Sustainability Report

2024

福井鋲螺

METAL PARTS INNOVATOR

FUKUI BYORA is dedicated to contribute to SDG attainment.

Hosorogi Factory
(Awara City, Fukui Prefecture)

The solar panel arrays installed at Fukui Byora's Hosorogi facility building 1, Kaga factory, Hosorogi buildings 8/9, and Noto factory (in March 2021, February 2022, April 2023 and October 2024 respectively) are one part of our continuing sustainability efforts. Operation of the arrays at these locations has resulted in an estimated 1300 ton reduction in yearly CO2 emissions.

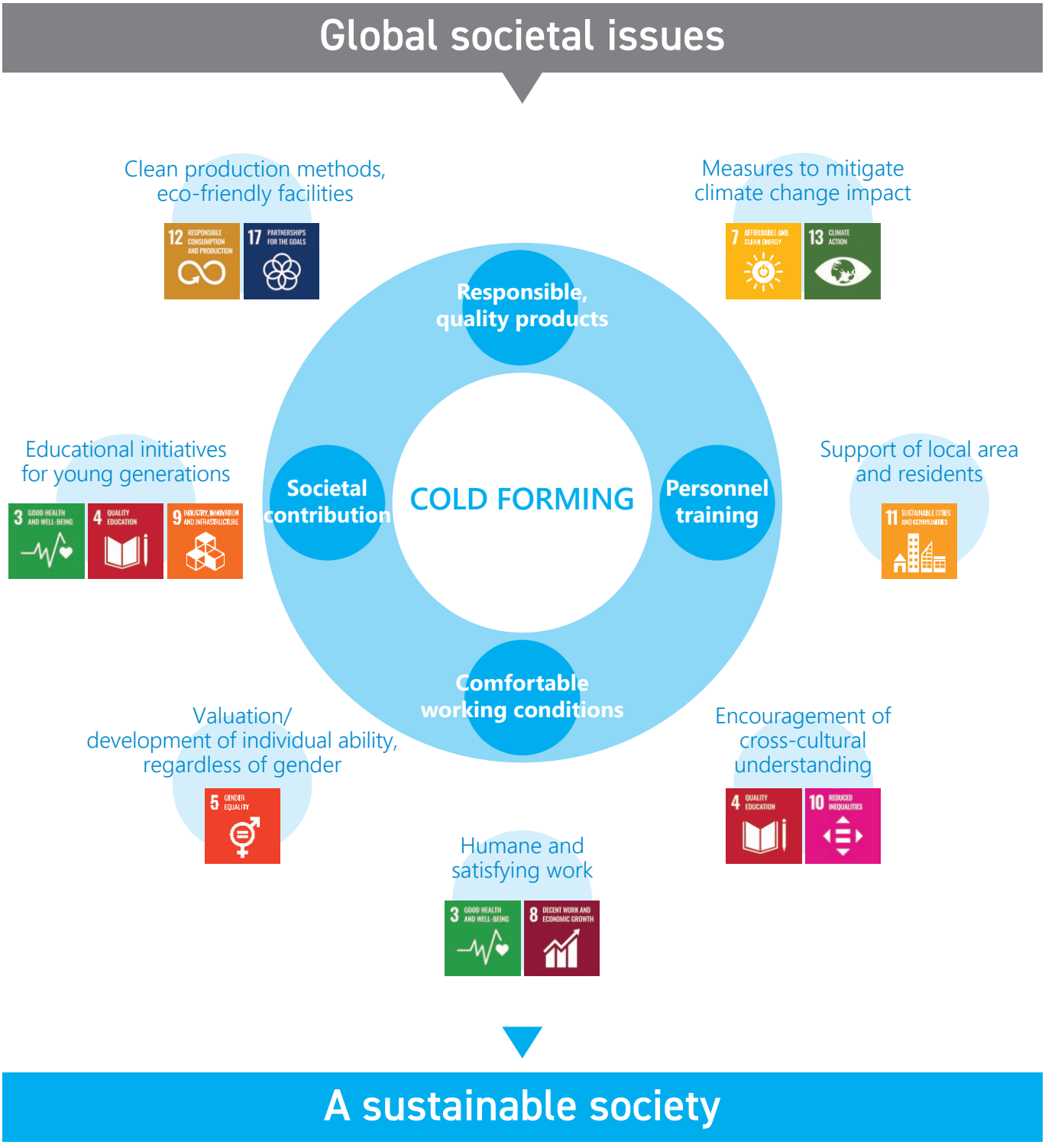
SDG basics

The Sustainable Development Goals (SDGs) are a set of 17 broad missions and 169 specified targets proposed by the United Nations in order to realize a better and more sustainable world by 2030. Formally adopted at the 2015 UN General Assembly as a successor to the Millennium Development Goals (MDGs), they act as a call for action to both developed and developing countries, and are driven by a pledge to leave no person on the planet behind.

