that both our sites and our suppliers have inventories available at all times. Difficult pricing scenarios require us to adapt our approach to inventory management – and the same is true for our suppliers. Our Business Continuity Plans and Crisis Management Response Guidelines provide solutions for these different scenarios. For instance, our contract supplier agreements allow us to source raw materials with minimal risk. A list of approved and certified alternative suppliers is maintained for emergencies, with quality assurance performed on-site by a third party.

17 PARTNERSHIPS FOR THE GOALS



We engage with our suppliers to search for more sustainable business approaches.



93%

Share of total costs spent on suppliers who have received our Code of Ethics in their own language



OUR APPROACH



GOVERNANCE AND ETHICS



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OUR PEOPLE



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Attracting the best talent

Attracting and retaining the best talent is a fundamental driver of our continued success.



Listening to our people

We help employees build careers through opportunities and continuous engagement.



OUR PEOPLE

Health and safety

Attracting and retaining talent

Employee engagement

Record-breaking safety



Safety at Birla Carbon is a personal commitment for everyone. We have been working hard to implement a commitment-based safety culture that focuses on personal commitments and accountability to manage risks every day. It appears to be working: our injury rates were down 7% and we had 12 sites with zero accidents in FY2016, a record in the company's 170-year history."

Steve Brenske, Senior Manager, Safety and Product Stewardship

Our key figures



BEST

safety record in 170 years



4

new leading safety indicators introduced



87%

of managers hired from the local community



OUR PEOPLE

Health and safety

Attracting and retaining talent

Employee engagement

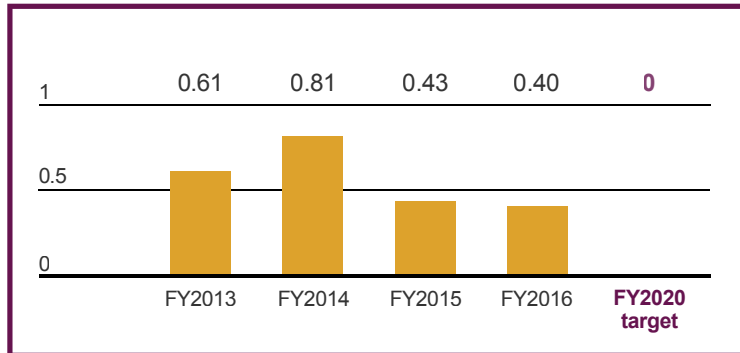
Health and safety

The health and safety of our people is paramount. Our aim is to create a culture of safety excellence throughout Birla Carbon. This culture begins with leadership: establishing a clear vision, communicating specific expectations for safe behaviors, aligning the organization with the vision and expectations, and ensuring that people are held accountable for their actions. In FY2016, we have seen our people make a personal commitment to safety. Our approach is to engage people in identifying and managing health and safety risks at all of our sites for our employees and the contracted workforce. We apply all of our standards and procedures, while communicating safety messages, in an appropriate, relevant way across our plants.

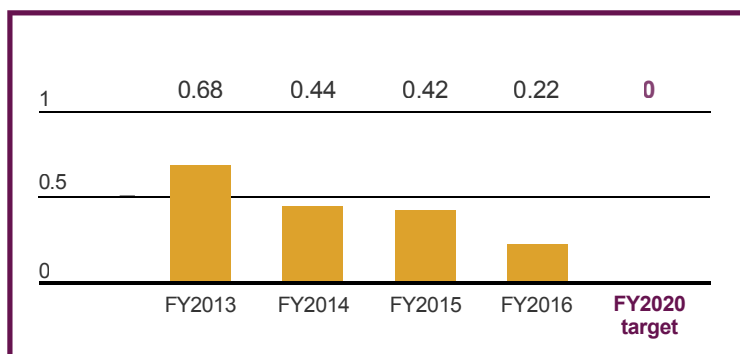
Progress towards targets



Target: Achieve zero recordable injuries year-on-year (employee Total Recordable Incident Rate).



Target: Achieve zero recordable injuries year-on-year (contractor Total Recordable Incident Rate).





OUR PEOPLE

Health and safety

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Employee engagement

Progress towards targets



Target: Achieve zero recordable injuries year on year (employee Total Recordable Incident Rate).

FY2013	FY2014	FY2015	FY2016	FY2020 target
0.61	0.81	0.43	0.40	0



Target: Achieve zero recordable injuries year on year (employee Total Recordable Incident Rate).

