



TemperPack

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IMPACT

R E P O R T



REFLECTION



In 2023, we have continued to pioneer developments in sustainable packaging, embracing our responsibility to innovate with integrity. This year has been pivotal in pushing the boundaries of what is technologically and practically achievable in reducing environmental burdens through smarter packaging solutions.

We focused extensively on enhancing our material compositions and operational processes to lessen waste and energy usage. These steps have significantly lowered our overall carbon emissions and reinforced our commitment to resource efficiency.

This Impact Report for 2023 lays out our achievements in detail, underscoring the rigor behind our innovations and the collaborative spirit that drives them. It highlights not only the advancements we have made but also the strong partnerships and customer trust that catalyze our progress. Each achievement reflects a collective effort towards more responsible production.

Our reflection on the year's work is more than a record; it is a foundation for future initiatives. As we look to further our impact, we remain committed to enhancing our practices, supporting global sustainability objectives, and

leading by example in the industry. This report is both a demonstration of our past year's work and a motivator for continued excellence and leadership in sustainable packaging solutions.

"If we don't do the right things now, we don't give future generations the best hand to work with."

PETER WELLS
CEO



QUICK STATS

Here are the top line takeaways from our efforts in 2023.

Powering **6,710 homes** for one year.

Charging **2,244,567,262 smartphones** from 0% battery.

The carbon sequestered by **562,193 trees** grown for 10 years.

By choosing ClimaCell instead of EPS, our customers avoided **34,309 MT of CO₂e**.

That's the equivalent of...

Taking **8,092 gas-powered cars** off the road for a year.

We helped our customers protect over **50 million shipments** with sustainable insulation.

By choosing TemperPack products, our customers have diverted **12,978 MT** of single use plastic packaging from landfill...

...that's the same volume as **60% of the Empire State Building**.



PLANET



SCOPE 1, 2 & 3

Our GHG emissions calculations are supported by Position Green ESG Software.

In 2023, we implemented Position Green to streamline data management and sharpened our carbon accounting. This impact report shows our 2023 and 2022 recalculated emissions using Position Green’s library of emission factors and framework guided by the GHG Protocol.

Position Green transforms our ESG journey from reactive to proactive by automating analytics and establishing formal data-gather processes. We’ve customized the platform for our stakeholders’ needs in order to leverage the visualizations for easy communication.

Position Green provides visibility to our data that was previously stuck in emails, spreadsheets, and exchanged as tribal knowledge, and allows us to make decisions based on our business activity with sustainability at the table.



Scope Category	2023	2022	Change Since 2022	
			(tons)	(%)
Scope 1	<i>(Metric ton CO₂e)</i>	<i>(Metric ton CO₂e)</i>		
Mobile Combustion	170	183	(14)	-7%
Stationary Combustion	-	-	-	0%
Total CO₂e emissions, Scope 1	170	183	(14)	-7%
Scope 2				
Purchased electricity (Market based)	3,715	3,353	362	11%
Heating	804	520	284	55%
Total CO₂e emissions, Scope 2	4,519	3,873	646	14%

Scope 3

As we continue to develop our impact reporting methodologies, we feel as though we don’t have a complete enough picture of our data to report a Scope 3 emissions estimate. Scope 3 takes into account 15 different material categories and includes both upstream and downstream activity for each of our facilities and product lines. We’ve invested resources to improve our visibility into this activity and impact, and the more we learn, the more we recognize their complexities. For now, we feel the most transparent, responsible choice is to not report a number for this metric.



UNPACKING OUR 2023 EMISSIONS

As a leading provider of sustainable alternative packaging materials, we know that *how* we manufacture is as important as *what* we manufacture.

We expected our overall emissions to increase from between 2023 and 2022 after incorporating the electricity and heat for two facilities acquired in Q3 of 2022 for the full year.

Kwh/Kit of Insulation*	2022	2023	% Change YoY
Richmond	0.247	0.238	-4%
Las Vegas	0.350	0.286	-22%
Holt	0.031	0.130	76%
Reno	0.085	0.221	62%
Company Wide†	0.201	0.216	7%

*Kit refers to a 9x11x10" box with 1.5" thick insulation cooler of either ClimaCell or Green Cell Foam
†Does not include the electricity consumed at our Proving Gound packaging lab.

