



Piramal Enterprises Limited Sustainable Development Policy

Effective as on : 01 / 08 / 2017

A handwritten signature in blue ink, appearing to read "Vivek Sharma".

Vivek Sharma

Chief Executive Officer

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Introduction

Piramal recognizes that doing business in a sustainable manner is imperative to ensuring its future viability. Sustainability considerations underpin Piramal's strategy and are integrated into the day-to-day activities. Piramal considers material issues to be those that have the potential to substantially impact Piramal's ability to create and sustain value for its stakeholders.

Piramal accepts that it must work to preserve the environmental sustainability of the planet, at all levels of its operations – in its own practice, as a participant in a community of practice.

Piramal aspires to minimize its impact on our environment and maximize the effective use of resources. We strive to achieve this by increasing communication and awareness of our efforts in accordance with this policy and fostering responsible environmental behavior amongst staff and stakeholders at all levels.

Piramal is committed not only to complying with applicable laws in all of its operations but also to minimize risks and impacts through the development of robust and documented systems that implement, measure, monitor, and disseminate excellent environmental performance both within its operations and to the broader community.

As a responsible corporate citizen the company is constantly engaged in delivering value to its stakeholders through the promise of Knowledge, Action & Care.

The Company also takes an entrepreneurial approach to sustainability practices that produce measurable value for society and the business by reducing usage of natural resources such as energy and water and looking for innovative ways to better manage waste.

Scope

This policy is applicable to all employees – (full-time, partial and contractual), suppliers and vendors of Piramal Enterprises Limited. Where external business associates have a Sustainable Development or similar policy of their own, they will follow both their own policy as well as the clauses mentioned in this document.

Piramal Core Values

This Sustainable Development Policy of the Company will be guided by the core values (Knowledge, Action, Care & Impact) of the group.

Our Sustainability Commitments

The Sustainable Development Policy indicates our Commitments towards -

Compliance: Full compliance with all applicable legal environmental requirements and our internal requirements where specific environmental legislation, code of practice is non-existent or insufficient.

Continual improvement: The continual improvement of the environmental performance of our activities, products and services and prevention of pollution through the Piramal Environmental Management System which complies with the international ISO 14001, OHSAS 18001 standards.

Greenhouse gas reduction: Piramal has long recognized potential for harm caused by climate change; including rising sea levels, fresh water scarcity, severe weather events, and adverse public health impacts. Anthropogenic carbon emissions are thought by climate scientists to be a significant reason for the observed changes in the earth's atmosphere and climate. Building on our successful past reductions, our 2020 goal is aimed at continuing to reduce our carbon footprint consistently with levels that the scientific community indicates are needed on a global basis to achieve long term sustainability (stabilization of global temperature rise at 2°C by 2050).

Waste: To drive efficiencies in resource use, we are setting targets for waste reduction; using waste minimization, re-using, and recycling to reduce the use of virgin resources. Where there is no option but to dispose, we will strive for the most environmentally sound disposal methods.

Water: Water is fundamental to health, a valuable natural resource, and a critical material used in all phases of pharmaceutical manufacturing. Although a relatively small portion of our water usage occurs in water scarce localities, Piramal is committed to reducing water use wherever possible, particularly where water is scarce. We will ensure that our water use does not adversely impact the communities where we operate, for example by diminishing supplies or degrading the quality of clean water.

Green chemistry principles: Piramal integrates “Green Chemistry” and environmental sustainability initiatives as an important base for the company’s professional activities and the management of the organization. We aim to follow and promote Green Chemistry Principles and practices, to reduce the environmental impacts of all our activities and to help our clients and partners to do the same.

Green building concept: We aim to improve building design strategies for upcoming buildings, blocks or facilities. We shall undertake systematic risk review of new facilities concepts, plans, and layouts at the time of initial concept discussions and implement those plans.

Supply chain: Our carbon, waste and water goals speak to improvements in operations under our direct control. However, we have a significant and wide reaching supply chain. To realize our vision of reducing environmental impact through the lifecycle of our products, we must involve our supply chain partners in our environmental sustainability program. Piramal strives for responsible sourcing of ingredients, packaging materials and other goods and services from suppliers who comply with the Piramal *Supplier Code* and demonstrate continual improvement of their environmental Performance.

Systematic assessment: We will incorporate the systematic assessment and optimization of environmental impacts in the design of new and renovated products.

Integration of considerations: We will integrate sustainability considerations into all our business decisions.

Awareness among all employees: We will ensure that all staff are fully aware of our Sustainable Development Policy and are committed to implementing and improving it.

Awareness of suppliers: We will work to make clients and suppliers aware of our Sustainable Development Policy, and encourage them to adopt sound sustainable management practices.

Review of policy: To review, report, and continually strive to improve our sustainability performance.