FY2013	FY2014	FY2015	FY2016	FY2020 target
0.68	0.44	0.42	0.22	0

The health and safety of everyone at our facilities, from the moment they arrive to when they leave to go home, is our responsibility. Although FY2016 saw record safety results in our long history, spanning over almost 170 years, we recognize that more can be done.

Conventionally, we assess our safety performance through incident rates and violations, which are lagging indicators as they measure events after the fact. To improve further, we engaged with our Health and Safety professionals worldwide and developed four leading indicators, aimed at proactively preventing incidents and injuries.

It is expected that these leading indicators will influence our safety culture and minimize at-risk behavior:

1. Completion of required HSE training and qualification.
2. Reports of hazards or employee concerns completed within 48 hours.
3. Near miss investigations completed within two business days.
4. Completion of HSE programs self-assessments with action plans/tasks to address findings.

All Health and Safety personnel were introduced to the purpose, definitions and data collection process through on-site training in January 2016. The first round of data collection began in March 2016 and we will evaluate the effectiveness of these leading indicators over the next year.



OUR PEOPLE

Health and safety

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Employee engagement

How do our health and safety programs work?

Our goal is active risk management through clear standards, education, training, auditing and follow-up to reinforce accountability. Health, safety and environmental responsibilities are taught to all of our people on induction and reinforced by regular training.

Over the last three years, in addition to regulatory requirements and recognized industry best practices, we have developed a range of global standards based on our own review of historical incidents and near-misses at our sites. Each plant is responsible for implementing and monitoring progress against these standards and producing a monthly report for our Senior Management Team. All sites are also audited at two-year intervals to assure compliance with regulatory requirements and company standards, as well as to identify and share best practices.

Safety management



Our approach to safety and health management involves a methodical, five-step process to ensure that each standard is entirely applicable to our operations.



1 Developing a standard

In addition to regulatory requirements and recognized industry best practices, we conduct our own retrospective review of incidents and near-misses at our sites, to develop appropriate standards and expectations.



2 Training and implementation

Once developed, each plant is responsible for training in and implementing these standards. Our safety leadership training focuses on the roles and responsibilities of leaders in instilling a culture of safety excellence for both our employees and the contracted workforce.



3 Executing an action plan

Each safety standard is internally and externally validated. An action plan is executed to track its successful implementation, monitor progress and reinforce accountability.



4 Conducting audits

Each location is audited at two-year intervals by an external body to review the compliance of the safety standards with regulatory requirements and company standards. Safety managers from our other sites also participate in the review process, sharing best practices.



5 Refining action plans

Specific tasks or activities identified during the audits are addressed by adjusting the action plan, reinforcing our drive for continuous improvement and safety excellence.



OUR PEOPLE

Health and safety

Attracting and retaining talent

Employee engagement

Changing our health and safety culture

In FY2015, we implemented a safety leadership training process, known as Safety 24/7, focusing on the roles and responsibilities of leaders in sustaining a culture of safety excellence. We finished the roll-out of Safety 24/7 in the first half of FY2016, almost a year ahead of schedule. We are now monitoring implementation through site visits, our audit processes and are using a series of training videos from actual training sessions.

Over the last year, we have moved on from leadership training by introducing the concept of Commitment Based Safety (CBS) in several of our locations. Through CBS, we encourage individuals to make a personal safety commitment to positively change the overall safety culture. A core element of CBS is the expectation that every person at every level is responsible and ultimately accountable for both their safety and that of those around them.

Key health and safety risks



Commitment Based Safety (CBS) encourages individuals to make a personal safety commitment to change the overall safety culture. Among the factors that we ask our employees to consider are these five occupational health risks, which every person working at our sites must be aware of.



Working at height

Use all prescribed personal protective equipment (PPE) for the task, including fall protection where work is performed at heights of above 2 meters.



Hot work

Secure a hot work permit and follow permit precautions when performing any spark-producing work, such as grinding or welding.



Lock-out/tag-out

Isolate and verify all types of energy, including electrical, hydraulic, pneumatic and stored, when performing maintenance on equipment. Follow line breaking procedures when opening equipment that may contain hazardous materials.



Mobile equipment

Be aware of limitations and safety requirements, including the one-meter rule, for operating or working around mobile equipment such as forklift trucks.



Confined spaces

Follow procedures for identifying and controlling risks prior to and during an entry into a confined space to ensure it is safe to enter.

Our employees are regularly trained on the standards and precautions required to work safely. Above all, they are taught and expected to stop work at any time in which they feel that risks are not being properly controlled.