Through large scale automation projects in Richmond, optimized reorganization of the layout in Las Vegas, and equipment upgrades in Holt yielded efficiency gains yielded the 7% reduction in mobile combustion from reduced use of propane for forklifts.

Early phases our most recent optimization and automation project have:

- increased throughput 5% and reduced waste generation by 5% in Richmond, VA
- increased plant efficiency by 10% in Vegas
- increase plant efficiency by 8% Holt

SMALL CHANGES COMPOUND TO A BIG IMPACT IN WASTE REDUCTION:



In 2023, the simple change from traditional gaylords to a design with a locking lid eliminated the need for 1,428 rolls of stretch wrap and 2,450 rolls of tape from our shipping process.

That's enough plastic film to wrap Big Ben,

53 times over.



CARBON INTENSITY

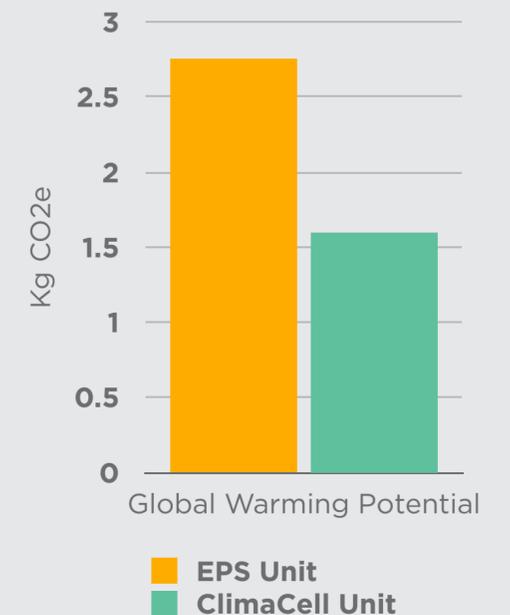
In 2023, we aligned our vision of company growth and sustainability goals by defining our carbon intensity. A ratio between our scope 1 and 2 emissions over revenue, this metric will serve as a guiding figure as we balance company growth with reducing our emissions and environmental impact.

Year	2022	2023
MT CO ₂ e / \$1 Million Revenue	33.59	33.38

CLIMACELL COMPARATIVE LCA

Our comparative Life Cycle Assessment model of ClimaCell and EPS, per ISO 14040 & 14044 (2006) Standards, allows us to estimate the CO₂e emissions avoided by an 11x9x10" box of ClimaCell compared to an identical shipping box using a molded EPS cooler. The results suggest that the box with ClimaCell yields a 42% reduction in Global Warming Potential (kg CO₂e) than the box with EPS.

We use these results to discover how we can reduce the total Global Warming Potential of ClimaCell within our manufacturing and upstream processes.





PEOPLE



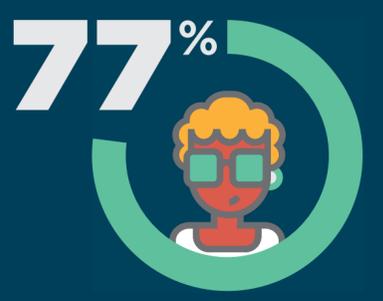
10 LANGUAGES

Among our over 600 employees, we speak 10 different languages.

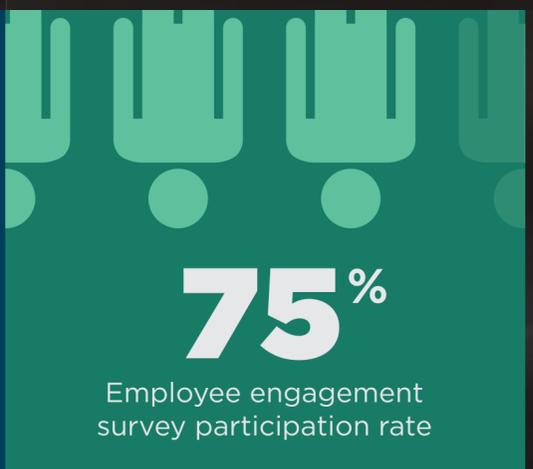
“I have found the people very respectful and very nice. They give me advice about work, and all my questions are answered. The company has taught me very much.”

