

Nurturing a Culture in Pursuit of Sustainability

— Initiatives by New Hampshire
Ball Bearings, Inc. (United States) —

New Hampshire Ball Bearings, Inc. (NHBB) is a manufacturing subsidiary of Minebea in the United States. Operating three plants in New Hampshire and California, the company produces bearings for the aerospace, defense and medical markets. NHBB is one of the five largest corporations in New Hampshire and has close ties to the community. This special feature introduces NHBB's approach to sustainability in the United States as a Minebea Group company.



Chatsworth Plant



Laconia Plant



Peterborough Plant

— Ingraining Sustainability into Our Corporate Culture —

Sustainability at NHBB

Sustainability at NHBB is founded upon our mission and values. In the 1990s, we implemented organizational development programs with the aim of enhancing our capabilities as an organization. This entailed transforming the culture, in other words our values and actions, and the structure of our organization in order to strengthen its foundations. We spent several years carrying out various studies and analyzing the current state of the organization and then used the results to establish a mission and values that would serve as guides for doing business. Our mission is "To exceed the expectations of our customers through an empowered organization resulting in profitable growth and world class leadership." Quality, Integrity, Partnerships, A Learning Organization and Social Sensibility are our five values.

One of those values, Social Sensibility, encompasses our environmental responsibilities, civic responsibilities and the health and safety of our employees. These ideas have long been fundamental values of our business and I believe that is why NHBB has been able to keep developing all these years.

Given this history, we do not treat sustainability as a special activity, but rather as inherent to the business process and as part of our corporate culture. We believe that all activities undertaken at plants contribute to sustainability. These include improvements made to cleaning systems to reduce water usage, research into the introduction of solar power generation, learning



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about best practices overseas and formulation of strategic plans. Sustainability is embodied in our daily actions. We don't tell employees that they need to practice sustainability or carry out CSR activities because the most important part of promoting sustainability is incorporating it into employees' daily actions. By changing the way employees act, we can establish a culture that allows us to push ahead with activities that in 10 years we can look back on and say, "That was for sustainability."

Advancing Activities in line with a Sustainability Vision

In 2011, we newly established a Vision of Sustainability and Values of Sustainability to entrench sustainability as part of our corporate culture. The Sustainability Vision declares NHBB's aim to nurture "a company culture which fosters long-term economic, social and environmental viability." In accordance with this policy, we are working to incorporate the concept of sustainability into all NHBB's different principles and all

its divisions and in doing so build up a culture that allows achievement of long-term management plans alongside greater sustainability.

To help realize this vision, we formulated a Sustainability Roadmap. The Sustainability Roadmap aggregates the roadmaps of individual divisions. It includes, for example, research into new parts washing system technologies for reducing the environmental burden of products, as well as activities carried out jointly with suppliers to improve production efficiency, and sets down specific action targets in regard to each of the social, environmental and economic aspects of business.

Our relationships with stakeholders such as our customers, suppliers, local communities and employees are vital for achieving sustainable business activities. For that reason, we seek communication with stakeholders in a wide range of settings.

Such activities are carried out across the company as cross-functional efforts with the Sustainability Committee playing a central role. Starting out as the EHS (Environment, Health and Safety) Committee, promoting environmental, health and safety initiatives, the Sustainability Committee took shape as EHS Committee personnel from legal, sales and human resources divisions—which are crucial divisions for the sustainability effort—were brought in to strengthen the organization. Besides keeping tabs on progress made against the Sustainability Roadmap, the Sustainability Committee holds training courses to build awareness about sustainability and also prepares plans and visions in readiness for the next challenge.

Overcoming the Challenges Ahead

NHBB is now faced with two major challenges in promoting sustainability. The first is securing technically qualified employees, and the other is strengthening supply chain management. Both are essential for

achieving greater sustainability.