OUR APPROACH



GOVERNANCE AND ETHICS



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OUR PEOPLE



COMMUNITIES



OUR PEOPLE

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In practice, CBS begins with the identification of specific risks and the behavior required to manage these risks. Employees are then requested to make a commitment to personally manage three of these risks and report daily on their progress. Daily reporting and discussion of these commitments reinforces accountability. Employees are not expected to be 100% compliant from the start, but it is hoped that they will improve each day. Once employees have mastered managing their own commitments they can start to be effective at looking after others.

CBS was introduced to all HS&E personnel in FY2016 and implementation was completed at all of our North American facilities. The implementation required a visit to each facility, accompanied by an in-depth introduction to the concept and training for all managers and plant personnel. We expect to roll out CBS at other sites around the world in FY2017.



From commitment to culture

Safety has to be a personal commitment: companies can implement regulations, but it is up to individuals to choose to be safe. One example of where this is happening is at North Bend, Louisiana in the US, where commitment-based safety was implemented in FY2015 by the facility's general manager, Vito Fiore. Although many employees were initially skeptical, the concept gradually met with success – thanks to daily conversations between employees about their commitments and the follow-up by leadership to ensure that these conversations occurred.

“The process provided a safe, non-confrontational way to engage co-workers about their commitments,” stated Kevin Brown, formerly the quality lab supervisor in North Bend and currently a chemist in the Marietta Research Center. “Humility was an important element of the process. Once employees saw the commitment from management and their genuine care and concern, the culture started to change.”

In addition to the daily discussions, the management at North Bend has taken this process out of the meeting rooms and on to the work floor, engaging employees from 230 to 250 times per week. Although these are early days, there has already been visible progress: by the end of FY2016, injuries at the plant were reduced by 50% when compared with the previous year and the facility had achieved over 433,000 work hours (470 days) without time lost to injury.

SAFETY



OUR PEOPLE

Health and safety

Attracting and retaining talent

Employee engagement

Protecting our contractors

Changing our health and safety culture on our sites depends on working closely with our contractors. In FY2016 Birla Carbon implemented a global standard to improve contractor management. This standard is reflecting the best practices available in all regions and contains the following core elements:

- a rigorous qualification process to ensure that only contractors that meet our health, safety and environmental requirements are approved to work on our sites. Hiring better qualified contractors will result in better safety performance;
- better management and accountability for contractors while working on-site; and
- post-work contractor evaluation on health, safety and environmental performance for consideration for future collaboration.

Contractor safety performance for FY2016 was 48% better than in the previous year.

Auditing our performance

In FY2016, a total of 18 audits were conducted at our sites; 10 for health and safety and eight for environmental performance. Findings from all of the audits are now entered and tracked through Enablon, our integrated Sustainability Management System, which was implemented globally. This system enables us to share and compare data between facilities to better gauge specific situations and issues. Enablon also allows us to devise and track action plans, ensuring their completion and reinforcing the accountability of sites and individuals.

We continue to strengthen our audit processes: over the past two years, we have developed or revised nine internal HSE standards to improve compliance and programs at all sites. Progress on implementing these standards is reported monthly. We are currently developing or revising an additional eight standards to strengthen our HSE programs.

These standards have also become the focal point of our audit program. A significant portion of the audit is spent in the plant observing work practices and evaluating effectiveness of these standards; audit results are tracked and reported monthly. Additionally, each standard now includes an annual self-assessment, requiring site leadership to evaluate and track improvements in HSE. In FY2017, we will add 10 new sections to our audit program to address management systems and the maturity of the site safety and environmental culture.



50%

reduction in TRIR over the last two years



OUR PEOPLE

Health and safety

Attracting and retaining talent

Employee engagement

Attracting and retaining talent

Developing and promoting internal talent from within Birla Carbon are instrumental to our people strategy. We assess internal candidates for their potential to take on enhanced responsibilities and leadership roles where possible. Through our support of *A World of Opportunities*, the Aditya Birla Group's Employee Value Proposition, we offer our people exciting opportunities for their career development, recognition and overall wellbeing.

8 DECENT WORK AND ECONOMIC GROWTH

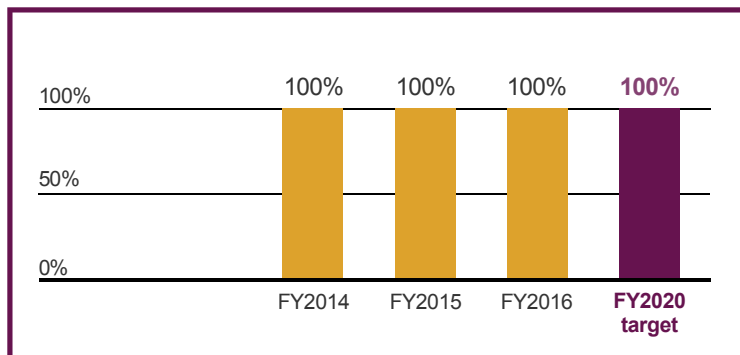


We provide jobs in a number of regions and our business contributes to economic growth, both directly and indirectly.