OMRAN RAHAMA,
Manufacturing

CULTIVATING AN INCLUSIVE ENVIRONMENT



77% of all employees are non-white, non-male.



75% Employee engagement survey participation rate

“I knew I’d found a special place in TemperPack when I started in October, 2023. And this year we are excited to continue to invest in the sustainability of our great culture - highlighting the unique qualities of every Packer, enhancing opportunities for development, and ensuring we stay curious and hungry - to bring out the best in our employees and deliver the best for our customers.”

AMY WILLIAMS,
Chief Human Resources Officer

“I love working for TemperPack and honestly since starting I can say my experience has been nothing short of fantastic! The work environment and people are great and I honestly don’t have any negative feedback!”

COREY TIGNOR,
Welding & Fabrication Technician

“TemperPack has a friendly and diverse environment. I also like that TemperPack hires and values veterans. Lastly, I’d say I like that we continue to innovate and elevate the technology in the facility to better the functionality of the machines on the production floor.”

JOSH McCLUTZ,
Inventory Clerk



33% of our FTE workforce is held by women, compared to the national average of 29%.

“I enjoy working for TemperPack because there are so many knowledgeable people within with many different backgrounds! I feel like I learn something new from someone everyday.”

KATIE MAXWELL,
Account Manager



2023 IN PICTURES

TECH 4 TROOPS

Gene Edwards, Inventory Manager at TemperPack with Mark Casper from Tech 4 Troops standing with an extra pallet of ClimaCell panels. Tech 4 Troops provides refurbished electronics and training to veterans entering the workforce and uses donated ClimaCell pallets for protective packaging for their stock of donated laptops.



WOMEN AND ALLIES NETWORK

Another year of connecting women and allies of TemperPack in quarterly meetings, focused on the four pillars of Personal Growth, Professional Development, Networking, and Service. With over 40 members of our salaried workforce, the group hosted guest speakers, conducted personal Gallup Strengths Finder assessments, and facilitated podcasting networking sessions to connect women across functions and facilities of TemperPack.



FAMILY DAY

Our second annual Family Day celebrated our team that makes sustainable packaging possible. We welcomed our entire workforce and their families to an afternoon of games, food, and celebrations at each facility in Virginia, Nevada, and Michigan.





GOVERNANCE

“The impact that the company has is clear ... but you also want to work somewhere where you can have a positive impact on the business. It’s been thrilling to arrive somewhere that has so many good things about it with so much potential.”

PETER WELLS
Featured on the Good Garbage Podcast with Ved Krishna



BE THE MOST RESPECTED

CORPORATE STRUCTURE GROWTH

The Board of Directors appointed Peter Wells as CEO of TemperPack to lead the next phase of growth and material innovation. From the world of renewable energy and a passion for sustainable design, Peter held leadership roles in nuclear and wind energy at Smart Wires, GE, Vestas, and a range of start-ups and large corporations in the US and Europe.



To improve data management and quality of carbon emissions accounting, we implemented Position Green as our ESG reporting software. This allows us to leverage their acclaimed library of emission factors and analyze our data in real time to embed ESG into our decisions.

