Environmental Protection

Management Approach

Environmental protection is fundamental to the Company's sustainability strategy. In view of challenges such as climate change, pollution and scarcity of resources, Atlas Honda aims to be the most resource-efficient mobility solution provider in Pakistan. The Company's focus lies on increasing the energy and resource efficiency of its production processes and on reducing emissions and waste. These measures allow the Company to minimize impacts on the environment, make a contribution towards achievement of Honda's environmental vision and reduce costs. Environment related issues arising from energy & resource consumption, emissions, effluents & waste and water are managed by the Company's Production & HSE departments in coordination with other departments. Necessary procedures are defined and implemented to achieve targets. The Company has a continuously evolving Environmental Management System (EMS) in place which is supported by the Company's Environmental Policy to ensure effectiveness of processes, monitoring and continual improvement in the Company's environmental performance.

Green practices are being implemented at all locations of the Company and those of its business partners. Awareness is being raised by the Company through continuous training and development programs for its suppliers as well as employees. In recognition of its efforts for protection of environment, the Company has been presented with Awards by National Forum for Environment & Health (NFEH), for the year 2020, in the category of Environment & Waste Management.

Environmental Policy

The Company's Environmental Policy covers every aspect of the Company's operations, whether they are directly or indirectly related to designing, engineering, manufacturing, distribution and service:

COMPLIANCE	Comply with requirements of environmental legislation and local regulations as a responsible corporate citizen.
ENERGY AND RESOURCE CONSERVATION	Establish and implement management programs to encourage energy conservation and reduce consumption of resources.
PREVENTION AND REDUCTION	Prevent, where possible, and reduce generation of emissions and waste throughout the production processes & ensure safe disposal.
KNOWLEDGE AND EDUCATION	Promote relevant environmental protection knowledge and activities through education and training.
KAIZEN - CONTINUOUS IMPROVEMENT	Initiate and extend environmental protection activities from our own operations and to those of our business partners including parts manufactures, general suppliers and dealers.

Environment Management System (EMS)

EMS is intended to formalize procedures for managing and reducing environmental footprint. It helps the Company organize and analyse, in a timely manner, the environmental impacts that result from its business operations. It also helps the Company in developing solutions to address those impacts. The Company's EMS is based on relevant legislation such as the Pakistan Environmental Protection Law, international standards and Honda's guidelines, as well as best practices. The management system is certified in accordance with ISO 14001:2015, an international certification for EMS.

The Company conducts internal and external audits of its EMS and strives for further improvement. During the year, the Company identified tasks as a result of in-house reviews and made improvements accordingly. Periodic visits by representatives from Environmental Protection Agency (EPA) are also facilitated to ensure compliance with regulatory requirements.

No non-compliances have been reported during the year. Further, no environment-related complaints were received through the Company's formal grievance mechanism during the reporting period.

Life Cycle Assessment

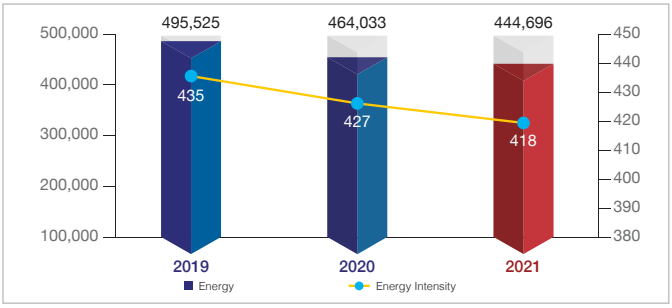
The Company applies a product life cycle approach for management of environmental impacts, which considers the entire life cycle - from product development to purchasing, manufacturing, sales & service, use, recycling and administration. This approach makes it easier to identify opportunities, minimize or enhance impacts and understand boundaries in every aspect of the Company's business. It also helps the Company understand how its actions and impacts are interrelated. The Company also applies the precautionary principle, whereby it acts responsibly despite not having the full scientific knowledge of negative impacts, to ensure the Company stays ahead of potential risks.