Progress towards target



Target: 100% of Birla Carbon managers to have stated and measured goals set annually.



FY2014	FY2015	FY2016	FY2020 target
100%	100%	100%	100%



OUR PEOPLE

Health and safety

Attracting and retaining talent

Employee engagement

How do we attract talent?

Our goal is to become a recognized global employer of choice to help drive our business growth and geographical reach. To achieve this, besides robust hiring strategies, we focus on internal talent development, targeted internal movement and continuous engagement.

Engaging and attracting the next generation of engineers and scientists remains crucial for our business growth and advancement. To attract this talent, we are building partnerships with local colleges and universities in the regions where we operate. Our internship opportunities provide a realistic work experience while enabling us to assess an intern's potential for a long-term hire. In FY2016 we provided technical internships to 36 students.

We also provide internship opportunities to participants who qualify for the Aditya Birla Group Leadership programs, generally for Business Management graduates from leading schools and universities in India and Asia. In FY2016, eight participants completed three-month internships within Finance, Plant Operations, Technology, Marketing and Human Resources.

We encourage our people to continue learning throughout their career by providing multiple opportunities and platforms. Our managers and full-time personnel are supported in the implementation of both regional and local strategies to improve their management skills and competencies. The objective is to enable our employees to meet their career aspirations, assume multiple roles within the company and perform successfully.

Management Development Program

The Management Development Program, launched in FY2014, continues to offer employees within the management cadre an online tool to help them track their development. With the assistance and support of their supervisors, employees are able to influence their career progress by selecting from various learning platforms, in the form of over 200 e-learning courses, on-the-job learning, external classes, conferences and short-term assignments. To date, 100% of employees in the management cadre training have a customized and documented Management Development Plan.

Recognizing our people

Our employees are recognized and rewarded for their contribution to our success. Besides performance-based rewards, exceptional performance is also recognized through regional, business and group-level awards.

The PRIDE Program

Exceptional individual or team performance is recognized through the PRIDE Program, providing employees with a monetary reward for outstanding contributions to the business. Besides being rewarded at the Business Level, our various locations supplement PRIDE with added regional recognition reflecting the traditions and cultural norms of their specific region.

Group recognition

Employees are also recognized through the Aditya Birla Group Awards for Outstanding Achievement. Exceptional performers are nominated for individual awards, including Young Professional, Distinguished Achiever, Exceptional Contributor, Outstanding Leader and Value Leader.



OUR PEOPLE

Health and safety

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In addition, business-level awards recognize excellence in a company, area or unit where specific initiatives have enhanced shareholder value and business sustainability. In FY2016, nine individual Birla Carbon employees won recognition and one of our teams received a competition award.

Career movements with Birla Carbon

At an increased rate, we have continued to make internal career paths easier to determine, through a streamlined career path framework for the Technology, Engineering and Operations areas. As part of talent development and growth, we encourage intra- and inter-regional movements of qualified employees as well as transfers from other businesses within the Aditya Birla Group. For example, we engage with the employees and their spouses prior to a potential relocation, ensuring that they are comfortable with the move and the role. We offer comprehensive support to relocating employees and their families, including assistance with school admissions and employment assistance for spouses.



Interview with Dr Himanshu Patel, Technical Manager, Americas and Europe

Himanshu Patel was promoted from Technical Service Manager for Europe, the Middle East and Africa to Technical Manager for the Americas and Europe in FY2016. The role saw India-born Patel transfer from Germany, where he had worked since FY2013, to Marietta, Atlanta, in the United States.

What thoughts did you have when considering the move?

When I got the first call, my initial reaction was that an international move would be very exciting. However, when I thought about it further, I started to think about the broader impact – such as moving my family. Schools, languages and cultural openness... these are all important criteria when you consider a move – much more so than your own career.

How easy was the transition? What support did you get from Birla Carbon?

The Birla Carbon team did everything they could to make our transition as easy as possible. The initial visa processing took longer than expected but the company took care of us, finding temporary accommodation, providing a rental car and helping us settle in. I would say that when making such a move, you have to expect the unexpected and understand that patience is the name of the game.