We are thus committed to continually improving the integration of sustainability into our working environment and business processes. Our aim is to play a proactive role in contributing to achieving sustainability where we have significant influence. We are committed to complete accountability and transparency in our sustainability performance.

Our Sustainability Goals

Compared with a 2016 baseline, by the end of 2020 we aim to:

- Reduce Greenhouse Gas (GHG) emissions by 10%
- Reduce hydrocarbon usage by 1%
- Reduce water withdrawal by 5%
- Reduce waste water disposal by Zero Liquid Discharge operation
- Reduce energy usage by 5%
- Use renewable/alternative sources of energy
- Reduce the amount of waste disposal by optimizing waste treatment Perform risk review for sustainable design and construction of new facilities (Manufacturing Block, Building)
- As a commitment to the sustainability in our supply chain, we shall strive to achieve the following by the end of 2020:
 - ✓ # 10 of key suppliers will support Piramal's supplier code of conduct and aligned them
 - ✓ # 10 of key suppliers will manage their environmental impacts through effective sustainability programs.
 - ✓ # 10 of key suppliers will institute reduction goals for greenhouse gas emissions, waste disposal, and water usage.

Sustainable Design and Construction of Facilities

The guidelines on construction of new facilities are a part of our sustainability program. The following requirements preferred to be considered for compliance with our sustainable development policy:

- Consideration of all energy utilities and government incentives when analyzing the feasibility of Energy Conservation Measures (ECM's)
- A “Climate and Place Analysis” shall be conducted early during the BOD phase. The purpose of this analysis is to gather the wet bulb temp, dry bulb temp, ground temp, humidity, wind speed, solar radiation, cloud cover, etc. at the project location. This data should then be used to develop an appropriate set of strategies related to building orientation, day lighting, natural ventilation, insulation, etc.
- Whole Building Simulation must be conducted during multiple phases of the design process. The first simulation must be completed during early stages of the BOD to analyze various ECM's.

Principals of high performance buildings to be ensured:

- High R-value for building envelope.
- Eliminate thermal bridges.
- Seal building envelope (leakage rate of less than 0.25cfm/ft²@3” wg or 76.2(L/min)/m³ at 75 Pa)
- Passive solar & shading.
- Heat transfer of exhaust and supply air: Automated controls on all building energy devices.
- Radiant heating and cooling where applicable.
- Effective use of soil & landscapes.
- Efficient use of water.
- Energy efficient & eco-friendly equipment.
- Effective control & building management systems.
- Use of renewable energy.
- Use of recycled/recyclable materials.
- Improved indoor air quality for health and comfort.
- Cooling efficiency – Earth air tunnels, geothermal, chilled beams etc.
- Lighting efficiency - LED lighting,
- Green ICT: Hardware virtualization resulting in greater information processing per cycle.
- More energy efficient PCs, servers and routers.
- Green Grids: Smart grid management resulting in reduced T&D losses.

Building Design – Daylight Modeling

- Daylight simulation coupled with window location/design to minimize lighting load.
- Interiors designed to keep high lighting-load areas close to daylight span.

- Window design to include light shelves.

Building design – Heat

- Good energy modeling reduces heat transfer coefficient by up to 40%, and building energy consumption by 6%. Examples:
 - East and west walls with sandwich insulation and air gap.
 - Restrict glazing to north and south facades.
 - Window to wall ratio < 40%

Building Design – strategies

- To improve indoor air quality to ASHRAE 62-2001 (< 530 ppm):
- Couple naturally ventilated areas with CO2 sensors.
- Use low VOC paints sealants and adhesives. E.g.: carbon compounds < 250 gms/litre for anti-corrosive paints
- Laminates used for interior should be free from urea formaldehyde.
- Use of low-flow flush, urinals and closets.
- All electrical and ventilation system to be coordinated with building management system (BMS).
- Water consumption could also be metered through BMS.
- Landscaping integrated with building design and plant processes:
- Construction of swales and ponds for water collection which could be used for tertiary treatment.
- Reuse of ETP treated water up to tertiary level for flushing and landscaping.
- Use low water-intensive plants; especially reduce lawn area.
- Use drip sprinklers to reduce evaporation loss.
- Choose native plants; they are most likely to survive with minimal care.

Building Materials – Roof

- Insulate composite slab roof with 75mm extruded polystyrene. Reduces heat transmission by 50%
- Truss insulation of PEB ceiling with 75mm rock wool.
- Roof finish with high reflexive material; SRI > 78. Reduces heat transmission by 10%

Green Industry:

- More efficient industrial motors & pumps. Low energy appliances
- Improved production processes.
- Waste to heat recovery in industrial processes.
- Mass transportation of raw material / finish products.

