



# 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 2021, 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 analyze, 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.

There were no non-compliances reported during the year and no significant fines or non-financial sanctions were imposed on company for any environmental non-compliance. 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.

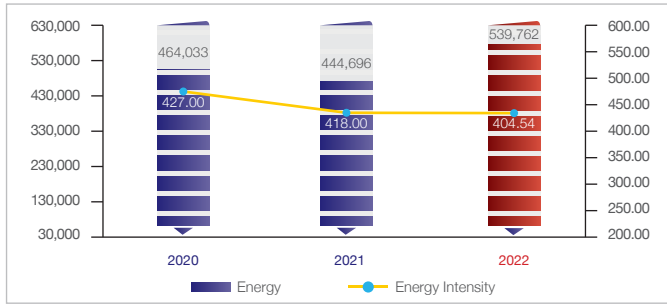
Life Cycle Stages	Major Initiatives in Each Domain Based on Impacts Identified
Development	<ul style="list-style-type: none"> <li>• Environment friendly product design</li> <li>• Efficient use of raw material, energy and other resources</li> <li>• Focus on reduced waste and emissions</li> <li>• Integrate future requirements into development plans</li> </ul>
Purchasing	<ul style="list-style-type: none"> <li>• Purchase of raw material from environmental friendly sources</li> <li>• Increased use of renewable raw materials and materials with sustainable characteristics</li> <li>• Implementation of environmental standards within the supply chain</li> <li>• Promotion of transparency and resource efficiency</li> <li>• Training and improvement programs</li> </ul>
Manufacturing	<ul style="list-style-type: none"> <li>• Environmental management system</li> <li>• Improved resource efficiency</li> <li>• Reduced waste-water and emissions initiatives</li> <li>• Reuse of water</li> </ul>
Sales and Service	<ul style="list-style-type: none"> <li>• Promotion "green dealers"</li> <li>• Dealers with 5S certification</li> <li>• Efficiencies in transportation</li> <li>• Efficient use of packaging</li> <li>• Use of returnable containers</li> </ul>
In-use	<ul style="list-style-type: none"> <li>• Fuel efficient products</li> </ul>
End-of-life	<ul style="list-style-type: none"> <li>• Increased parts collection, reuse and recycling</li> <li>• Eliminating harmful materials to enable higher quality recycled materials</li> <li>• Promoting proper recycling and providing technical support</li> </ul>
Administration	<ul style="list-style-type: none"> <li>• Environmental management</li> <li>• Energy and resource conservation</li> <li>• Promotion of "Green Building" design</li> </ul>

### Energy Consumption

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<sub>2</sub> 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. Currently only a small part of the total energy is being derived from solar panels. However, the Company endeavors to explore possibilities of renewable energy generation and increase the share of energy generated from renewable sources on an ongoing basis. 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 539,762 GJ. Compared to 2021, the total energy consumption during the year under review increased by 21% on account of increased production. However, energy intensity ratio has been brought down to 404.5 KJ/Motorcycle 3.2% decrease from last year, owing to new energy initiatives and process optimizations adopted as part of our green practices. The energy consumption includes energy directly consumed by the Company and the Company uses previous year as the base year.



The Company operates two manufacturing facilities. Energy consumption data is recorded in relevant conventional unit, for instance, MMSCF for natural gas and kW h for electricity. These units are converted into consolidated unit, gigajoules (GJ), to obtain mean energy content and as a standard measure for representing energy consumption. The heating values are based upon standard values for natural gas and diesel. The energy consumption and sources in this report have been determined from data provided by production sites of Company and present a consolidated picture of Company's energy consumption in manufacturing operations.

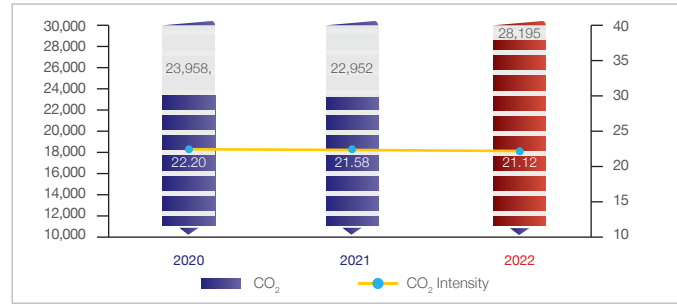
### GHG Emissions

The Company's products are in compliance with requirements of Pakistan Standards for Quality Control Authority (PSQCA) in respect of CO<sub>2</sub> emissions, noise levels and smoke. Further, all products of the Company comply with EURO II standards of carbon emission. The emissions of GHGs are subject to control limits laid down by Environmental Protection Agency and the Company ensures compliance with these limits by determining total emissions for each plant site at regular intervals and is moving further to reduce the emissions up to maximum possible limit.

