



SUSTAINABILITY

AT SIERRA NEVADA



OVERVIEW



History of Sierra
Nevada



Defining
Sustainability



Energy / Water / Waste / GHG



Advocacy



1980



Ken Grossman



Ken Grossman



1980

SIERRA NEVADA BREWING CO.







SNAPSHOT

- 3rd largest craft brewery
- 10th largest brewery overall
- Independent/family-owned
- ~1000 employees
- Pioneer/mentor in craft
- Leader in craft beer sustainability



NATURAL & ORGANIC
**STRANGE
BEAST™**
HARD KOMBUCHA



SIERRA NEVADA BREWING CO.

DEFINING “SUSTAINABILITY”

Meet the needs of the present without compromising the ability of future generations to meet their own

Environmental Resiliency

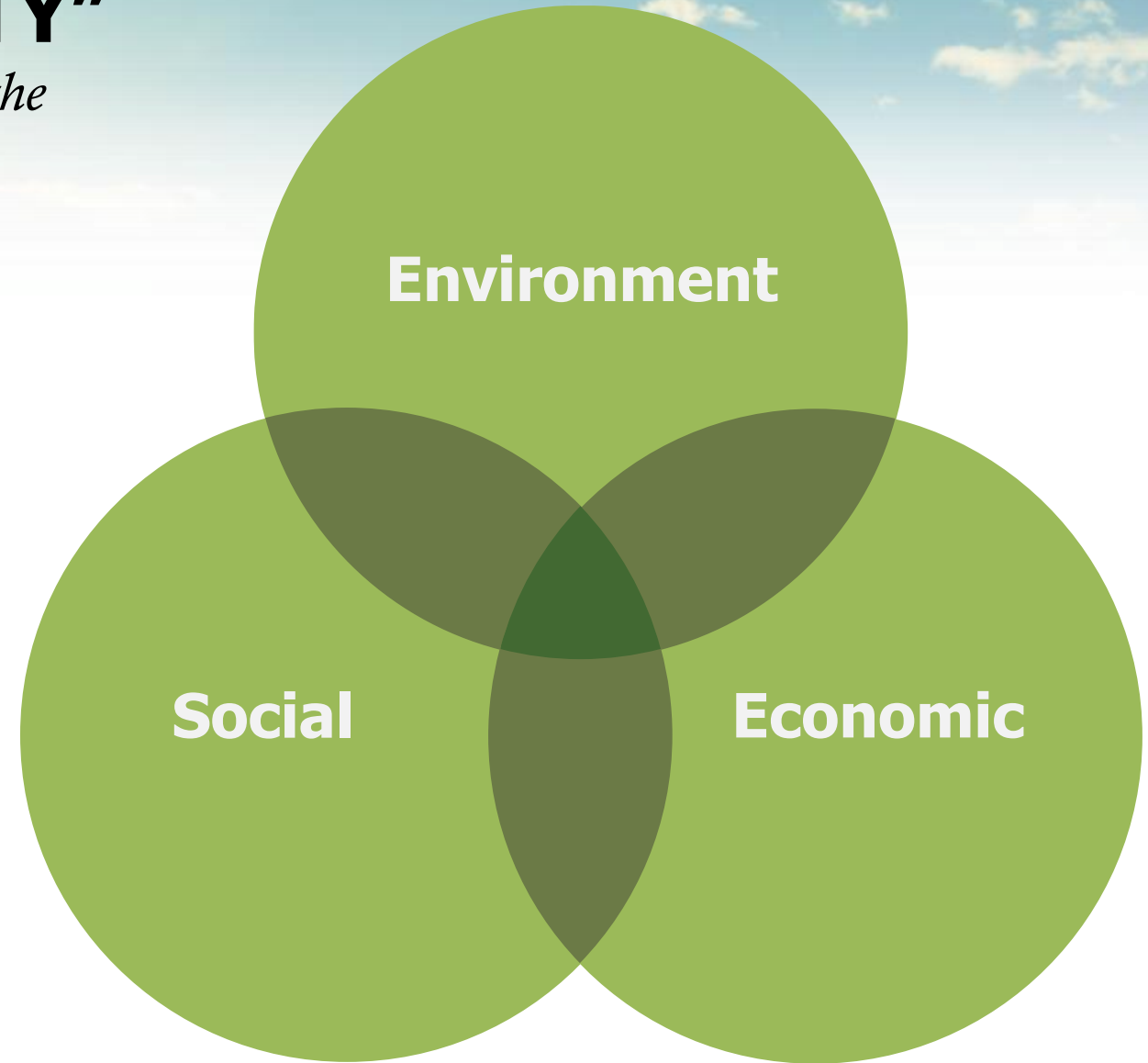
- GHG Reduction
- Closed Loop Philosophy
- Zero Waste

