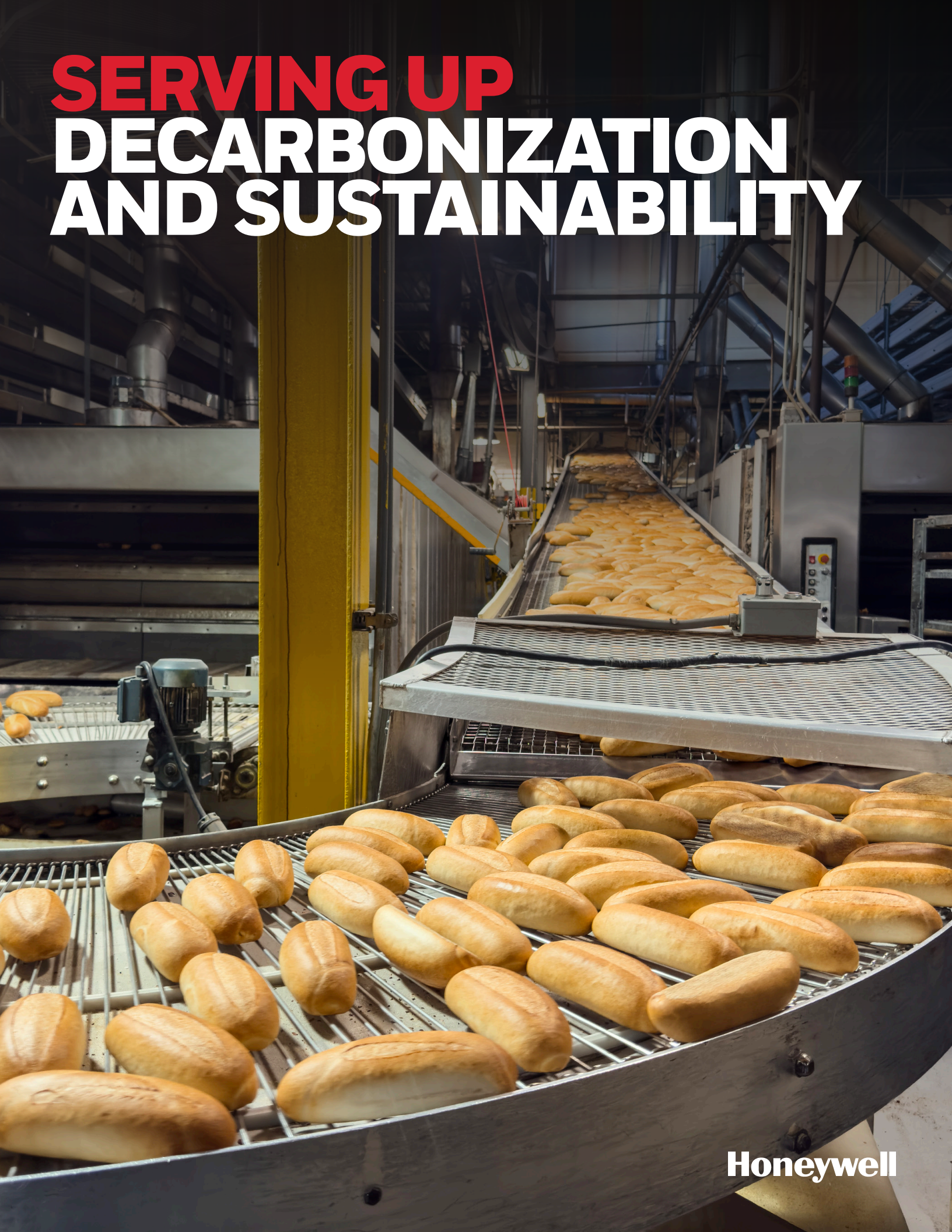
SERVING UP DECARBONIZATION AND SUSTAINABILITY



Honeywell

Many industries are doubling down on decarbonization, adopting new technologies and implementing energy-saving solutions that help lower their carbon footprints. The food and beverage industry tops the list of those that must make quick, significant changes.

And for good reason. The food and beverage sector emits roughly 33% of *global* emissions.[1] It's a necessary industry; everyone needs safe, properly prepared food and drinks for sustenance. But it's also an industry that's stunting worldwide sustainability efforts, keeping emissions high and contributing to global warming. Because industry output is rising and will continue to do so, industrial food and beverage manufacturing enterprises need efficient, sustainable equipment that helps reduce greenhouse gases (GHG) emissions without limiting production.