Life Cycle Stages	Major Initiatives in Each Domain Based on Impacts Identified
Development	• Environment friendly product design • Efficient use of raw material, energy and other resources • Focus on reduced waste and emissions • Integrate future requirements into development plans
Purchasing	• Purchase of raw material from environmental friendly sources • Increased use of renewable raw materials and materials with sustainable characteristics • Implementation of environmental standards within the supply chain • Promotion of transparency and resource efficiency • Training and improvement programs
Manufacturing	• Environmental management system • Improved resource efficiency • Reduced waste-water and emissions initiatives • Reuse of water
Sales and Service	• Promotion "green dealers" • Dealers with 5S certification • Efficiencies in transportation • Efficient use of packaging • Use of returnable containers
In-use	• Fuel efficient products
End-of-life	• Increased parts collection, reuse and recycling • Eliminating harmful materials to enable higher quality recycled materials • Promoting proper recycling and providing technical support
Administration	• Environmental management • Energy and resource conservation • Promotion of "Green Building" design

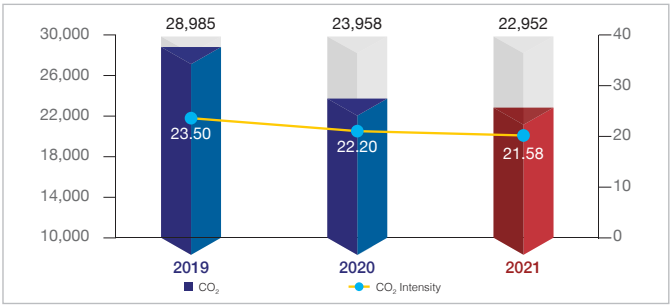
Energy Consumption and Emissions

The Company monitors energy consumption and emissions on regular basis to identify and incorporate best practices and to improve the Company's energy management. Both the Company's manufacturing plants are located away from protected areas to minimize the effects of CO_2 and other greenhouse gases on such areas. The Company's primary sources of energy are grid based electricity, natural gas and diesel. Other sources include solar energy. However, currently only a small part of the total energy is being derived from solar panels. The Company is making efforts to increase the share of renewable sources of energy. Accurate data on energy consumption and emissions is obtained from management systems. The conversion factors are sourced from U.S. Energy Information Administration. The Company uses previous year as base year to measure energy consumption and emissions. This enables the Company to address irregularities and implement necessary measures to ensure the Company's performance is on track. Collecting comprehensive data helps in understanding not only the energy savings, but also the economic benefits that can be achieved through specific measures.

The energy consumption during the year was 444,696 GJ. Compared to 2020, the total energy consumption during the year under review decreased by 4.2% on account of new energy initiatives adopted as part of our green practices. The energy consumption per motorcycle has been brought down to 418 KJ/Motorcycle.



The Company's products are in compliance with requirements of Pakistan Standards for Quality Control Authority (PSQCA) in respect of CO_2 emissions, noise levels and smoke. Further, all products of the Company comply with EURO II standards of carbon emission. The emissions during the year were 22,952 tons mainly comprising of CO_2. Emissions per bike have been brought down to 21.58 kg/motorcycle.



Energy Conservation and Emission Reduction Initiatives

Lack of access to energy supplies and transformation systems is a constraint to human and economic development. Increased use of fossil fuels without actions to mitigate greenhouse gases will have climate change implications. Energy efficiency and increase use of renewables contribute to climate change mitigation and disaster risk reduction. To reduce the Company's energy consumption and emissions, primarily CO_2, investments have been made and energy efficiency measures have been implemented at the Company's offices and production facilities. During the year, energy conservation of 13,935 GJ and emission reduction of 1,784 tons was achieved through following initiatives:

Solar Panels

The Company is determined to extend its use of renewable sources for energy. Installation of solar power systems is one of the major projects under the efforts in this area. This is aimed to derive clean & affordable energy to reduce greenhouse gas emissions and Atlas Honda's dependence on fossil fuel or grid-based electricity. This year, the Company increased solar energy utilization from 1,398 KW to 3,581 KW at Sheikhupura plant. This initiative will help to save 12,890 GJ of energy and reduce CO_2 emissions by 1,652 tons every year.


A view of solar panel

Installation of Alternate Mechanism for Parts & Jigs Cleaning

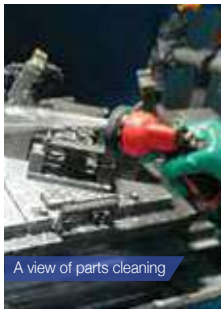
Previously, parts and jigs of engine plant were cleaned using compressed air at 5 Bar. Cleaning of parts through compressed air involves wastage of 10% to 12% air owing to leakages in air cleaning guns. Cleaning through compressed air is replaced by cleaning through cutting oil guns. This energy conservative initiative has resulted in reduction in energy consumption by 438 GJ per annum and reduction in CO_2 emission by 55 Tons.