Our approach

Fukui Byora has reached the point where it is today after a more than 60 year journey alongside its customers. Our technology has been shaped by the demands of our clients in various industries, and continues to evolve. As a leader in cold form manufacturing technology, we vow to put sustainability at the forefront alongside other core needs of our customers in all aspects of company operations.

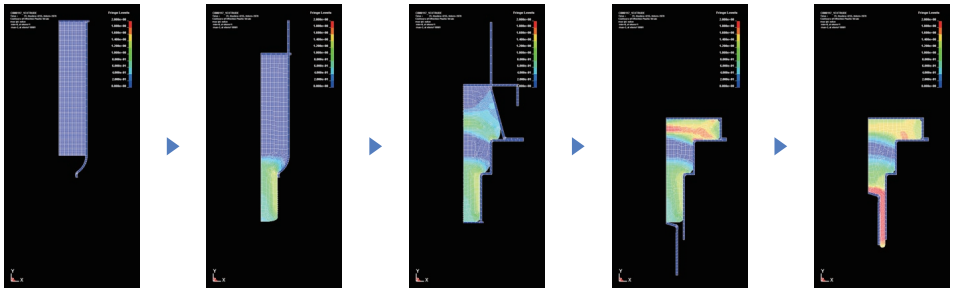
Fukui Byora SDGs framework illustration



Enviromentally friendly Cold Forming

Cold forming is a manufacturing process that plastically deforms metal using dies.

Forming process by cold forming



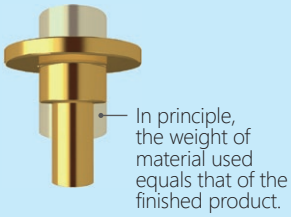
It allows for high speed production, little to no material waste compared to conventional machining, and creates a stronger end product due to work hardening of the material.
Due to these various merits, cold forming has often been called an environmentally friendly and streamlined method of production.
Fukui Byora makes the most of our cold forming equipment's strengths when developing products, allowing us to efficiently utilize raw materials and rapidly output large quantities. Through such environmentally conscious production, we aim to contribute to global efforts to reduce CO_2 emissions.

Advantages of Cold forming (multi-step rivet example)

Material Yield Rate

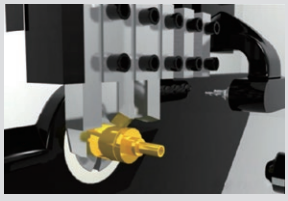
Machining
45 %

Cold Forming
100 %

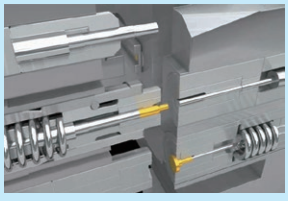


Production Speed

Machining
4.5 pieces/min



Cold Forming
100 pieces/min



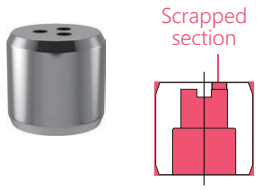
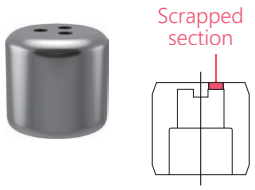
Specific initiatives to cultivate SDG attainment

Clean production methods, eco-friendly facilities

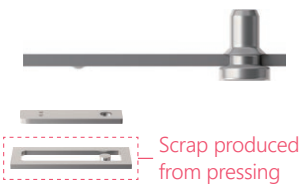
Environmentally friendly production

Through collaboration with our global partners, we have devised products that require little to no machining. Manufacture of products in this way reduces CO_2 emissions from the process while making efficient use of raw materials.