Social Equity

- Employee wellness, safety, equity & inclusion
- Community engagement & philanthropy
- Advocacy

Economic Stability

- Operating costs are met with the ability to reinvest, give back, & plan for the future



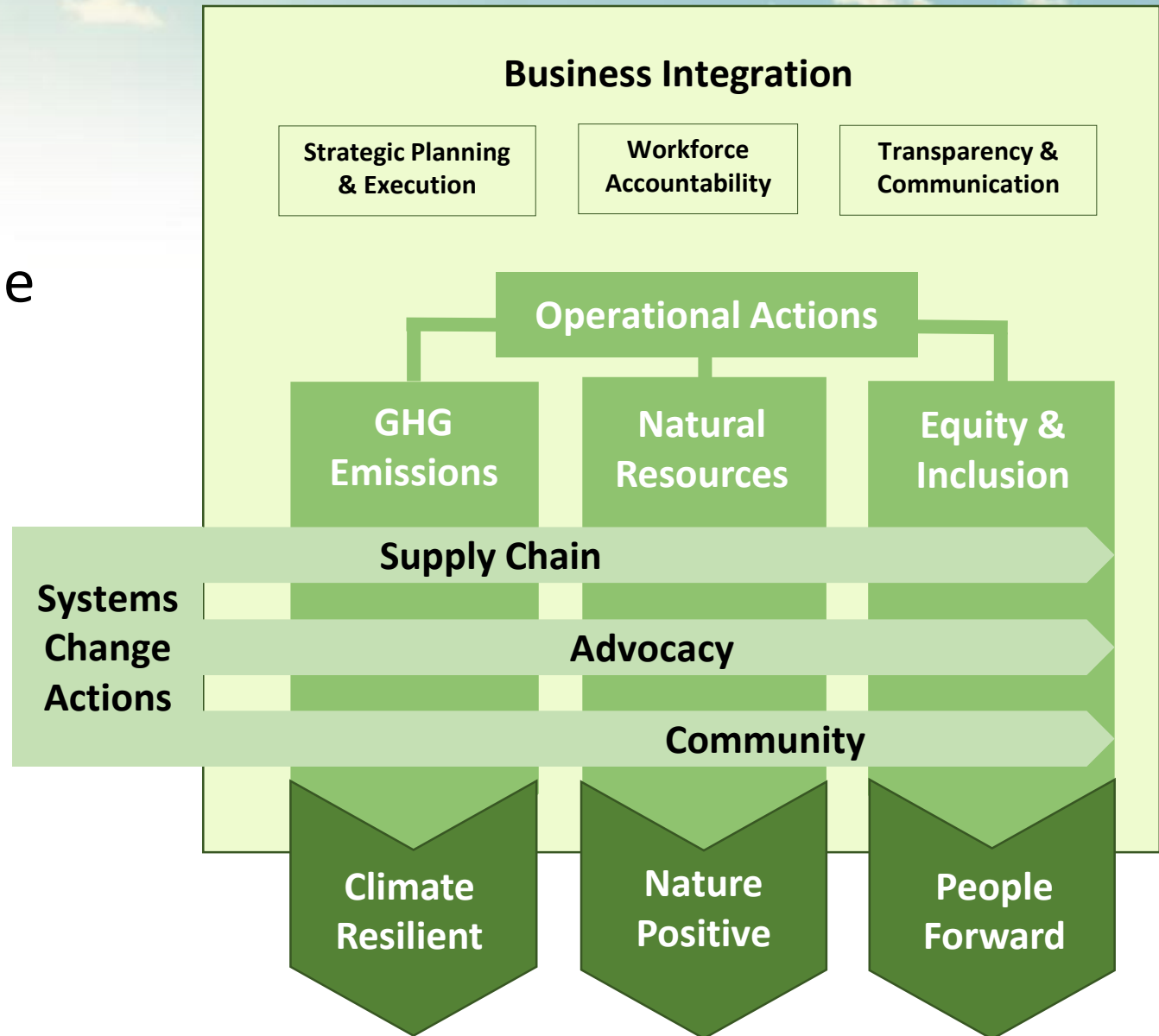
Driven by values, continuous improvement, and a commitment to do the right thing.