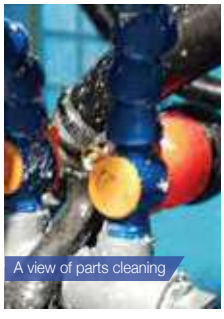
Old Setup


A view of parts cleaning


A view of parts cleaning

New Setup


A view of parts cleaning

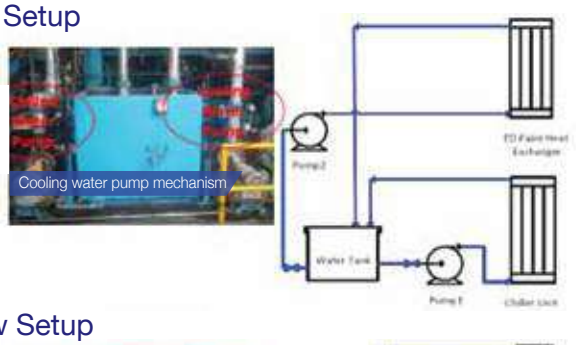

A view of parts cleaning


A view of parts cleaning

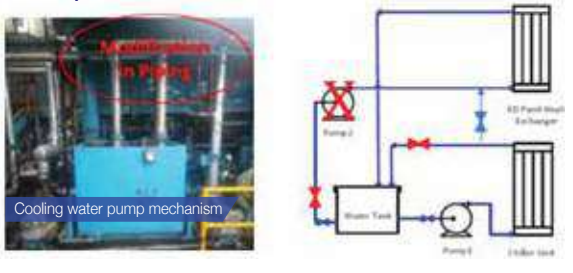
Shutting off Cooling Water Pump

Previously, two pumps each of 1.5 KW were being used continuously to maintain the temperature of water base paint. During the year, the Company has modified piping mechanism, running the chilled water through ED paint heat exchanger which has eliminated the requirement of second water pump. This has reduced the energy consumption by 54 GJ and CO_2 emission by 7 tons per annum.

Old Setup


Cooling water pump mechanism

New Setup


Cooling water pump mechanism

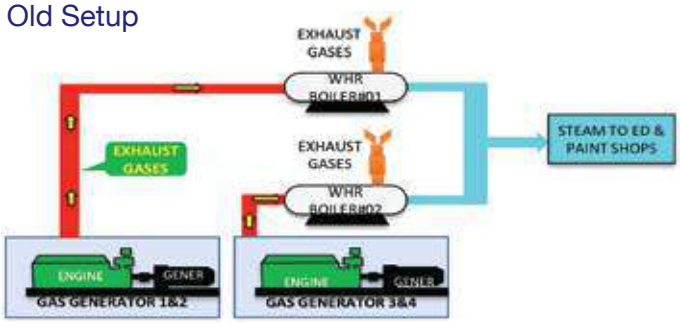
Energy Conservation on Cooling Tower

Previously, cooling tower was used throughout the year to cool off water storage tank for use in engine plant. During the year the Company has optimized the electricity consumption by utilizing weather effect of winter season to cool the water required in the production area. This measure has reduced the electricity consumption by 41 GJ and CO_2 emission by 5 tons per annum.

Alternate Mechanism for Water Heating at Machining Area

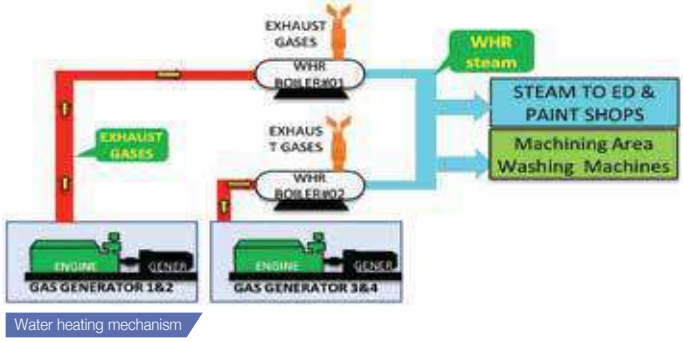
The parts processed in the machining area contains aluminium and oil particles, which require washing using heated water. Previously, heaters were used for the purpose. During the year, an alternate mechanism has been implemented, heating the water in winter season by using the waste heat recovery steam, generated from gas generators exhaust system. This measure helped to reduce the electricity consumption by 97 GJ and CO_2 emission by 12 tons during the year.