In New Hampshire—where two of our plants are located—it is very difficult to secure technically qualified employees because not only is the population aging, but manufacturing is not as popular as other industries. We therefore work with the state government to provide training so that people in the community may develop an interest in manufacturing and acquire skills. We also offer internships to university students as a way of providing actual job experience. By also pushing ahead with technological development, we can make improvements allowing us to do away with manufacturing processes that demand advanced skills, which would be useful in getting around the shortage of human resources.

Supply chain management is another area we need to direct energy into. A major quality- or environment-related issue occurring within the supply chain would likely have a negative impact on our own profit and so we need to strengthen management. We hope to strengthen the technical side of supply chain management through measures such as hiring new engineers.

To Keep Developing into the Future

NHBB's Vision of Sustainability and Values of Sustainability indicate our approach to ensuring business continuity over the long term. They show that we will continue to deliver value to customers and, by making a profit, continue to give back to employees and people in the community. As a Minebea Group company, NHBB will nurture a company culture and promote sustainability through strategic measures looking ahead 15 to 20 years into the future to bring us closer to realizing this vision. By doing so, we hope to carry on being a corporation that touches all stakeholders.

NHBB's Sustainability Vision

A Culture which Fosters Long Term Economic, Social, and Environmental Viability

NHBB's Sustainability Values

NHBB recognizes the broad risk profile we face, and the necessity of managing risk with equal regard to people, place and profit.

NHBB seeks to improve our competitive advantage by striving to be an employer and supplier of choice.

NHBB seeks innovative solutions, and leverages resources by encouraging inter-disciplinary thinking and problem-solving.

NHBB seeks to eliminate waste and maximize the efficiency of resource utilization in its manufacturing and business practices.

NHBB's products and manufacturing practices contribute to the sustainable development of the global environment and humanity.



Sustainability initiatives could be called “activities for exceeding the expectations of various stakeholders.” Placing importance on ties with customers and other stakeholders, including suppliers, local communities and employees, NHBB advances activities that allow the company to keep developing together with those stakeholders. Here we introduce some of our sustainability initiatives.

Customers

► Meeting Quality, Delivery and Environmental Expectations

To ensure business continuity into the future, we have to listen to customers who use our products and meet their expectations. To learn what customers' expectations are, NHBB conducts customer satisfaction surveys targeting the main customers of each business unit. We ask questions on around 40 topics, which include service-related areas such as legal matters and formalities in addition to product costs, value and delivery. Findings are then shared with plants so that improvements can be made.

Customers' strongest requests concern product quality and delivery dates. From aerospace customers, in particular, we also receive requests concerning fuel efficiency improvements, noise reduction and other aspects related to the environment due to their need to respond to strict environmental regulations. NHBB makes an effort to stay in close touch with customers as we seek to develop products that meet their requirements.

Suppliers

► Making Environmental Improvements Together with Suppliers

To achieve sustainability, NHBB has to promote sustainability throughout the supply chain. We therefore meet with suppliers to exchange information on initiatives relating to quality and the environment and provide assistance for improvements to suppliers' production activities.



Meeting with suppliers

Many suppliers are small companies with 10 or fewer employees and as such are unable to respond adequately to environmental challenges and regulations. NHBB supports efforts by suppliers by dispatching facilities teams dedicated to energy and resource savings to suppliers' production facilities where they carry out surveys and analyses of energy usage and waste generation and give advice for making improvements. In one case, a supplier was discarding a large amount of metal scrap as waste until NHBB referred the company to a recycler. The supplier now earns revenue from what used to be waste because of this joint recycling effort. Enormous benefits have also been achieved in terms of reduced energy usage and costs and recycling of resources.

Employees

► Raising Employee Awareness and Nurturing a Sustainability Culture

In order to achieve greater sustainability, it is important that we raise employee awareness and transform our organization to establish a culture based on sustainability. By incorporating elements of sustainability into all activities and implementing them, employee mentality will change and so will our corporate culture. It is more effective to make employees aware about sustainability by changing their day-to-day actions than by sitting them down and showing them some slides.