ISO CERTIFICATION & QUALITY PROGRAM

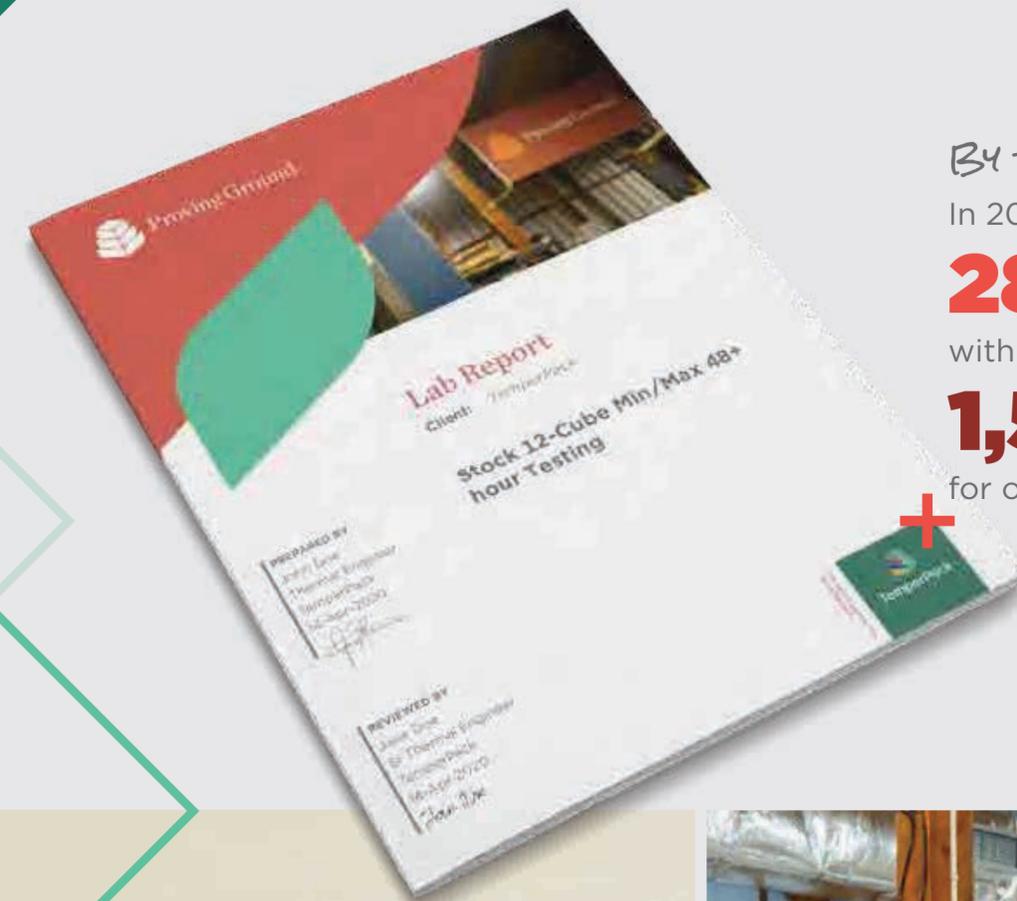
We take quality seriously. Our facilities in Richmond, VA and Las Vegas, NV hold the ISO 9001 certification, with our facility in Holt, Michigan on the way to certification in 2024.





LOVE THE PROCESS

Proving Ground serves as our R&D hub and laboratory for our packaging engineers. Our thermal and protective packaging labs in Richmond, Virginia and Holt, Michigan are certified by International Safe Transit Association to provide our customers with trusted, optimized pack-out designs without the need for EPS.



BY THE NUMBERS

In 2023, our labs conducted

285 tests

with a total of

1,547 boxes

for our customers.





DO IT TOGETHER

Disrupting the status quo requires good partners and collaboration across industries. Thanks to all of our partners in the sustainable community, investors, and board members.