GOAL **Attainment of internal target values**

Before	After
Machined part	100% cold formed part
	
2.9 grams of scrap produced per part	**9.9 tons less** metal scrap yearly

Revised production methods produce less scrap, and consequently reduce CO_2 emissions

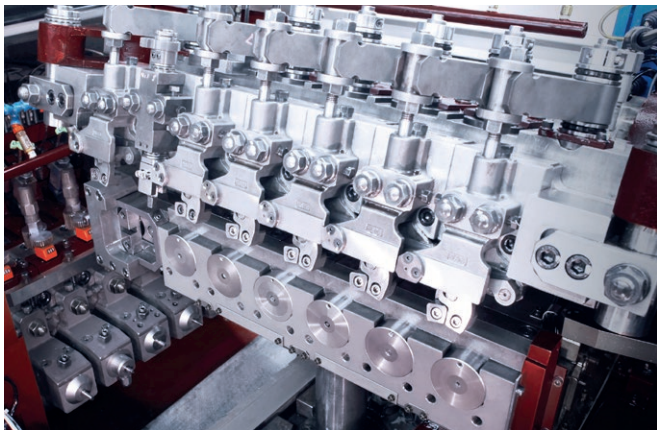
Before	After
3 total processes	Consolidation of parts
Pressed and cold formed part, with final fusing process	Single part, single cold forming process
	
	10.1 tons less metal scrap yearly

Revised and reduced processes produce less scrap, and consequently reduce CO_2 emissions

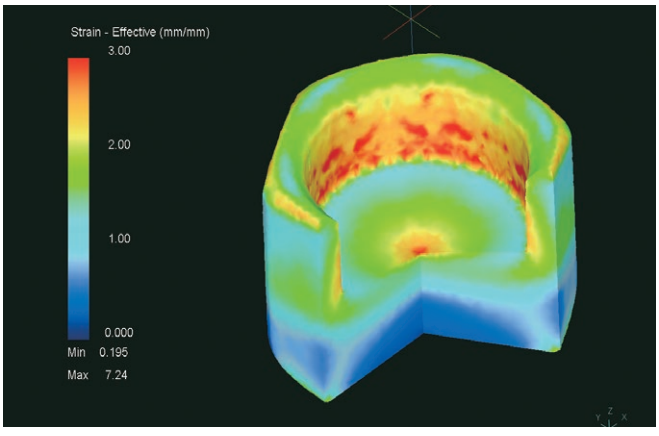
Low defect rate, low scrap

Innovations in cold forming technology and analysis equipment reduce defective product output, and thus the amount of scrapped materials.

GOAL **15% reduction of yearly scrap by 2030** (based on 2019 scrap measurement)



Innovations in cold forming lead to fewer defective products



Application of FEM analysis improves efficiency of product design

Specific initiatives to cultivate SDG attainment

Valuation/development of individual ability, regardless of gender

Realization of Gender Equality

At Fukui Byora, we stand by the following principles :

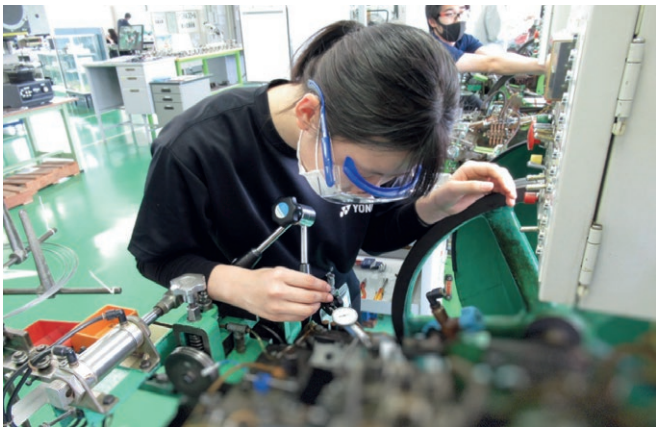
- Equal opportunity for female employees in technical and machine operator positions
- Promotion to executive positions based purely on ability

GOAL **Expanded scope of duties, and a positive work environment for all employees**

New female employees in technical and machine operator positions

Year	2022	2023	2024
Number of People	1	1	1

Total by Year



Promotion to executive positions based on ability, regardless of gender

The number of female employees in leadership and upper management is increasing every year.
Those in leadership organize the members of their assigned units, and conduct evaluations and interviews of them as future candidates for leadership positions.

Year	2022	2023	2024
Number of People	12	10	12
Proportion of total executives	10.2%	8.4%	11.0%

Total Female Executives by Year

Humane and satisfying work

Improving All Employees' Sense of Fulfillment

As we gain increased profits by expanding into the technology development business, the resulting wealth is shared with all employees.

GOAL **By interviewing all employees, understand their desires and increase employee satisfaction**

Conduct personnel interviews

To improve employee satisfaction, we systematically conduct personnel interviews throughout the year.