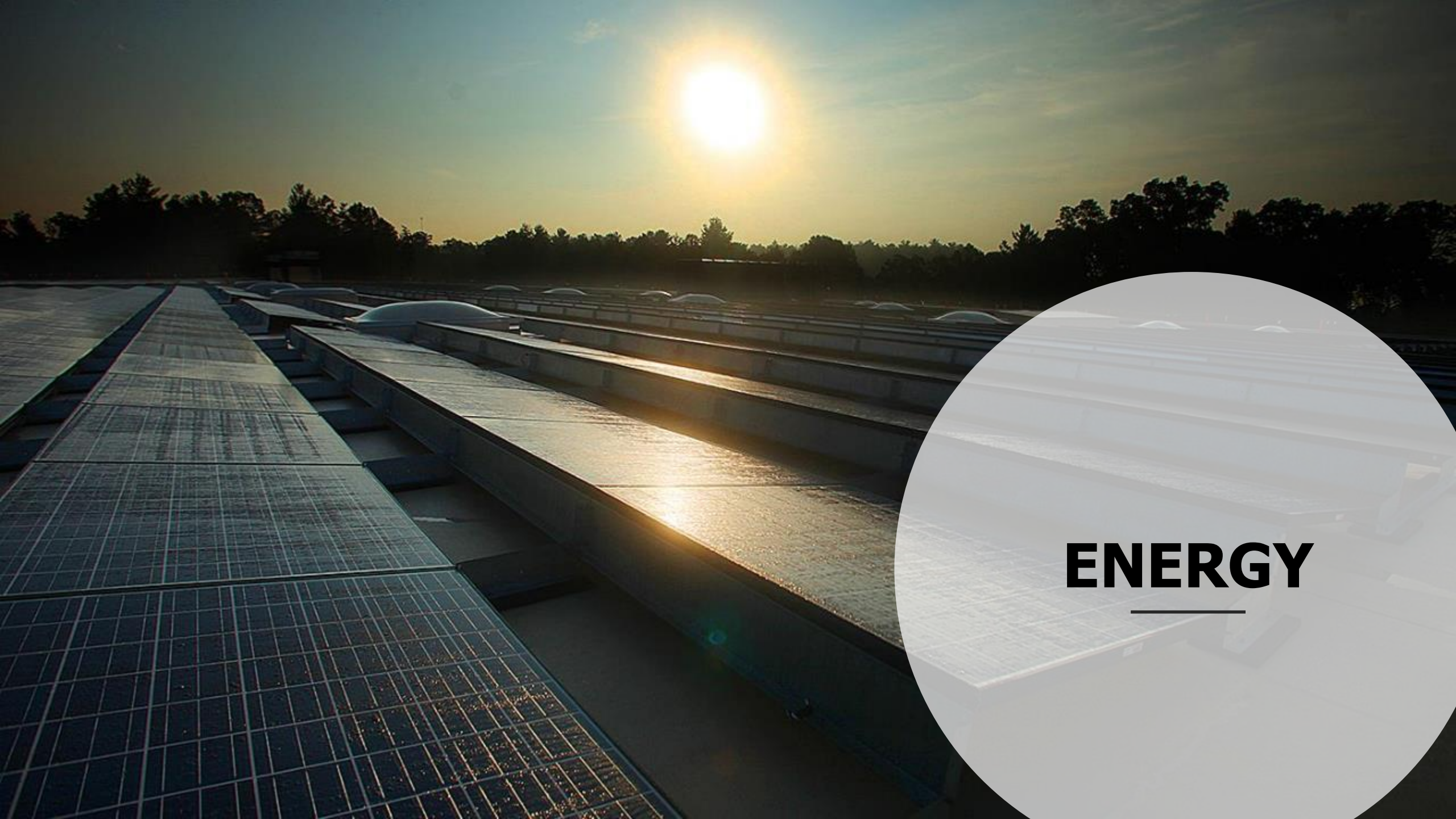
SIERRA NEVADA SUSTAINABILITY INITIATIVES AIM TO BE:



OUR APPROACH:

How does Sustainability come to life and what does it look like at Sierra Nevada?

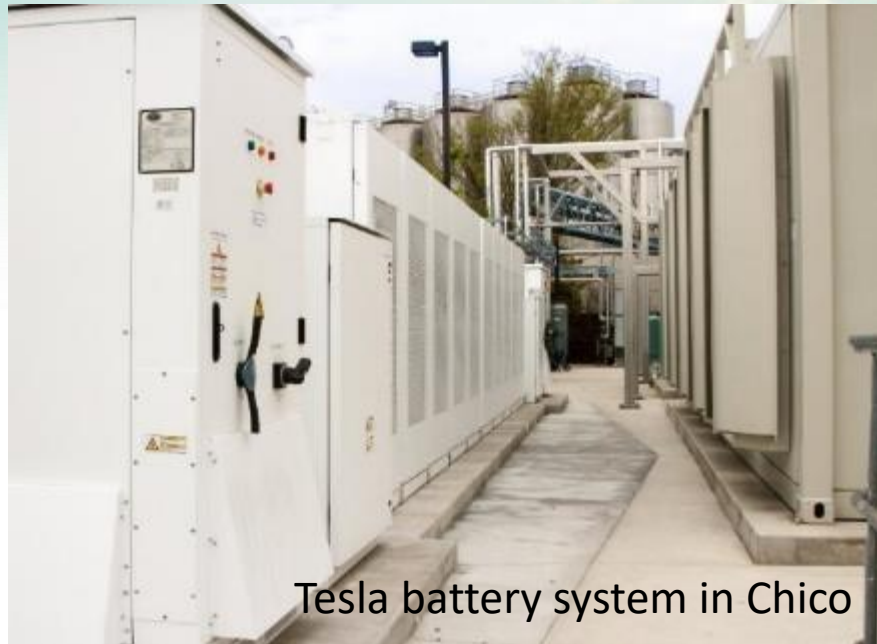




ENERGY



SOLAR



Tesla battery system in Chico



Chico, CA



Mills River, NC

MICROTURBINES



ZERO WASTE

99.6% DIVERSION

- First TRUE Platinum Zero Waste business

THE ZERO WASTE HIERARCHY 7.0



© Zero Waste International Alliance zwia.org/zwj



RECYCLING COOPERATIVE

Sierra Nevada led the effort to establish a recycling drop-off location for craft breweries in Western North Carolina.

- Craft breweries and other businesses within 60 mile radius
- Many brewery waste streams are not-recyclable in traditional recycling programs unless separated and collected in bulk
- Combines waste streams of several small businesses to generate volume and clean material streams
- Allows breweries to divert waste that otherwise would be landfilled





