

BrucePac is committed to developing a culture of sustainable business practices and strives to be a leader in waste reduction, environmental protection and conservation. Our goal is to improve all aspects of sustainability year over year and keep our eyes on continuous improvement now and in the future. A carbon footprint was developed as a metric to help achieve that goal, measure our progress, and make informed decisions.

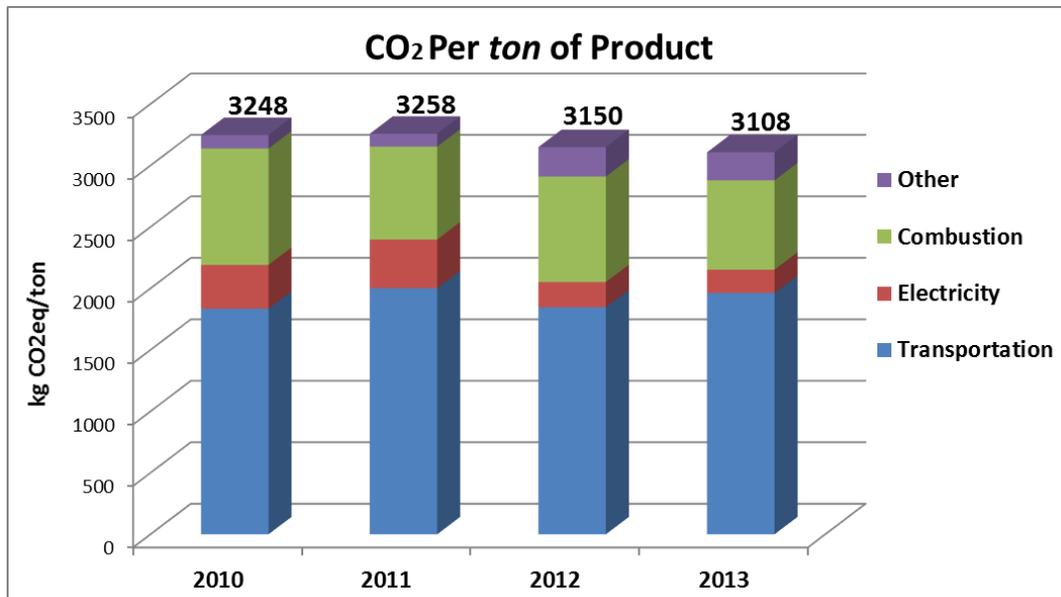


Figure 1: Shows BrucePac's carbon footprint since 2010. Emissions have been reduced 5%. The footprint is measured by the same standards as the Carbon Disclosure Project.

Our carbon emissions have decreased 5% since 2010. The emissions reductions have come from decreased electricity, less natural gas use, and our commitment to ship more raw materials by railroad, a more efficient option than on-road trucks. The focus of our efforts, and a major factor in our environmental footprint, has been electricity because BrucePac believes the greenest energy is always the energy not used. Since 2009 we have **cut electricity use by 22%** by pursuing many projects and changes, some of which are listed below.

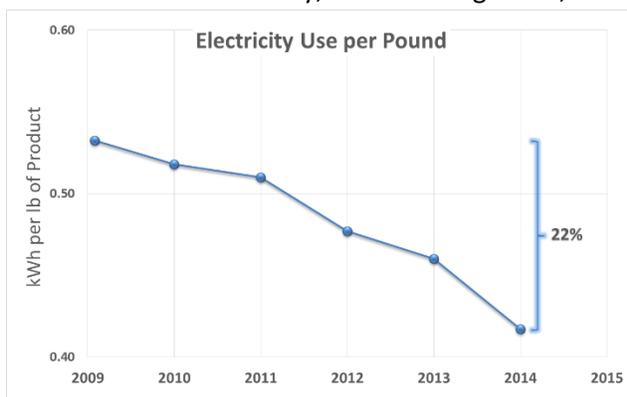


Figure 2: BrucePac's per pound electrical usage. Energy has been reduced 22% since 2009.

- Refrigeration Controls and VFDs** – Industrial refrigeration is our largest energy user. Adding computer controls and variable speed motors saves hundreds of thousands of kWh's of electricity.
- Condensate Return System** – Returns hot condensed steam back to the boiler saving water and natural gas.