Would you advise employees to consider making similar moves, where possible?

Absolutely. Any move away from your own comfort zone can be challenging, but moves like these are enriching both personally and professionally.

EMPLOYEE RETENTION



87%

of managers hired from the local community



OUR PEOPLE

Health and safety

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Employee engagement

Employee engagement

Engaged employees deliver value to our stakeholders and to our business; for this reason, it is vital that our employees align with our vision and culture. In view of our geographical footprint, we employ people from diverse cultures and backgrounds and our employee engagement strategy reflects this.

Employee wellness

Birla Carbon aspires to create a positive working environment for its employees. Caring for their wellbeing is an integral part of our relationship with our workforce and we provide opportunities to support them to lead healthy lifestyles.



Sharing what we do

Engaging our employees involves making them aware of their role within Birla Carbon's sustainability journey. The more we learn about our colleagues in different positions and departments around the world, the greater sense of 'One Birla Carbon' we can foster.

It was with this spirit that the 'Food4Thought' gathering was developed. 'Food4Thought' was originally inspired by a trip taken by Marietta-based chemist Robert Batchelor, to our North Bend facility in Louisiana. During this trip, Batchelor realized that he was not entirely aware of the everyday processes involved in the Specialty Black plant. On his return, he facilitated/organized 'Food4Thought' sessions, which took the form of lunchtime discussions in an open environment. These sessions have grown in popularity and provide representatives from different areas with a platform to describe what they do in greater detail. Topics covered so far have ranged from HS&E to Technical Services, to market segment development and even our involvement in the ASTM Committee. Each quarter, a different group or set of ideas is highlighted, demonstrating the diversity of the company's work.

"The original goal was fourfold: to create a platform to spread knowledge about the great work being done in different segments of the business; give speakers more confidence; grow in effective communication styles; and encourage those in the audience to ask questions in an informal environment."

Robert Batchelor, Chemist, Marietta

EMPLOYEE ENGAGEMENT



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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OUR PEOPLE



COMMUNITIES



OUR PEOPLE

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6 CLEAN WATER AND SANITATION



We support the World Business Council for Sustainable Development (WBCSD) and its WASH pledge to give all employees access to clean drinking water by 2018.

Providing safe drinking water

Water, Sanitation and Hygiene (WASH) is one of the priority areas identified by the World Business Council for Sustainable Development (WBCSD) and its Action2020 business sustainability agenda. Following the steps taken by our parent company, the Aditya Birla Group, and as an industry leader, Birla Carbon signed the [WBCSD Pledge for Access to Safe WASH at the Workplace](#) (WASH Pledge) in FY2015, committing to achieve this target globally by FY2018.



wbcds water



Clean water for employees

Following the signing of the WASH Pledge, Birla Carbon conducted preliminary self-assessments in FY2015 to identify the gaps between WBCSD expectations and the reality at our sites. In FY2016, we formed multi-disciplinary teams at each site to analyze and identify the capital investment required to bridge these gaps. The multi-disciplinary teams are composed of a representative from Human Resources; a representative from Health, Safety and Environment; and a representative from the Ancillary Department, selected due to their knowledge of the site in question.

At the end of FY2016, we conducted a second self-assessment to determine how much progress had been made. While sites that performed well had performed better this year, overall there was improvement across our entire operations. We look forward to reporting on our progress in FY2017.

EMPLOYEE WELLNESS

Supporting diversity in the workplace

With operations in 12 countries, Birla Carbon has a diverse workforce with varied cultural backgrounds and skills. We are strongly committed to diversity and equality; all employees should be able to progress based on their merits and abilities and we aim to ensure that our leadership is representative of the local workforce. It is important to us that we hire local talent regardless of ethnicity, sexuality or social background, and that we ensure that skills are transferred equally throughout our operations. We comply with all relevant employment legislation in the countries where we operate.



OUR APPROACH



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PRODUCT RESPONSIBILITY



ENVIRONMENT

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OUR PEOPLE



COMMUNITIES



OUR PEOPLE

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Employee engagement

The Women's Network

The Women's Network was created in FY2014 in the Europe and Africa region to provide our female employees with a stimulating work environment that is more conducive to career advancement.

The Women's Network has built on its initial foundations and has implemented projects in certain areas. An example is the free childcare program, which is now offered at all of our sites in the region for specific business situations. This program is available 24 hours a day, seven days a week, so that shift workers can also take advantage of it. Childcare is provided in the event of emergency, such as illness or last-minute business trips, or during school vacations. Discrete, professional counselling is also available for those wishing to receive advice on personal issues such as debt and family relationships.