The direct CO<sub>2</sub> emissions are the result of combustion processes for the generation of heat electricity and steam. Emissions of CO<sub>2</sub> and other GHG are measured at each production facility and integrated into consolidated calculation of GHG emissions. The GHG figures only include the emissions caused by the Company. The global warming potential of the respective gaseous emissions was sourced from United Nations Framework Convention on Climate change (UNFCCC).

The Company has no biogenic emission of CO<sub>2</sub> at its operations. All the emissions are within the prescribed NEQS limits and regularly reported to the EPA under SMART reporting program. Furthermore, the Company does not have any significant Scope-II emissions. The only scope-II emissions result from purchased electricity at marketing offices and warranty centers of the Company and these are considered to be insignificant. Moreover, the Company identified that scope-III emissions are insignificant in the overall context except the emissions resulting from products transportation and selling. The Company is working with the transporters to apprise them of the emissions, effects of climate change and encourage them to upgrade their fleets to reduce emissions

The emissions during the year were 28,195 tons mainly comprising of CO<sub>2</sub>. The Company uses previous year as base year. The emissions were higher as compared to last year on account of increase in number of units produced. However, emissions per bike have been brought down to 21.12 kg / motorcycle: 2% reduction from 2021. Furthermore, the information includes the emissions that are directly generated by the Company.



There were no significant emissions of ozone-depleting substances during the year. The company is committed to the non-use of ozone-depleting substances as a part of its environmental management policy. The company is in process of replacing its old air conditioners with air conditioners which use R410 gas and do not harm the ozone layer.

### 7 Environmental Commitment 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<sub>2</sub>, 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 18,358 GJ and emission reduction of 2,361 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 3,581 to 3,955 KW during the year. This initiative will help to save 14,243 GJ of energy and reduce CO<sub>2</sub> emissions by 1,859 tons every year.



#### Installation of Variable Frequency Drives (VFDs) on Plant & Machinery

VFD is a type of motor controller that drives an electric motor by varying the frequency and voltage of its power supply. During the year, VFDs were installed at four press machines and two compressors having motor rating 160 KW and 200 KW. Installation of VFDs reduced the energy consumption of these machines by 38%, which resulted in reduction in energy consumption by 3,504 GJ per annum and reduction in CO<sub>2</sub> by 414 Tons per annum.

Old Setup



VFDs installed at Press Machine

Installed VFDs



VFDs installed at Press Machine

Electricity saving by sparing the Circulation Pump (ED Paint)

Previously two motor pumps each of 15KW capacity were running to operate heat exchangers, resulting in high electricity consumption. The heat exchanger is modified, and plates are replaced to improve its efficiency. After this modification only one motor is enough to operate heat exchanger and other pump is in standby condition. This has reduced energy consumption by 60 GJ per annum and has reduced CO<sub>2</sub> emissions by 7 tons per annum.

Before



Circulation pump mechanism

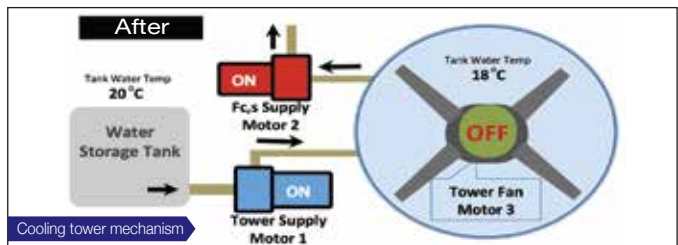
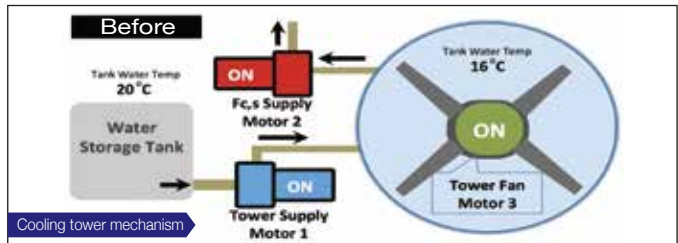
After



Circulation pump mechanism

Energy Conservation on Cooling Tower

Previously chilled water was used in furnaces in one of the manufacturing areas of Company, throughout the year. The Company during the year optimized electricity consumption by using weather effect of winter season to cool the water required in production area. This eliminated the need to operate cooling tower fan for 3 months during a year, which resulted in reduction in energy consumption by 84 GJ and reduction in reduced CO<sub>2</sub> emissions by 10 tons, per annum.