Biodiversity at Piramal

Biodiversity refers to the variety of life on earth and, as defined by the United Nations Convention on Biological Diversity, includes diversity of ecosystems, genes and species, and ecological practices that support them.

There are serious threats to biodiversity in many areas of the world, and concerns about global biodiversity loss has emerged as an issue with potentially negative health and economic consequences. We believe preserving biodiversity and ensuring the sustainable and fair use of biological resources is an important and shared responsibility.

Piramal is mindful of the importance of conserving biodiversity. We agree with the intent of the Convention on Biological Diversity, which promotes conservation and the sustainable use of biodiversity and outlines guidance related to the acquisition and utilization of natural and biological resources.

Through business activities, it is important to continually proceed with reducing the impact on biodiversity and take appropriate actions rooted in culture or the local life in contributing to society.

Conserving Biodiversity: Piramal contributes to the conservation of biodiversity using internal standards and goals to guide our behavior, and indirectly through our partnerships.

Our Standards: Our Family of Companies considers the biodiversity risks and impacts arising from its operations. Piramal companies are also mindful of biodiversity in the supply chain. We give priority for equipment, fuel technology that promotes the ecosystem. While purchasing new equipment we evaluate it on ground of its impacts on ecosystem and sustainability.

Our Goals, and activities to achieve the goals:

Resources & Procurement

We are committed to establishing long-term environmental goals for the organization. These have included reducing water consumption, electricity consumption, fuel consumption and purchasing more eco-friendly paper for office and packaging uses, as well as decreasing carbon emissions.

Manufacturing & Transportation

When commencing or making changes to land use such as when constructing factories or warehouses, we will give due consideration to protecting the biodiversity of the land in question. In manufacturing and transportation activities, we aim to minimize energy use, waste generation, and the emission of chemical substances.

Sales, Usage & Maintenance

In our sales activities, we will work to promote better understanding among our customers of the impact that product/service usage and maintenance can have on biodiversity.

Maintaining biodiversity

Our businesses have biodiversity conservation plans that include activities ranging from the restoration of wetland habitats to tree-planting to removal of invasive plant species.

Resources & Procurement

Recognizing that we utilize globally procured natural resources such as minerals, fuels, and plants, we shall aim to preserve biodiversity carrying out green procurement activities.

Product Design

In designing our products and services, we shall promote the effective utilization of resources and the efficient use of energy, as well as aim to prevent the emission of substances that pose a risk to the environment.

Energy Efficiency Policy

Understanding the role of energy efficiency in helping reduce the impacts of climate change, Piramal is committed to using resources efficiently and reducing greenhouse gas (GHG) emissions. As such, we are committed to procuring and using energy in an efficient, cost-effective and environmentally responsible manner.

The foundation for our Energy Efficiency Policy.

It is our responsibility as responsible citizens to protect the environment and natural resources; and we must strive to reduce costs in order to maintain reasonable prices. We are committed to excellence in fostering efficient, cost-effective, and environmentally responsible purchasing and use of energy. By promoting usage of renewable energy we aim to minimize the usage of fossil fuel like Furnace Oil.

The diligent management of energy helps us lower manufacturing cost.

Since the technology associated with energy generation, distribution, and consumption is continually advancing, the opportunities available for meaningful cost reduction and avoidance through vigilant energy management will endure. From the project phase itself we consider conservation of energy through energy-efficient equipment, preventing losses of energy, green buildings, optimizing processes and practicing effective operations.

We believe that business has a responsibility to conserve energy and help abate climate change.

Energy is an indispensable ingredient for a healthy economy and sustainable business growth. Until effective energy policies are in place to reduce GHG emissions and businesses are not leading by implementing voluntary reductions of GHG's within their control, the problem of climate change shall not be overcome. Hence businesses should continually strive to improve the energy efficiency of their operations, products, and the services.

We aim to:

- Improve energy management and efficiencies in order to help achieve our 2020 public goal of a 10% reduction in GHG emissions from a 2015 baseline.
- Use renewable energy technology where it makes good business and environmental sense.
- Reduce CO2 emission from vehicles owned or leased by group companies by 10%, by 2020. Progress is ensured with the selection of more efficient cars and with education of drivers.