Award-winning initiatives in Italy

The Women's Network focuses on making real improvements to the professional and personal lives of Birla Carbon's female employees. These improvements can take the form of advice and practical assistance. One such example is the childcare initiative, promoted by the local Women's Network in collaboration with Human Resources at our operations in Trecate, Italy. Through this initiative, employees on a business trip can have babysitting, care for the elderly, or housekeeping services provided externally by an agreed company, with these expenses covered by Birla Carbon.

The service has been received enthusiastically and in FY2016 Birla Carbon won recognition for these efforts. The local chamber of commerce gave us the Singular Female Company award for companies that distinguish themselves for initiatives that help women with their work-life balance. As part of the award, which was covered in the local media, members of the Women's Network will be able to attend training courses focused on self-empowerment.

EMPLOYEE ENGAGEMENT



OUR PEOPLE

Health and safety

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Employee engagement

Employee feedback

By encouraging continuous dialogue with our employees, we gain a better understanding of their expectations. Birla Carbon conducts an employee engagement survey, known as the Vibes survey, every two years. This direct feedback tool helps us develop and execute action plans in specific areas, which are tracked at a local, regional and global level.

The FY2015 Vibes survey, which had a 97% response rate, generally revealed that employees like Birla Carbon's ability to adapt to changing marketplace needs and that employees feel that their work is connected with overall business objectives. Over 80% felt engaged, were satisfied with their workplace and recommend it as a good place to work. Although the survey produced positive results in general, an area of concern was Birla Carbon's ability to find creative approaches to attracting and retaining millennials.

Since the survey's completion, results have been reviewed at a regional level, with the drafting of action plans to address areas of improvement specific to each region. In some cases, teams were set up to drive the implementation of these action plans, consisting of Human Resources personnel and subject matter experts. These teams meet on an ad hoc basis and provide regular status updates to the wider company.

In FY2016, Birla Carbon implemented action plans in the following areas:

- Focus on learning and development opportunities and programs to strengthen technical capabilities and develop leaders, such as safety culture training.
- Improving employee recognition, through nominations for Aditya Birla Group awards.
- Continued improvement of the performance review process.
- Safety culture efforts and improvements, as indicated through TRIR.

The Vibes survey will be conducted once more in FY2017, after which the action plans will be revised based on results.

Team Vibes

The Team Vibes survey was implemented across Birla Carbon for the first time in FY2016. It is a feedback mechanism through which those managers with five or more dependent employees can provide actionable insights into what prevents employees from performing at their best. The purpose of the survey is to help managers in their development in order to help bring issues to light.

The survey consists of 37 questions on the following topics:

- Team engagement
- Future vision and strategy
- Collaboration and execution
- Development
- Discretionary effort
- Behavior change
- Compensation
- Communication.

The Team Vibes results were compared across the company and also with the wide Aditya Birla Group. The survey, saw 94% participation in its first edition. Communication sessions were held with the managers that participated and their teams to discuss the results and develop plans, which will be announced in FY2017.



2018

We are committed to providing safe access to drinking water for all employees by 2018



OUR APPROACH



GOVERNANCE AND ETHICS



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OUR PEOPLE



COMMUNITIES



Being responsible neighbors

We are committed to supporting communities and fostering positive and long-lasting changes to the quality of life in the communities where we operate.

Giving back to communities

Birla Carbon partners with local community groups to implement programs focusing on health, education, social investment and charitable giving.



COMMUNITIES

Community engagement

Delivering social value



We aim to understand and address the issues that impact the communities where we operate. In Thailand, for instance, we strive to empower people, starting with women, by supporting the development of financially viable, autonomous businesses. Our community engagement is designed to make a real difference to people's lives."

Atikan Pinsuk, Human Resources, Angthong (Thailand)



COMMUNITIES

Community engagement



100%

of facilities participate in community engagement

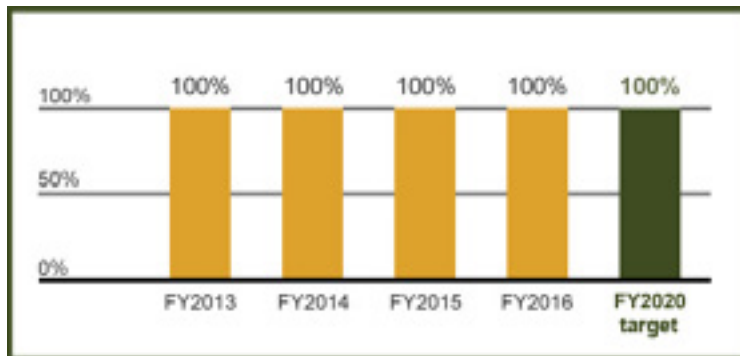
Community engagement

Our approach to community relationships is localized, based on an understanding of the varying social and cultural priorities of each region. We focus on areas where we can deliver long-term socio-economic benefits, such as health, education, social support and charitable giving. We are also committed to supporting sustainable economies through skills and capacity building, assisting in establishing reliable infrastructure.