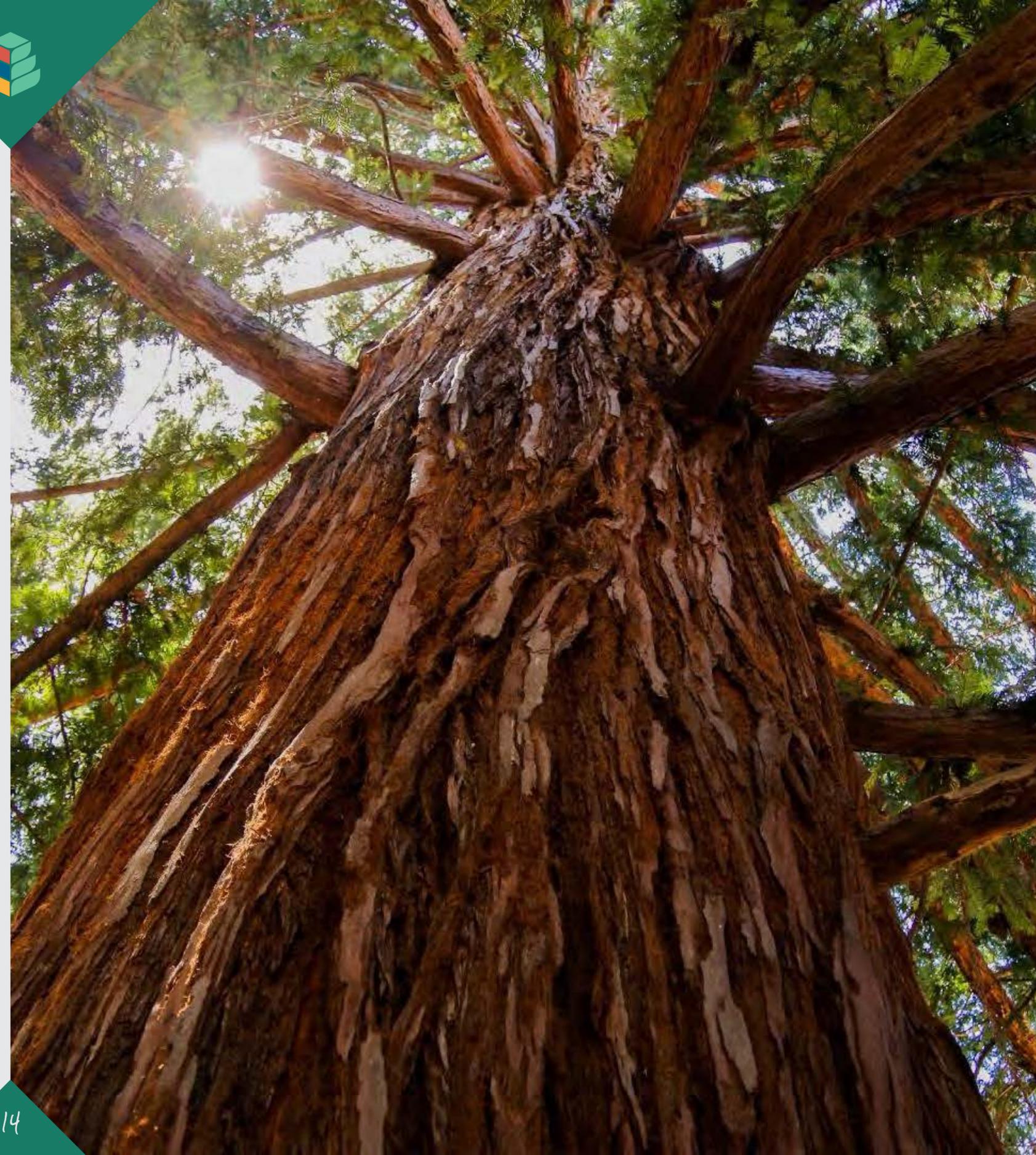
SUSTAINABILITY COMMUNITY PARTNERSHIPS

Position Green*



INVESTORS AND BOARD MEMBERS

Goldman Sachs



PACKAGING PRAISE

We collect unsolicited feedback on our site from end customers who want to let us know how their packaging experience was. Here are a few from 2023.

“SO COOL! The texture is so much nicer than styrofoam and doesn't make the horrible noise when you open it. It's also super awesome that it's so much better for the environment!”