Year	2022	2023	2024
Number of People	167	162	156

Personnel interview participants

TOPICS

Sea and beach cleanup

On October 26, we participated in the "Sea and Beach Cleanup Activity" organized by the Fukui Prefecture Federation of Fishermen's Cooperative Association.

TOPICS

Children's clothing donation project

In August, we coordinated a collection of children's clothing goods within our company, and through
cooperation with Fukui Byora Thailand were able to donate the collected goods to a Thai orphanage in need.

ZERO EMISSION

At Byora, our and our suppliers' environmental footprint is of high importance. We have defined 3 main goalposts to guide tangible actions towards the achievement of environment-related Sustainable Development Goals (SDGs), within overall operational polices that aim to help global prosperity by 2030 become a reality. In addition, following a review of target values in 2021, we have put forth a commitment to carbon neutrality by 2030 via reduction of CO_2 emissions, along with other preventative measures to combat global warming.

Headquarters
(Awara City, Fukui Prefecture)

Fukui Byora
Committed to environmental preservation

Aim for carbon neutrality
(Offset 2013's CO_2 emissions by the year 2025)

Concrete actions
- Implementation of remote meetings and telework
- Demand control systems (responsible energy use)
- Solar panel installations

70% reduction of industrial waste
(Relative to 2013's output numbers)

Concrete actions
- Adherence to waste management principles (Reduce, Reuse, Recycle)

Zero incidents requiring emergency action
(Goal window: 4/6/2020 - 12/31/2030) *escape of oils, hazardous materials etc.

Concrete actions
- Implementation of preventative measures
- Strengthening of internal inspection
- Regular check-ups of oil product containment facilities

The road to 2030 : Our efforts towards sustainability

Aim for carbon neutrality (Offset 2013's CO_2 emissions by the year 2025)

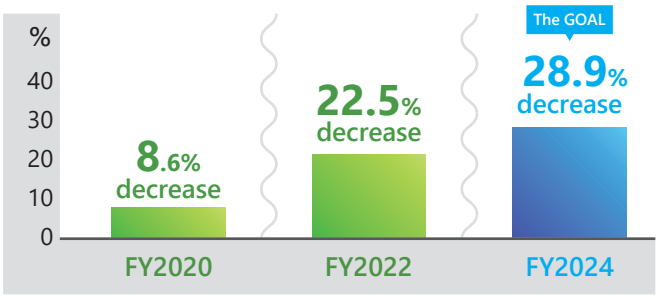
CO_2 emission rate

Relative to 2013 output numbers

(Output: t-CO_2 / Earnings)

	2020	2022	2024
Compared to 2013	-8.6%	-22.5%	-28.9%

*Calculated with CO_2 emission factor = 0.479kg – CO_2
(taken from Hokuriku Denryoku's 2019 emission factor)



CO_2 reduction progress in 2024 Solar panel installation
(Noto Factory)

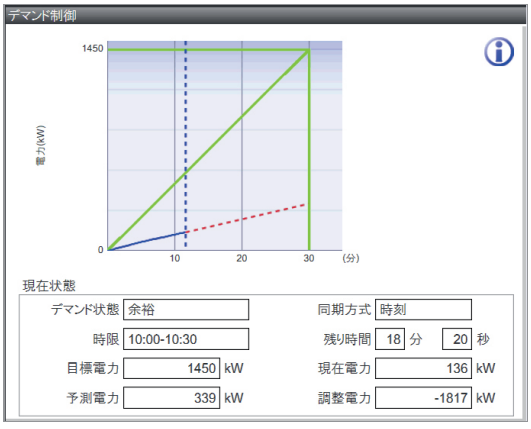
As part of our plan to decarbonize and reduce greenhouse gas emissions, we have formed a PPA* contract with AOI Energy Solutions to outfit our factory in Noto, Ishikawa with a solar panel array. The panels entered effective use on October 1st, 2024, and constitute our 4th complete solar power generation facility.

*Power Purchase Agreement

Noto Factory

Air conditioner control

At the Hosorogi Factory, continuing from last year, we updated the power receiving and transforming equipment as well as the automatic control system that controls air conditioner output when it starts to become too high.



