



Department of
**Environment &
Conservation**



DENSO Manufacturing of Tennessee, Inc.: Realizing a Sustainable Automotive Society

DENSO is a leading supplier of advanced automotive technology, systems, and components for major automakers. DENSO Manufacturing of Tennessee, Inc., located in Maryville, is one of two operations in Tennessee.

DENSO fully embraces the corporate vision of creating a sustainable automotive society. The Maryville facility employs over 3,600 associates with four major divisions manufacturing starters, alternators, instrument clusters including motherboards, keyless entry, air bag sensors, and head-up displays.

Such an enormous operation brings with it an enormous amount of challenges. These challenges include diverting material from the landfill, energy management, and engaging employees and the community.

DENSO has made amazing progress in diversion and recycling at the Maryville site since setting a base-line in 2000. "We've gone from 2,928 tons of materials to the landfill in the year 2000 to 9.0 tons in 2016," said Mike Wingo, Environmental Engineer with DENSO.



DENSO

- Established 1991
- Employs 3600+
- Member since 2004
- Pursuing Eco-Vision 2025





Last year, DENSO's Maryville facility diverted nearly 30 million pounds from the landfill. The rate of landfill diversion, however, is only one success story. Like many companies, energy is a significant cost consideration. DENSO, a visionary company that embraces innovation in every aspect of their operation, sought a unique solution to their most costly use of energy: 21 traditional compressor driven HVAC units.

Traditional HVAC units cool air using coils filled with refrigerant. DENSO replaced the refrigerant with chilled water. That required a chilled water plant, and DENSO chose to use what is referred to as an ice plant system.

An ice-chilled water plant has all the components of a traditional plant, plus a series of ice storage tanks. "The chillers create ice overnight during periods of off-peak electrical demand that is stored in insulated tanks. The water from the HVAC systems is cooled during the day by running the water around the ice. This ends up being a 40 percent reduction in the cost of cooling", said Mike Wingo. Maintenance and downtime are reduced, and ozone depleting refrigerants are eliminated.

The decision to build an ice plant instead of upgrading a traditional system is in harmony with DENSO's world-wide Eco-Vision initiative. Eco-Vision provides DENSO a roadmap to realizing their goal of a sustainable automotive society. The initiative encompasses virtually everything that DENSO does that touches the environment. One of the most visible outcomes of Eco-Vision is Eco-Park.

Maryville's Eco-Park was opened in 2012 and was the idea of DENSO President, at the time, Van Saka. Saka expressed a desire to demonstrate the company's commitment to the environment. DENSO approached Keep Blount Beautiful (A Keep America Beautiful affiliate) about creating a wetland learning environment. As a result, DENSO and Keep Blount Beautiful formed a partnership to spearhead the effort.



There is an EcoPark adjacent to both DENSO facilities in Maryville and Athens. It is a safe place for associates and the communities to walk, learn, and immerse themselves in nature. 1,700 children came through the EcoPark in Maryville last year for environmental education provided by Keep Blount Beautiful. Both campuses are examples of true community partnerships, including the City of Athens, City of Maryville, and Keep Blount Beautiful.

DENSO is committed to sustainability in their industry and their community. They became members of the Tennessee Green Star Partnership in 2004 and attended the Sustainable Industry Workshop in Knoxville last summer. “We would love for all the automobile companies in Tennessee to join the partnership and share ideas,” said Mike Wingo.

The [Tennessee Green Star Partnership](#) is a voluntary environmental leadership program designed to recognize industries in the state, which are committed to sustainable practices. If you are interested in joining DENSO and other sustainable industries in Tennessee by becoming a member, please contact us.