NHBB has made an open door policy part of its culture as a way to facilitate communication with employees. Under a principle of open and frank communication, employees can talk to their boss at any time and are free to ask questions in meetings held regularly to share information on managerial matters.

Local Communities

► Developing Together with the Community

Because we believe that NHBB cannot develop without development of the local community, we place great importance on our relationship with the region. That relationship is diverse. Our support for a local solar car contest is an example of the opportunities we create in order to deepen interaction with people working and living nearby. NHBB also has a volunteer program in

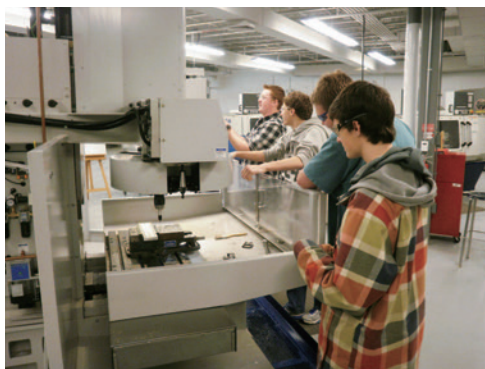
place to support employee participation in the activities of non-profit organizations and we provide financial assistance to NPOs in which employees take part as volunteers.

► Contributing to the Development of Local Human Resources

It is sufficient to say that manufacturing sustains economic development in New Hampshire—the location of NHBB's Peterborough and Laconia plants—as around one third of the state's top 100 companies in terms of sales are manufacturers. However, few young people today have an interest in manufacturing and highly skilled engineers are on the decline, making it hard to secure talented human resources.

NHBB has responded by implementing a wide range of programs to assist development of engineers in the region. They include an internship program offering university students in fields such as mechanical engineering four months' work experience at one of our plants. The experience gives the students greater confidence about their future and a number of interns have opted to come and work for NHBB after graduation.

NHBB also has a major involvement in the operation of a technical training institute in the region. Besides reviewing and transforming its existing six-month curriculum into a four-year program, NHBB supplies machines and systems for use in practical training. These efforts have led to more trainees enrolling. Some students who complete their training and go on to university will one day end up working as engineers for NHBB. These efforts to develop human resources are valuable for both the community and NHBB as the needs of each are filled.



Students receiving practical training at technical training institute

Environment

► Reducing the Environmental Impact of Plants

In order to meet rigid environmental standards put in place by customers and local environmental regulations, we need to reduce the environmental impact of products

and plants. NHBB does this in line with its Sustainability Roadmap through a wide range of environmental activities. To save energy, NHBB has introduced reflective coatings and high-efficiency cooling systems, and has set a target of reducing CO₂ emissions 5% by 2015 (based on 2010 levels). To save resources, the company has stepped up recycling of cutting fluid and plastics as well as improvements to cleaning systems.

NHBB applies the experience acquired through these activities by playing an active role in environmental policy formulation for New Hampshire. In 2009, we were part of a task force responsible for developing the state's Climate Action Plan. The Climate Action Plan is still used as a roadmap for the state's environmental activities.

► Introduction of "re:cool" Coolant Recycling System

NHBB uses a system called "re:cool" to make effective use of coolant and metal emitted during the bearing grinding process. Coolant reuse was previously complicated by fine metal swarf in the used fluid. Using "re:cool," coolant and swarf are separated and briquettes are created to enable recycling of the metal. The system also enables completely closed recycling of coolant, which is reverted to its pre-use state through processes such as centrifugal separation and filtration. As a result, NHBB has managed to reduce annual disposal of coolant by around 5,700 liters and increase the volume of metal sales. This success has prompted us to recommend the system to suppliers.



A scene from the recycling process

► Efforts to Conserve Water Resources

In California water resources are scarce and reducing water usage is a major issue. NHBB has taken action to reduce the amount of water used in the product cleaning process by switching cleaning agents. Annual water usage has been halved as a result. Now we are planning to reduce water usage further by switching to environmentally friendly solvents for other processes that use water.