HOTROT COMPOSTING



CLOSING THE LOOP

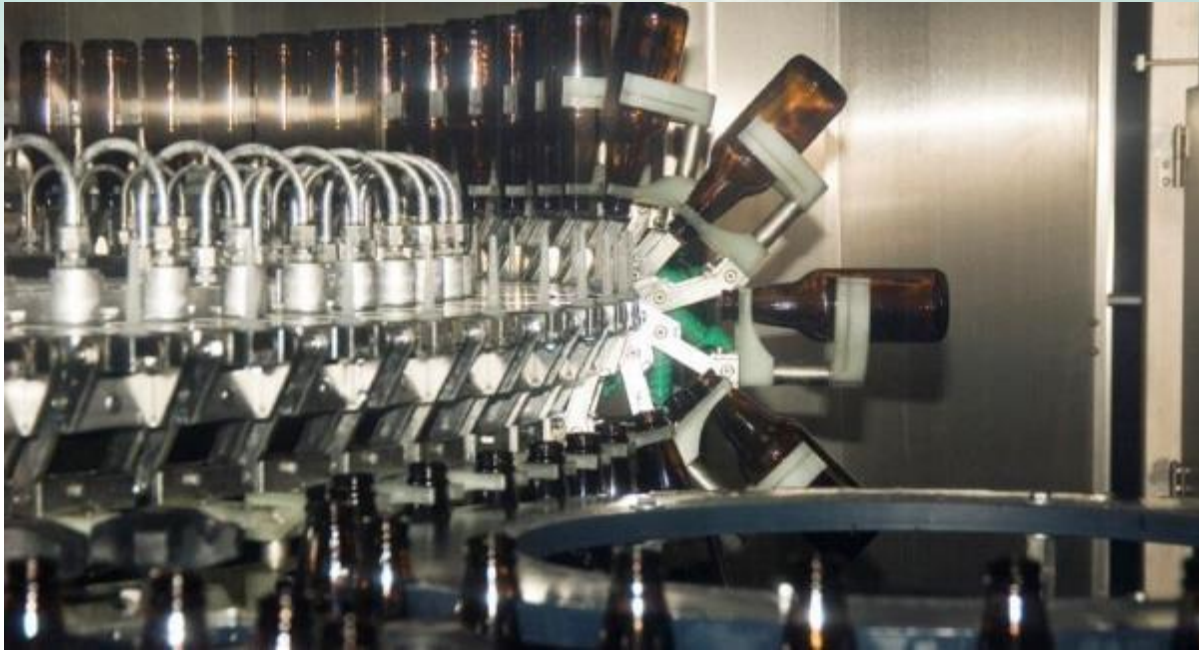


HEAT RECOVERY/REUSE



**HOW MANY BARRELS OF
WATER DOES IT TAKE TO
MAKE 1 BARREL OF BEER?**

4.5 - 5 barrels!