Old Setup



Water heating mechanism

New Setup

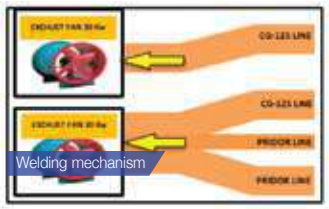


Water heating mechanism

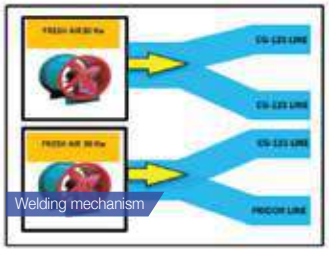
Alternate Mechanism for HVAC System of Welding Frame Body Line

Exhaust and fresh air blowers are used for ventilation purpose at frame body welding line. However, Fresh air and exhaust ducts are Common for both CG models and Pridor model production lines. In G2 Pridor is not produced but air supply and exhaust systems remain in operations. Exhaust and air supply system has been re-designed, by installing motorized damper at each line to control air wastages in G2. This enables us to shut down 60 KW of blower when the related production line is idle. This measure has resulted in reduction of electricity consumption by 415 GJ and CO_2 emission by 53 tons during the year.

Old Setup

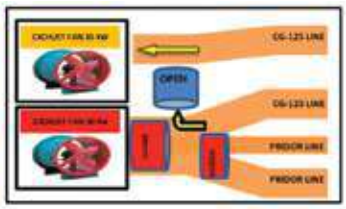


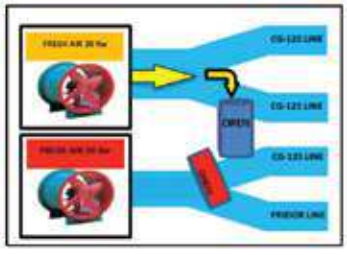
Welding mechanism



Welding mechanism

New Setup





Tuning of Synthetic Natural Gas (SNG Plant)

Previously, the mix ratio of LPG and air at the SNG plant was not at optimum level resulting in incomplete burning and heat loss. During the year, the composition of LPG and air in the SNG mix is modified to achieve environment friendly results. This will reduce the LPG consumption from 14,000 litres per day to 13,720 litres per day.

A view of SNG plant

A view of SNG plant

Plantation of Trees

Over the years, the Company has been undertaking initiatives such as tree plantation to negate the impact of greenhouses gases. These activities cover in-house plantation of trees as well as those planted at schools, government institutes and reservoirs in collaboration with Environmental Protection Agency. During the year, 2,370 trees were planted and 5,000 trees were distributed to the Government departments. The Company also received awards from Punjab Horticulture Society for Horticulture, Landscaping and Gardening.

Atlas Honda receiving award from Parks & Horticulture Society

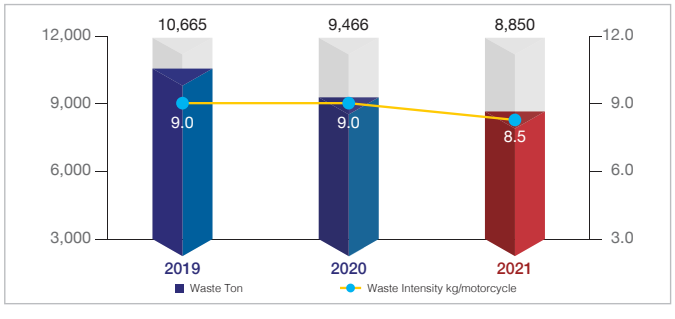
Material, Effluents & Waste

To ensure sustainable consumption and production practices necessarily entails to respect the biophysical boundaries of the planet and to reduce current consumption rates in order to fit with the biophysical capacity to produce ecosystem services and benefits. At Atlas Honda, environmental friendly use of raw materials is taken into account as early as the development phase through life cycle engineering. The Company's supply chain and material cycles have been shaped accordingly. Natural resources are being used in the most efficient manner with the objective to minimize depletion of the planet's resources. The Company is working to replace artificial materials with renewable materials wherever it makes technical, business and environmental sense and is socially viable. Consumption of raw materials, having substantial impact on the environment, is closely monitored and treated according to the Company's environment policy. Following table shows the materials used:

Renewable / Non-renewable	Material	Unit	2019	2020	2021
Non-renewable	Ferrous casting	Ton	75,236	72,082	72,468
Non-renewable	Non-Ferrous casting	Ton	9,102	8,425	8,365
Non-renewable	Oil paints	Ton	286	274	275
Non-renewable	Lubricants	KL	1,627	1,559	1,567
Both	Rubber	Ton	6,650	5,348	5,377
Non-renewable	Plastic	Ton	4,800	3,895	3,912

Waste resulting from the Company's production processes mainly includes waste water, metal, plastic & rubber scrap, packing & used oil. Considering water-related environmental impacts from our discharged water, waste water is treated through Waste Water Treatment Plant before it is released in sewerage drains to control the negative impacts and promote a healthy environment. The remaining waste and effluents are discharged through incineration, recycling, landfill and disposal to legitimate contractors at certified waste disposal facilities. During the year, 8,850 tons of waste was released with the reduced intensity of 8.5% per motorcycle. There were no significant spills during the year.