MORE PRODUCTION, FEWER EMISSIONS

Producing food and beverages at scale requires specialized thermal equipment that often operates around the clock. Though some industrial food and beverage manufacturers are adopting induction and electric equipment — an eco-conscious decision that's gaining traction as sustainable food and beverage operations are encouraged — many rely on gas-powered ovens, dryers, roasters and fryers. These appliances, a primary source of emissions and some of the largest energy consumers in this sector, require changes, upgrades or enhancements to reach lower-emission, higher-production goals.

Improving energy efficiency and reducing the emissions of food and beverage manufacturing equipment are critical first steps in helping substantially decarbonize the overall food and beverage industry.

1. Reavis et al. "Evaluating Greenhouse Gas Emissions and Climate Mitigation Goals of the Global Food and Beverage Sector." Frontiers in Sustainable Food Systems.12 January 2022. https://www.frontiersin.org/articles/10.3389/fsufs.2021.789499/full.

HEAT EXCHANGERS AND OTHER HIGH-EFFICIENCY EQUIPMENT

Not all solutions for sustainability in this industry work the same. For greater energy efficiency across thermal equipment *and* fewer emissions from operations, food and beverage manufacturers trust Honeywell Thermal Solutions. Our portfolio of reliable technologies, products and solutions, supported by a century of thermal expertise, consistently helps deliver sustainable outcomes — and perfect temperatures.

HEAT EXCHANGERS

Capture waste heat in various processing stages, then repurpose it elsewhere to reduce reliance on fossil fuels and increase energy savings. This heat recovery is especially important as high-cost hydrogen fuels and net-zero goals gain traction. Our heat exchanger offerings have customizable flow configurations, can accommodate a wide range of temperatures, operate in direct and indirect air applications with extremely low NO_x emissions and handle contaminant-free process air. If contaminants are not removed, they can corrode equipment and negatively affect food and beverage quality.

BURNER SOLUTIONS

Manage your process heat requirements with our extensive burner solutions portfolio, which includes air-heating nozzle burners and forced and natural draft line burners. These burners are suited for low-emission and hydrogen applications, among many others. Additionally, we manufacture flame safety devices, fuel delivery components and burner controls with the ability to deliver an engineered-to-order combustion system tailored to specific applications.

THERMAL IQ™

This remote monitoring solution connects your thermal equipment to the cloud for real-time insights and advanced analytics that can help drive better business decisions and identify inefficiencies at equipment, site and enterprise levels. A complete combustion solution available on any smart device, Thermal IQ can improve productivity by helping you monitor fuel consumption and manage equipment emissions, thus maximizing the performance of each oven, fryer, roaster and dryer.

REAL-WORLD USES AND APPLICATIONS: HEAT TREATING DAIRY

Dairy operations depend on heat treatment and other thermal processes to preserve product quality and shelf life. Our Eclipse ER Indirect Air Heater is ideal for dairy applications; as the burner is fired into the heat exchanger, it heats and dries products with contaminant-free process air. This low-NO_x heater also delivers the lowest emissions of any indirect heaters available, making sustainability just as much of a priority as sanitation and safety.

ADD EFFICIENCY. EXTEND LIFECYCLES.

Our thermal solutions can grow with your processes and equipment demands as food and beverage operations evolve. We're committed to helping your equipment last longer with the innovative design and energy efficiency of our solutions, as well as real-time management functions that can help stop maintenance before it's needed or failure before it happens. These features help prevent capital expenditures for new or additional equipment and can keep machines and waste out of landfills.

FULL STEAM AHEAD: FOOD AND BEVERAGE INDUSTRY DECARBONIZATION

Food and beverage production and decarbonization can coexist. They must; achieving sustainability objectives and meeting global climate goals truly depend on the thermal, efficiency and emission transformations of food and beverage manufacturing equipment. We can help you make the right advances, install the right solutions and realize improvements without disrupting your processes.

For more information
automation.honeywell.com

Honeywell Smart Energy & Thermal Solutions
2101 CityWest Blvd.
Houston, TX 77042

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www.honeywell.com