CONSERVATION



Before



After



ONSITE WASTEWATER TREATMENT



BIOGAS RECOVERY



Brewhouse



Wastewater



Biogas Recovery




Boilers/Microturbines

CO₂ RECOVERY



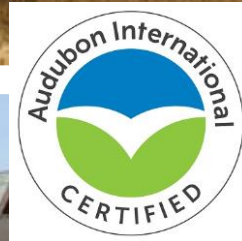
BIODIESEL





ESTATE AGRICULTURE







OCEAN FRIENDLY RESTAURANT



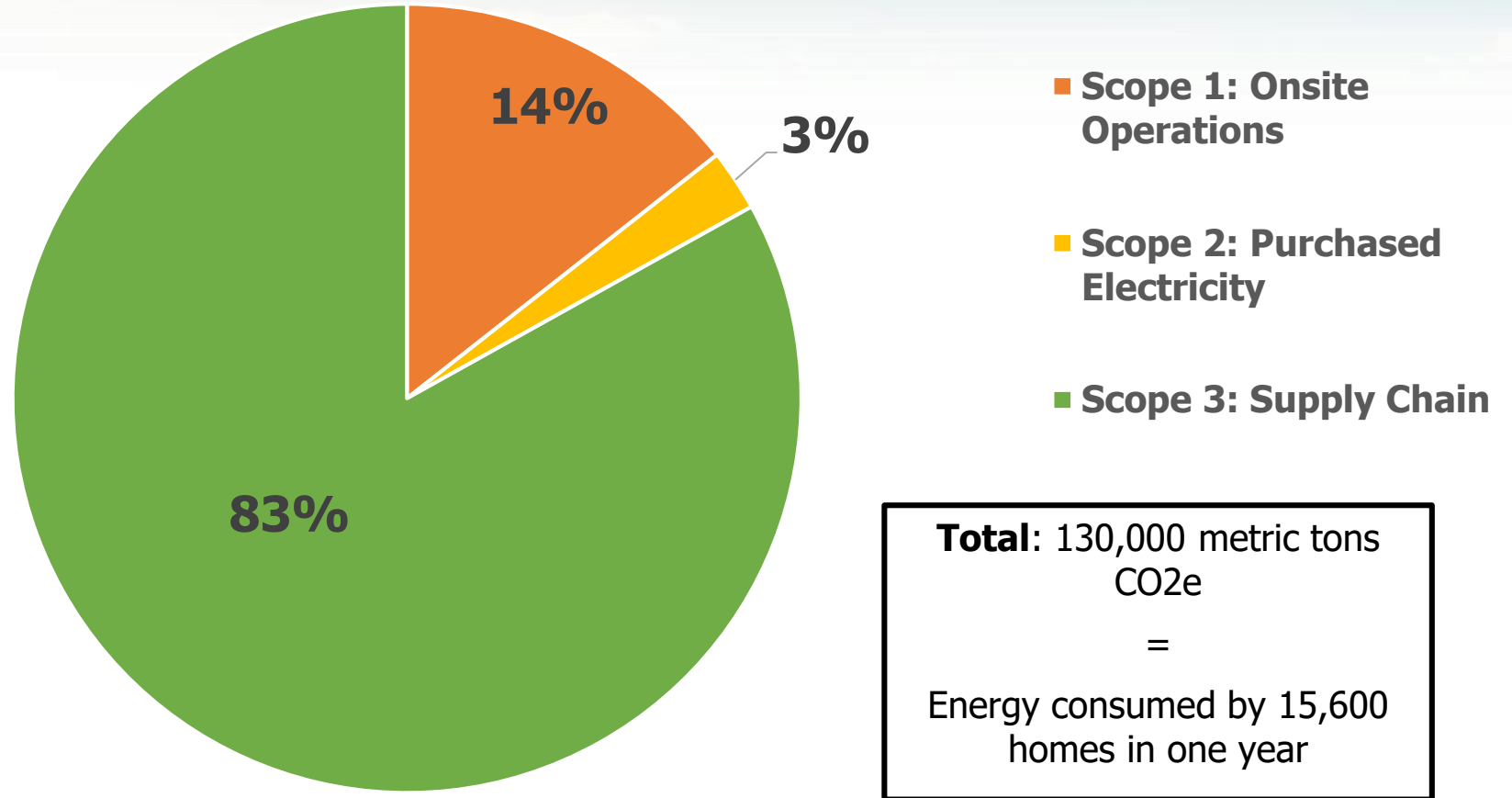
- No expanded polystyrene (aka Styrofoam)
- Proper recycling practices are followed
- Real silverware only and to-go utensils available only upon request
- No plastic bags
- Paper straws available only upon request
- No beverages in plastic bottles
- Implement water and energy conservation practices
- Vegetarian and/or vegan options available
- Seafood is "Best Choice" or "Good Alternative"



**TRANSPORTATION,
SUPPLY CHAIN &
EMISSIONS**



Sierra Nevada's GHG Footprint



Scope 3 comprised mostly of malt, packaging materials, transportation & refrigeration







ADVOCACY

The things we believe in and *actively* get others to do

PRIORITY AREAS

**WE ARE
STILL IN**



- Industry sustainability
- Climate Change / Renewable Energy / Decarbonization
- Clean & Resilient Water Supply
- Protection of Public Lands / Land & Water conservation
- Zero Waste / Circular Economy
- Equitable Access to Outdoor Recreation
- Biodiversity / Ecosystem Health
- Soil Health, Regenerative Agriculture





2021 PRIORITIES

- Establish GHG reduction targets and goals
- Formalize corporate & social responsibility strategy for 2030
- Engage supply chain as partners

INTERACTIVE MAPS!

Chico



Mills River



TOTAL POWER GENERATION

ENERGY SOURCE	KILOWATTS	% OF BREWERY POWER
Capstone Microturbines	1072kW	71%
Solar Arrays	427kW	28%
Total	1499kW	100%



THANK YOU!