- *Blast Freezer Variable Speed Fans* – Modified freezer to reduce fan speed during a blast freezing cycle cutting energy use when it is not needed.
- *Started the Energy Bucks Program* – Our team members can earn energy bucks for the company store by coming up with energy and water conservation ideas. So far many ideas have been brought to BrucePac’s attention to reduce energy and water use.
- *Electric Vacuum Pumps to Replace Compressed Air Vacuums* – BrucePac modified a piece of equipment to use a more efficient vacuum generator. The project saved an estimated 22,000 kWh.
- *Industrial Energy Improvement* – Undertook a year long training session to reduce energy use through educating our team and improving management practices. The on-going effort included an energy booth at our company picnic, site wide energy scans, and compressed air leak detection.



Figure 3: Electric vacuum pumps installed to replace compressed air.

BrucePac’s efforts do not end at energy conservation. Renewable power is important to us and we have invested in on-site solar electric generation and in renewable energy credits through Portland General Electric’s Clean WindSM program. **Together clean wind and solar power make up over 9% of our facilities electricity use.**



Figure 4: BrucePac's solar panels generating power in Woodburn, OR.

Energy conservation needs to reinforce waste reduction to truly be sustainable. At BrucePac our recycling program covers every material possible. Recycling over 1000 tons of cardboard was not enough for us, so we worked with suppliers to design new packaging that doesn’t use any un-recyclable waxed cardboard. The new box is fully recyclable into paper pulp and greatly increases our salvaged materials. Grease collected from our production activities as part of a sustainability project is converted into biodiesel fuel by a local Northwest company. **The grease separation has the added benefit of reducing clean water use**



by 10,000 gal a day! The project along with our other efforts won BrucePac the Mid-Willamette Valley, Sustainable Large Business award.

MATERIALS RECYCLED AT BRUCEPAC:

- OIL/GREASE
- PLASTIC
- METAL
- CARDBOARD & PAPER
- BATTERIES
- LIGHT BULBS
- BIOSOLIDS

Any material not recycled is sent to a waste-to-energy plant located nearby our Woodburn and Silverton facilities. Salvaging recyclable materials and sending anything leftover to the waste-to-energy plant makes **BrucePac a zero landfill company**. An achievement few food processors can achieve. To cap off our recycling efforts in 2015 we partnered with a local garden supply company to upcycle our buckets. The buckets are directly reused for cut flower sales in the Salem area.



Our environmentally friendly operations are accredited by two third party certifications. We have been independently audited for EarthWise and Food Alliance. Two certifications that hold us to our sustainable goals and safe food practices. We also regularly undergo training and education efforts to push sustainability out to the entire BrucePac team. In

2014 a more in-depth sustainability policy was adopted to help guide purchases, growth and operations in a green path. The training also led to no cost operational changes that cut energy use by over 100,000 kWh.

BrucePac’s efforts with projects, operational changes, purchasing policies, and team member education will not stop. We are committed to sustainable business practices, and environmental conservation. Future projects to conserve water, reduce energy use, and increase recycling rates are underway. Below highlights some of our current in-progress efforts. Continuous improvement has been a BrucePac policy since our founding in 1949 and we have achieved our goal by shrinking our carbon footprint and improving all aspects of sustainability every year.



Figure 5: Upcycled buckets from BrucePac supply a local garden center with containers for cut flower sales.

Projects	Improvements to BrucePac
Work with suppliers to reduce waxed cardboard	Waxed cardboard is unrecyclable and after a successful switch from two of our suppliers BrucePac is working to get more suppliers to change their box to a more recyclable version. Ongoing
Find secondary uses for cleaned wastewater	BrucePac fully treats its wastewater and may have other uses after it has been cleaned such as cooling needs, and agriculture. Winter 2015
Improve solids drying	Improve the drying capabilities for our wastewater solids will reduce garbage weights, and improve the waste-to-energy facilities generation capabilities. Winter 2015
Improve condensate return system in Silverton Plant	Upgrading the capacity of our condensate return system will reduce water and natural gas use. July 2015
Reduce Belt Washers Water Use	Cleaning and sanitation processes is our largest water user. If we can reduce it by improving belt washing equipment while maintaining safety standards we will save thousands of gallons a day. Fall 2015
Improve grease collection system in wastewater pretreatment	Add oil separation equipment in Silverton pretreatment to remove any oil that gets down the drain, before pretreatment. Winter 2015