Installation of LDR on Shop Lights to Maximize utilization of Sky Light.

Company has started to use natural skylight along with LED lights at its newly constructed production areas. This has resulted in reduction in energy consumption by 168 GJ and reduction in CO<sub>2</sub> emissions by 20 tons during the year.



A view of passive daylighting mechanism



A view of passive daylighting mechanism

Electricity Saving through Process Optimization

Ultra-Filtration in paint shops is done by three UF pumps and to retain process parameters in required range, three pumps remain operational 24/7. However, during the current year research has been undertaken and these pumps are kept switched off every hour during non-operational time. This has resulted in reduction in energy consumption by 133 GJ and reduction in CO<sub>2</sub> emissions by 22.5 tons during the year.

Auto Shut Off Valve in Compressed Air Line to Save Energy During Idle Hours.

Auto shut off valves are installed at compressed air line to save energy during idle production hours. This has resulted in reduction in energy consumption by 165 GJ and reduction in CO<sub>2</sub> emissions by 28 tons during the year.

Installation of Chip & Sludge Removal

Previously, the coolants used in Company's machines were discarded as Sludge and contaminated oil render it infeasible for recycling. During the year the Company has installed Coolant purification system which has maximized recycling of coolants used in the Company's machines. This recycling has reduced the consumption of coolants by 4,900 liters per annum. This will further reduce the disposal of hazardous waste.

Before



A view of Coolant purification system

After



A view of Coolant purification system



Material, Effluents & Waste

To ensure sustainable consumption and production practices necessary 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 environmental policy. Following table shows the materials used:

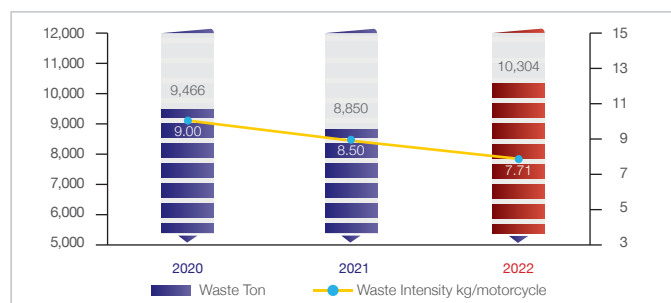
Renewable / Non-renewable	Material	Unit	2020	2021	2022
Non-renewable	Ferrous casting	Ton	72,082	72,468	92,001
Non-renewable	Non-Ferrous casting	Ton	8,425	8,365	10,130
Non-renewable	Oil paints	Ton	274	275	324
Non-renewable	Lubricants	KL	1,559	1,567	1,988
Both	Rubber	Ton	5,348	5,377	6,826
Non-renewable	Plastic	Ton	3,895	3,912	4,965

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. Company ensures that these contractors follow guidelines issued by regulatory authorities for safe disposal of the said waste.

During the year, 10,304 tons of waste was released with the reduced intensity of 9.3% per motorcycle. There were no significant spills during the year.

Hazardous / Non-Hazardous	Waste by disposal method	Unit	2020	2021	2022
Non-Hazardous	Recycling/Reuse (metal scrap, packing, plastic)	Ton	8,417	8,219	9,611
Non-Hazardous	Landfill (waste sludge)	Ton	265	254	319
Hazardous	Incineration - mass burn (sludge, oil contaminated waste)	Ton	130	127	124
Non-Hazardous	On-site storage (in-house scrap yard)	m3	250	250	250



### 6 CLEAN WORLD AND SUSTAINABILITY Recycling, Waste Control and Waste Reductions Measures and Initiatives

During the year the Company took following initiatives at its production facilities and to reduce its material consumption and waste generations accordingly:

#### Reduction in Packaging waste

Previously, the Company used bubble plastic sheets for packaging of crank case parts which were non-recyclable. The Company has now replaced bubble plastic sheets with Vinyl Sheets with can be reused for up to 20 times within 6 months. This has resulted in wastage reduction of approximately 1.3 tons per annum.

Furthermore, the Company reduced its paper and card box waste by 135 tons.