Hazardous / Non-Hazardous	Waste by disposal method	Unit	2019	2020	2021
Non-Hazardous	Recycling/Reuse (metal scrap, packing, plastic)	Ton	8,785	8,417	8,219
Non-Hazardous	Landfill (waste sludge)	Ton	315	265	254
Hazardous	Incineration - mass burn (sludge, oil contaminated waste)	Ton	136	130	127
Non-Hazardous	On-site storage (in-house scrap yard)	m3	250	250	250

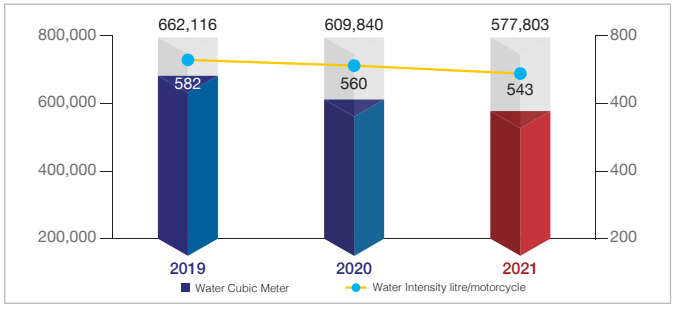


Water

The Company seeks to reduce its water footprint by promoting water-saving practices amongst employees and adopting water-efficient technologies and equipment wherever possible. Sustainable management of water resources and access to safe water and sanitation are essential for clean environment and productivity, and provide significant leverage for existing investments in health and education. The natural environment e.g. forests, soils and wetlands contribute to management and regulation of water availability and water quality. The Company has special focus on this goal and clean drinking water and sanitation facilities are ensured at all the business offices.

The majority of the Company's water use is attributable to its production processes, cooling and water consumed by employees. Main areas of action are thoughtful use and reuse of water and safe disposal of treated waste-water. Most of the water consumed is fresh water, drawn from earth which is not designated as a protected area whereas the size or volume of the water body cannot be estimated reliably.

Water consumption and discharge is recorded through flow meters installed at water tanks and treatment plant, respectively. During the year, 577,803 cubic meters of water was consumed with a reduced intensity of 3% per vehicle as compared to the last year. After proper treatment, water used in manufacturing process is released back to environment. Such treatment removes pollutants from the water and makes the same suitable for safe drainage. During the year, 86,671 cubic meters (15%) of the water was recycled.



Effluent Water Treatment Plant

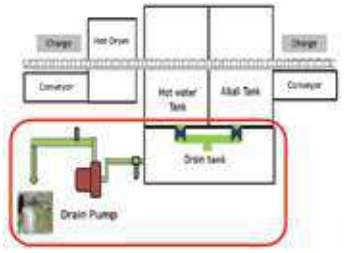
Water is used throughout the Company's production processes which results in effluent water. To prevent the effluent water from being discharged as produced, waste water from all over the plant is collected and treated to remove the harmful pollutants, at Effluent Water Treatment Plant. The profile of the receiving water-body is however not considered due to safe drainage after treatment. The Company, as a responsible organization abides by the legal requirements of effluent water treatment as well as meets "Provincial Environment Quality Standards". This year, around 506,233 cubic meter of water was treated and safely drained into the sewerage.


A view of effluent water treatment plant at Karachi

Water Recycling & Pretreatment at Drainage

Previously, 12,000 liters of water was drained every three months through drain tank when alkali water tank and hot water tanks were cleaned. Furthermore, cleaning process required 144 KG of chemicals. During the year, the Company has modified its water piping process and converted the drain tank into storage tank which has resulted in recycling of 45,000 liters of water per annum.

Old Setup



Water recycling mechanism

New Setup

Biodiversity

The Company has clear vision from the onset of its business related to environment protection, therefore both of the manufacturing plants have been located away from protected areas to minimize the effects of CO_2 and greenhouse gases on the protected areas.

With reference to the Environment statement, the Company considers biodiversity conservation initiatives as imperative part of our commitment to the preservation of the environment. The Company will work incessantly towards the harmony between the commitment and its activities. Following are the broad guidelines related to biodiversity:

- Company will continue to channelize efforts towards the development of technologies for fuel-efficient vehicles and other technologies for the reduction of environmental impacts;
- Environmental impacts will be minimized by the effective use of resources through efficiency improvements;
- Community-based activities will be implemented in cooperation with stakeholders; and
- Company will promote transparency of information related to the outcomes of its activities.


A view of visit to flower exhibition


A view of visit to flower exhibition