Progress towards targets



Target: 100% of our facilities participate in community engagement



FY2013	FY2014	FY2015	FY2016	FY2020 target
100%	100%	100%	100%	100%

How do we understand community needs?

We know that the needs of each community vary, which is why we identify the issues of critical importance through direct interaction. This approach allows us to align our community investments.



COMMUNITIES

Community engagement

3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



10 REDUCED INEQUALITIES



Our community investments focus on: improving health through vaccinations and education, on providing access to education and schooling for children and on offering social support for the homeless, the disadvantaged and the underprivileged.

11 SUSTAINABLE CITIES AND COMMUNITIES



We contribute to the communities where we operate.

Our approach to communities

Partnerships are the foundation of our community strategy



Our strategy

Global commitment

To engage and support communities around our sites



Regional approach

Varies from site to site depending on the region's development goals



How do we do this?



We IDENTIFY short- and long-term community risks



We ASSESS local impact and priorities of the region



We ENGAGE with communities to identify views and needs



We DEVISE relevant regional community engagement strategy and focus areas



We IMPLEMENT activities and investment



OUR APPROACH



GOVERNANCE AND ETHICS



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OUR PEOPLE



COMMUNITIES



COMMUNITIES

Community engagement

Making a long-term difference

Our involvement and support have largely been manifest in initiatives in health, education, social investment and charitable donations. From past experience, we know that the local communities can also count on us to pool resources in the case of natural disasters or extreme weather conditions.

North America

Education



In Hickok, Kansas, we support local charitable organization Communities in Schools, which seeks to empower students and encourage them to stay in schools, through a variety of activities, including mock interviews for high school seniors, life skills events for young people and an annual golf tournament.

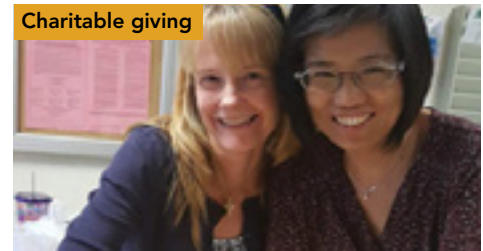
Other activities throughout the year in North America

Social support



We have supported the Angel Tree initiative for more than 10 years, with employees providing gifts for around 50 underprivileged children each Christmas.

Charitable giving



We raised over \$42,000 for United Way through direct contributions and fundraisers, surpassing our FY2016 target of \$40,000; the final amount was matched by Birla Carbon. We also held a food drive to collect donations for Thanksgiving dinners for the underprivileged.



OUR APPROACH



GOVERNANCE AND ETHICS



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OUR PEOPLE



COMMUNITIES



COMMUNITIES

Community engagement

South America

Health



Our employees in Brazil organized events to promote cancer awareness. At our Cubatão facility, a talk was given and a football match organized in aid of Blue November for prostate cancer, while at all of our locations, employees attended a lecture on breast cancer and scarves were collected to donate to a cancer hospital for women for Pink October.

Other activities throughout the year in South America

Education



The mosquito-borne virus zika is a rising concern in South America, particularly in Brazil. Our operations gave talks at our two facilities at Camaçari and Cubatão in FY2016 to raise awareness about zika, as well as dengue and chikungunya. Furthermore, safety committees at the plants perform monthly inspections to identify and eliminate potential source areas, and insect repellent has been provided to employees.

Social support



Our people from the Cubatão plant participated in Voluntário de Valor in FY2016, a volunteer program through which teenagers from the local community learned about technical education. Three presentations were created and given by Birla Carbon employees to 320 young people, demonstrating how our team in Brazil gives back to their local community.



GOVERNANCE AND ETHICS



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OUR PEOPLE



COMMUNITIES



COMMUNITIES

Community engagement

South America

Education



Our facilities in Brazil support the local community through educational activities. In FY2016, 125 children visited our facilities during Open Days.

Social support



Other educational activities in FY2016 included the organization of performances for students in public schools in the communities surrounding Cubatão, including the Scientific Circus, and a photography workshop for teenagers in the community.