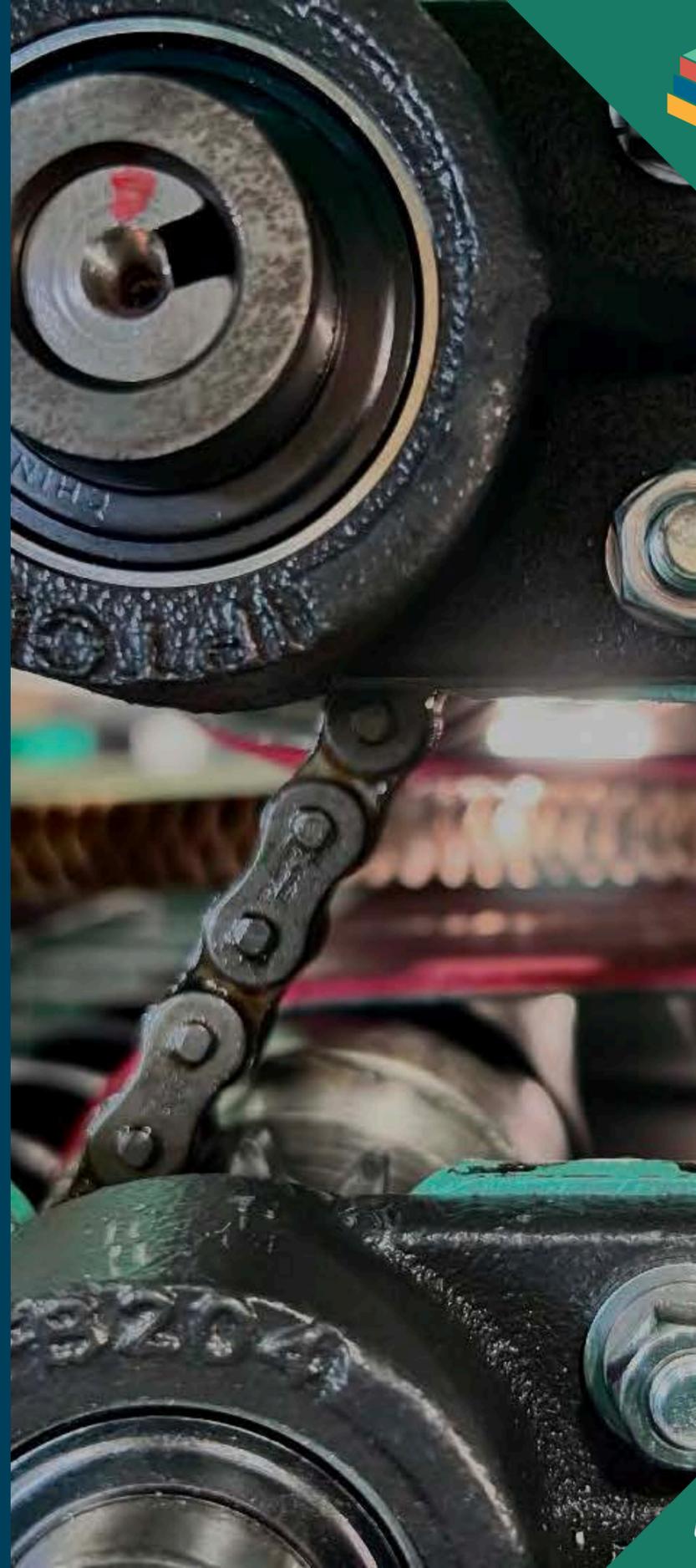
TORI HERMAN,
Colorado

“First time I've seen your product. I am favorably impressed. Did a good job protecting a vintage stereo from UPS.”

TERRY MILLER,
Florida

“Awesome! It works by keeping produce and raw meat cold. easy to recycle. Many thanks for all research people's hard work.”

JILL WHEAT,
New York



SHOOT FOR THE MOON

Every day, we put products into the world that are designed to displace plastic packaging that ends up in a landfill. We know that offering recyclable and compostable materials is essential to sustainable design, but that end-of-life is only part of the impact story.

GREEN CELL FOAM

We're working with WAP Sustainability to build a cradle-to-grave Life Cycle Assessment for Green Cell Foam to measure the comprehensive impact of the material, identify areas we can reduce that impact, and see how it stacks up against plastic alternatives, such as EPS.

WAVEKRAFT

After its inaugural year on the market, WaveKraft continues to disrupt the status quo of cold chain packaging by offering a decentralized, curbside recyclable solution for perishable ecommerce goods. With a year of data under our belts, we're curating impact metrics for WaveKraft to measure what matters and help our customers measure the impact of their commitment to sustainable packaging.



TemperPack

THANK You