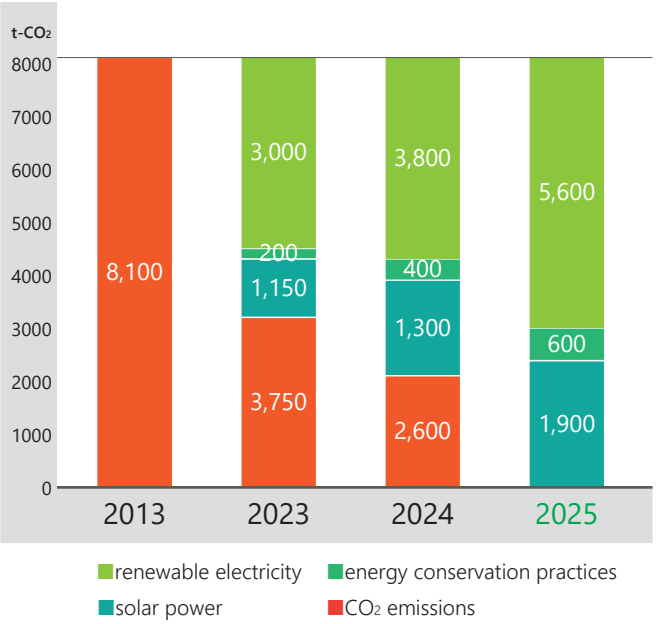
Air conditioner automatic control system

Our roadmap to carbon neutrality

Medium-term objective

Offset of 2013's fiscal year emissions

By pursuing further installation of solar panels and other energy conservation efforts, we aim to offset 8,100 tons of CO_2 (our 2013 emissions) by 2025. To aid in these efforts, we began utilizing the renewable energy source "Kagayaki Green" at our Hosorogi factory in 2023, followed by our Katayamazu factory in 2024. We plan to expand its use to our Kaga factory in 2025.



TOPICS

Ranked highest 10 years consecutively in energy conservation practices under the Business Operator Class-Based Assessment System

Fukui Byora has consistently achieved S-class designation through the Business Operator Class-Based Assessment System, which follows the Ministry of Economy, Trade and Industry (METI) Agency for Natural Resources and Energy's revised Act on Rationalizing Energy Use.

What is the Operator Class-Based Assessment System?

This system receives and evaluates periodic reports on energy conservation practices submitted by businesses, and designates entities as one of four classes (S, A, B, or C). Further actions depend on the designation; a business may be featured on METI's homepage, be provided with guidance to improve their practices, or be subject to on-site inspections. S-class indicates superiority in energy conservation efforts and requires a 1% or more reduction in a business's 5-year average energy consumption, among other conditions defined by benchmarks. We will continue to maintain and improve our energy conservation practices to keep our streak going for a 11th year and beyond.

FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	**FY 2024**
☆	☆	☆	☆	☆	☆	☆	☆	☆	☆

*S Class is indicated by a [☆] under Energy Conservation Assessment column

The road to 2030 : Our efforts towards sustainability

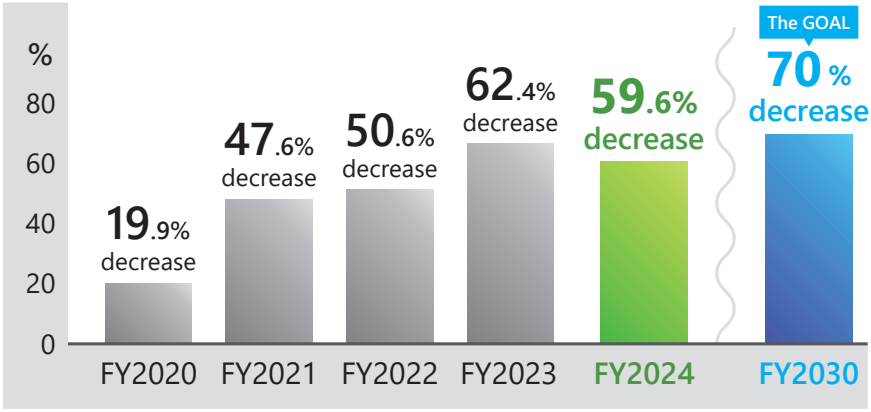
70% reduction of industrial waste (Relative to 2013 s output numbers)

59.6% cut in industrial wastes

Relative to 2013 output numbers

(Output: kg / Earnings)

	2013	2021	2022	2023	2024
Output	61.6	33.0	30.4	23.2	24.9
Compared to 2013	—	-47.6%	-50.6	-62.4	-59.6%



Wastewater Treatment

Fukui Byora is continuously working to reduce dewatered sludge, including holding wastewater treatment opinion exchanges.

Wastewater treatment facility