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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OUR PEOPLE



COMMUNITIES



COMMUNITIES

Community engagement

Europe and Africa

Charitable giving



Our employees in Germany gave €600 to the charity Kids Wishes Come True, which brings to life the dreams of children who are orphaned, seriously ill or live in difficult circumstances. Birla Carbon's contributions helped make a difference to a young boy's life by allowing him to participate in horse-riding therapy for a complex language development disorder.

Other activities throughout the year in Europe and Africa

Social support



Our facility in Alexandria, Egypt, organized a project at a local community center to educate 32 women in tailoring and sewing. After a four-month training program, the women chose to either work from their homes or at the center. Furthermore, 20 of the women were taught how to be future trainers in their villages.

Health



In Spain, our people conducted a campaign to collect milk from employees, with the belief that no child should want for milk. The campaign, which included a charity concert, met with so much success that it was converted into a permanent feature at the facility.



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



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OUR PEOPLE



COMMUNITIES



COMMUNITIES

Community engagement

Europe and Africa

Education



Together with a local school, we helped organize a competition in Trecate, Italy, for young people to develop projects under the title Good Environmental Practices. The projects required students to build scale models from ecological and recycled products, accompanied by videos and artwork, and were recognised in an awards ceremony.

Education



Our employees in Alexandria, Egypt, visit schools and support students in neighboring communities, providing school materials and helping children to paint the walls of their school.



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



ENVIRONMENT



CUSTOMERS AND SUPPLIERS



OUR PEOPLE



COMMUNITIES



COMMUNITIES

Community engagement

South Asia

Education



The Hi-Tech Jan Kalyan Trust runs the Aditya Mahila Prashikshan Kendra Vocational Training Center, which provides professional education for girls in villages neighboring our Renukoot facility. The education, in the form of training to be a beauty parlour specialist or tailoring, has benefitted over 300 women since FY2014.

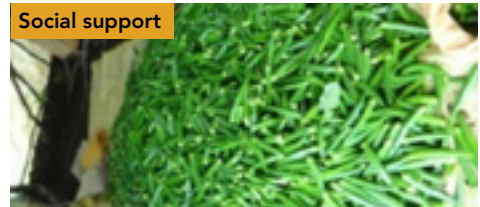
Other activities throughout the year in South Asia

Education



The Hi-Tech Carbon Jan Seva Trust, working together with the Confederation of Indian Industries (CII), established the Skill Training Center in Gummidipoondi to provide training in four trades for unemployed members of the local community. The center, which trains 360 young people per year, offers state-of-the-art facilities, training aids and teachers and modern equipment.

Social support



Employees from our facility in Patalganga have implemented various activities in the local community under the sustainable livelihood initiative, through which we have organized vocational training for women and provided financial support for farmers.



GOVERNANCE AND ETHICS



PRODUCT RESPONSIBILITY



ENVIRONMENT



CUSTOMERS AND SUPPLIERS



OUR PEOPLE



COMMUNITIES



COMMUNITIES

Community engagement

South Asia

Education



On Children's Day, celebrated at Gummidipoondi in November, 2015, the children of our employees took part in fun activities, including a quiz, acting and drawing and painting competitions.

Social support



Through the ANYA project, our employees at Gummidipoondi provide space and funding for women from the rural communities surrounding the facility to develop their own tailoring business. We offer refresher training courses, and also provide upgrades to the machinery used.



COMMUNITIES

Community engagement

South East Asia and Far East

Social support



Our facility in Thailand was proud to host the first refreshment stop for bikers participating in 'Bike For Mum', a nationwide cycling event that took place in FY2016 organized and led by His Royal Highness Crown Prince Maha Vajiralongkorn in honor of Her Majesty Queen Sirikit's 83rd birthday.

Other activities throughout the year in South East Asia and Far East

Social support



CCK, our facility in Yeosu, Korea, donated KRW 20,000,000 (USD \$16,920) to the underprivileged and social welfare organizations to support their activities, including food and fuel for underprivileged communities, and shelters for victims of prostitution and sexual violence.

Education



The team at TCB, Thailand, taught housewives and elders from the Hua Pai community how to make dish washing solution and liquid detergent – either as a domestic product or to sell in order to support their families.

Charitable giving



Employees from our facility in Weifang, China, visited impoverished families in the days before the annual Spring Festival. Together with Binhai Volunteers, our employees donated stationery and items for daily use to students from underprivileged backgrounds.

Social support



Our offices in Thailand organize initiatives for local communities, including the repainting of a children's playground and the repair and repainting of fencing in the Hua Pai community.