

# HIRDARAMANI GROUP ENERGY & GREENHOUSE GAS EMISSIONS

Hirdaramani Group Facilities Reduce Energy and  
Greenhouse Gas Emissions in Sri Lanka

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USE CASE



*"Climate change is the most pressing challenge that the industry, country, and the world are facing at present."*











**DEMITH GOONERATNE**  
SUSTAINABILITY MANAGER

## An ambitious rooftop solar array and energy efficiency projects will help the Hirdaramani Group meet its 2020 goals.

“Climate change is the most pressing challenge that the industry, country, and the world are facing at present,” says Demith Gooneratne, Environmental Sustainability Manager at Hirdaramani Group. The company, based in Sri Lanka, has 19 apparel manufacturing facilities across the country and is a leader in sustainable manufacturing. In 2012, its Mihila Factory was the first apparel manufacturing facility in Asia to achieve an impressive a CarbonNeutral® status.

Gooneratne and his team use the Sustainable Apparel Coalition’s [Higg Facility Environmental Module](#) (Higg FEM) to baseline and continuously measure environmental management across seven key impact areas:

-  Environmental management systems
-  Energy use
-  Greenhouse gas emissions
-  Water use
-  Wastewater
-  Emissions to air
-  Waste management
-  Chemical use and management



*“Using the Higg Index helped us identify areas that we might normally have overlooked for improvement in energy and other environmental impact areas.”*

By 2020, Hirdaramani seeks to reduce energy in megajoules per standard production minute by 20 percent over a 2012 baseline, so it’s been keenly focused on reducing energy use and lowering greenhouse gas emissions. The Higg Index helps the Hirdaramani sustainability team to identify hotspots in these categories, so that they can improve them. A key component to reducing overall energy consumption will be the reduction of purchased electricity. By 2020, the Group plans to reduce electricity in kilowatt hours per standard production minute by 20 percent over the same baseline.



“The Higg Index has been beneficial to help identify energy and other environmental impact areas we might have normally overlooked,” Gooneratne said.



The energy and greenhouse gas emissions section of the Higg FEM assessment initially asks facilities questions about basic management practices: tracking emissions, measuring them, and quantifying energy consumption. Once facilities have demonstrated that all basic management practices have been partially or fully met, they answer questions about more robust and advanced management practices that can lead to a reduction in the facility’s greenhouse gas emissions and lower its environmental impacts. To improve, facilities must identify energy consumption hotspots, baseline energy consumption, and set energy reduction targets.



## Setting Reduction Targets

Using the Higg Index, Hirdaramani calculates a normalized energy reduction target. A normalized target represents a reduction relative to a set production unit, which allows the company to measure real reduction progress, even if production levels fluctuate year to year, affecting total energy consumption.

Higg FEM questions prompt facility teams to determine and explain how they will meet reduction goals. To set its 2020 goals, Hirdaramani examined past energy-saving initiatives and extrapolated possible reductions for future initiatives. The company set targets holistically, creating targets for its entire group of Sri Lankan facilities. Each site received a unique target requirement based on its individual potential.

*“The Higg Index scores and improvement areas allowed our management to identify facilities that needed more investment or attention,” Gooneratne said.*

Some of those investments include swapping fluorescent bulbs in facilities with energy efficient LEDs and installing skylights. Such changes led to the development of worker awareness programs for energy conservation, reducing unplanned overtime, and operations. Hirdaramani also began conducting energy audits and preventative maintenance on machines. Through energy efficiency and conservation measures, Hirdaramani facilities hope to successfully meet their targets. The Group's self-assessment indicates that it is just below the halfway mark toward its energy goal at 9.7 percent reduction.



When implementing sustainability projects, Hirdaramani Group relies on in-house experts and supplements its expertise with third-party energy auditors. The company also works closely with machinery manufacturers to identify energy efficient options for future purchase. For larger projects, the team turns to third-party experts, as it did recently when exploring solar power generation.



### Using Solar Power

In early 2018, Hirdaramani partnered with a Sri Lankan renewable energy company to implement an ambitious rooftop solar photovoltaic (PV) array. The manufacturer installed more than 21,000 solar PV panels, with a combined capacity of about 7.7 megawatts on eight of its facilities.

Because solar generation can be uneven – even during the day due to changing weather patterns – Hirdaramani's system will feed into the national electrical grid, so that facilities will continue to draw on uninterrupted grid power.

Hirdaramani expects the generation from the entire project to support a reduction of more than 10,000 metric tons of carbon dioxide equivalent each year, compared to the relatively carbon-intensive national energy mix.<sup>1</sup> The overall contribution from the solar PV installation is expected to equate to more than 30 percent of the total electricity consumed by all of its Sri Lankan facilities.

<sup>1</sup> Sri Lanka's national grid mix includes approximately 40% coal, 37% oil, and 23% hydro and other renewables. The 2017 proportion of non-hydro renewables was small. <http://powermin.gov.lk/english/wp-content/uploads/2017/10/MoPRE-2017.2018-03-English.pdf>

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In addition to the direct reduction benefits from the solar PV system, Hirdaramani also identified indirect benefits, including a reduction in the amount of cooling facilities needed. During the day, the solar panels shade the roof, cooling the buildings and reducing the need for air conditioning.

While this kind of project can be expensive, Gooneratne points out that projects can range from no or low cost, to medium, high, and long-term cost. “Actions in this area [of energy and greenhouse gas emissions] are the ones that have the highest return on investment,” he says.

Following these initiatives, Hirdaramani announced earlier this year that it achieved Net Zero status for greenhouse gas emissions from energy across its entire manufacturing footprint in Sri Lanka.



## Business Value

Hirdaramani’s senior leadership were initially inspired to urgently address climate change after reading former U.S. Vice President Al Gore’s 2006 book, *An Inconvenient Truth*. Hirdaramani’s sustainability, maintenance, and engineering teams remain committed to applying and enhancing sustainability practices. The teams collaborate with facility managers to implement projects that can meet climate goals while providing business value for the global manufacturer.

The teams see the business value through the return on investment of numerous initiatives, from reduced operational costs to a decline in risk associated with fossil fuel dependency. The manufacturer’s relationships with business partners are also stronger following the success of these projects. Gooneratne says that the recognition Hirdaramani receives from value chain partners for facilities with high Higg Index performance encourages further project development and investment.

With the new and ongoing projects in place, Hirdaramani looks forward to seeing its energy and greenhouse gas emissions continue to decline. The company will become less dependent on fossil fuels and continue to see its Higg Index scores improve.

## Advice from Hirdaramani Group sustainability team to Higg Index customers hoping to pursue energy and greenhouse gas emission projects.



Think long term.

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Your finance team is your friend. Always look at impact and cost-benefit analysis before implementing a project. Rather than considering the profitability of each individual project, consider a cluster of projects that will provide an overall positive outcome. While some initiatives add cost, those can be offset by other initiatives that pay back.

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Keep the momentum going and keep your teams motivated by recognizing their achievements with sustainability-related awards and recognition.

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Reducing environmental impact is not always easy, but the overall benefit for future generations and the planet should always be at the back of your mind.

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