Actions preferred to meet our energy goals include:

- Promoting leadership at sites in energy management and environmental stewardship;
- Assessing renewable energy projects and implementing them where they are viable;
- Assessing new projects / proposals & adopting energy efficient equipment and utilities;
- Undertaking energy assessments across all sites;
- Identifying energy-saving technologies and measures;
- Benchmarking current energy-efficiency practices;
- Establishing an energy management plan;
- Conducting energy efficiency reviews
- Developing an energy-savings action plan and supporting policies;
- Measuring and monitoring progress toward targets, and management program evaluation;
- Increasing awareness of all employees and engaging them by instilling a culture of innovation, ownership and conservation;
- New projects are a major focus — it is more effective to develop energy efficiency systems from the beginning rather than redesign an existing system;
- Some notable actions identified below mentioned the potential areas for energy conservations:
 - ✚ Thermal utilities :
 - Steam System, Furnaces, Insulation, Waste heat recovery systems,
 - ✚ Electric utilities :
 - Electricity Distribution System, Motors, Drives, Fans, Blowers, Pumps, Compressors, Compressed air Chillers, HVAC (Heating / Ventilation / Air Conditioning), Refrigeration, Cooling towers, Lighting, DG sets, Buildings, Water & Wastewater recycling systems etc.

Responsible Business

At Piramal, we are committed to maintaining highest levels of quality in the markets and becoming a manufacturer of choice for both retailers and consumers. We believe in fostering a strong connection between employees, the community and consumers, and support both internal and external communication to keep them informed of all information pertaining to products and the Company.

The key objectives of the Company's Responsible Business policy is:

- To take all measures to prevent over exploitation of resources and to strive for optimal consumption in the manufacture of products to protect and conserve them.
- To ensure that material information related to products or services are disclosed in a timely, consistent and appropriate manner
- To raise the awareness of consumers through appropriate labelling, awareness campaigns and responsible advertising and make them aware of the contents of products, the right usage and methods for its effective disposal.
- To recognize and give due credit to the owners of intellectual property.
- To truthfully disclose all information relating to the environmental performance of the Company including and not limited to the impacts of waste, emissions, and other business activities.
- To work for complete satisfaction of all stakeholders internal and external and strive for harmony between all.
- To evolve a culture which respects and supports human rights in line with the provisions of the Indian Constitution and internationally recognized frameworks.
- To respect and value the human rights of our workforce, communities and all those affected by our operations wherever we do business (including our contractors and suppliers).
- To provide equal opportunities to all irrespective of caste, creed, gender, race, religion, disability or sexual orientation.
- To prohibit deployment of child or forced labor, paid or unpaid.
- To set up a grievance mechanism for addressing human right issues of all stakeholders impacted by our business operations.
- Piramal is committed to engaging with the Government through recognized industry bodies/associations to help and provide support to shape public policy on laws and regulations that affect the business and benefit various stakeholders.

This policy document is applicable to Piramal Pharma Solutions Locations as mentioned below.

1. Digwal : Piramal Healthcare Limited, Digwal Village, Kohir Mandal, Medak, Dist: Andhra Pradesh 502321. India
2. Ennore : Piramal Enterprises Limited, Ennore Works, Ennore Express Highway Ernavoor, Chennai, Tamil Nadu 600057. India
3. Grangemouth : Piramal Healthcare UK Ltd., Piramal Pharma Solutions, Earls Road, Grangemouth, Stirlingshire, FK 38XG, Scotland, UK
4. Morpeth : Piramal Healthcare UK Ltd., Piramal Pharma Solutions, Whalton Road Morpeth, Northumberland, NE61 3YA, UK
5. Mumbai: Piramal Enterprises Limited, Hiranandani Lighthall, A Wing, 3rd Floor Saki Vihar Road, Chandivali, Andheri (East). Mumbai – 400072. India
6. Pithampur : Piramal Enterprises Limited, Plot 67-70 , sector II, Indore, Madhya Pradesh 454775. India
7. Torcan : Piramal Healthcare Canada Ltd., 110 Industrial Parkway North, Aurora, Ontario L4G 3H4, Canada
8. Lexington : Piramal Pharma Solutions Inc., 1500 Bull Lea Road, Suite 250, Lexington, KY 40511.
9. Riverview : Piramal Enterprises Limited (Ash Stevens), 18655 Krause St, Riverview, MI 48193.
10. PPDS, Ahmedabad : Piramal Enterprises Limited, Plot No.19, PHARMEZ – Pharmaceutical Special Economic Zone (SEZ), Sarkhej-Bawla Highway, Village-Matoda, Ahmedabad, Gujarat 382213. India.
11. PDS, Ahmedabad : Piramal Enterprises Limited, Discovery Solutions, Plot # 18 Pharmaceutical Special Economic Zone, Village Matoda, Sarkhej-Bawla NH #8A, Taluka Sanand, Dist. Ahmedabad, Gujarat 382 213. India.
12. Mahad : Piramal Enterprises Limited, Plot no.K 1 , Additional MIDC, Mahad-Dist-Raigad, Maharashtra 402302, India.
13. Mumbai Office at - PRL Agastya Private Limited, 109A, 109A/1 to 109/21A, 111 and 110, 110/1 to 110/3, Opposite Fire Brigade, Kamani Junction, Kurla (West), Kajupada, Kurla, Mumbai, Maharashtra 400070.