Before

After



Recycling of Aluminum Waste

During the year the Company recycled 492 tons of aluminum waste which is generated as part of its various production processes. This represents 5% of total non-ferrous casting material consumed by the Company during the current year.

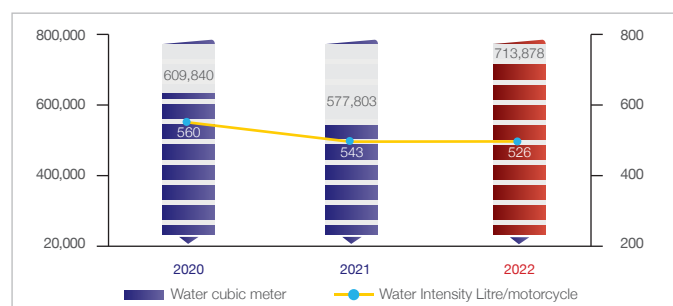


Water

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 unlocking economic growth 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 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 wastewater. Significant proportion of the water consumed is fresh water, drawn from earth which is not designated as a protected area and no protected species are affected by water extraction, 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, 713,878 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. No water bodies or related habitats were significantly affected by water discharges of the Company as these areas are not designated as protected areas.

During the year, 107,082 cubic meters (15%) of the water was recycled.



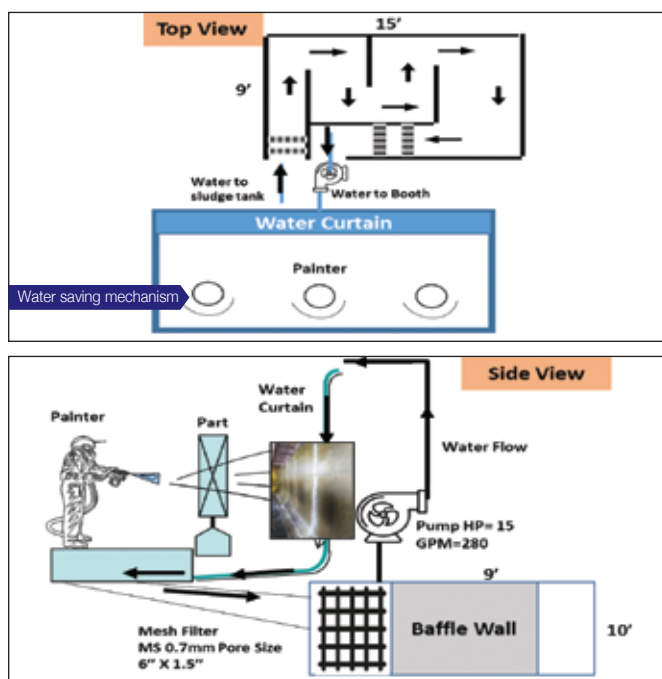
Waste Water Treatment Plant

Water is used throughout the Company's production processes which results in wastewater. To prevent the wastewater from being discharged as produced, waste water from all over the plant is collected and treated to remove the harmful pollutants, at two Waste Water Treatment Plants at manufacturing sites of the Company. The profile of the receiving waterbody is however, not considered due to safe drainage after treatment. The Company, as a responsible organization abides by the legal requirements of waste water treatment as well as meets "Punjab Environmental Quality Standards". This year, around 606,796 cubic meter of water was treated and safely drained into the sewerage.



Water Saving in Paint Shops

Water tank of paint shops of the Company, with capacity 44,000 liters was cleaned every week. The Company during the year modified its manufacturing process such that the water tank needs to be cleaned up after two weeks. This initiative reduced the consumption of water by 144 cubic meters, greasing material by 1.15 tons, spray booth additives by 6.3 ton, and diesel by 520 liters, annually.



## Recycling of Water Treated through Waste Water Treatment Plant (WWTP)

Company during the current year started using recycled water which is treated through waste water treatment plant at three different locations of its manufacturing facilities. This resulted in reduction of water consumption by 11,155 cubic meters annually and reduced the annual drainage of water by the same volume.

### 13 CLIMATE ACTION 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<sub>2</sub> and greenhouse gases on the protected areas.

With reference to the Environment statement, the Company considers biodiversity conservation initiatives as imperative part of its 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.



During the year the Company was awarded 1st prize for 163rd Annual Spring Flower Show 2022 by Horticultural Society of Pakistan.



### 13 CLIMATE ACTION 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, 2,897 trees were planted and 7,500 trees were planted in collaboration with the Government departments.