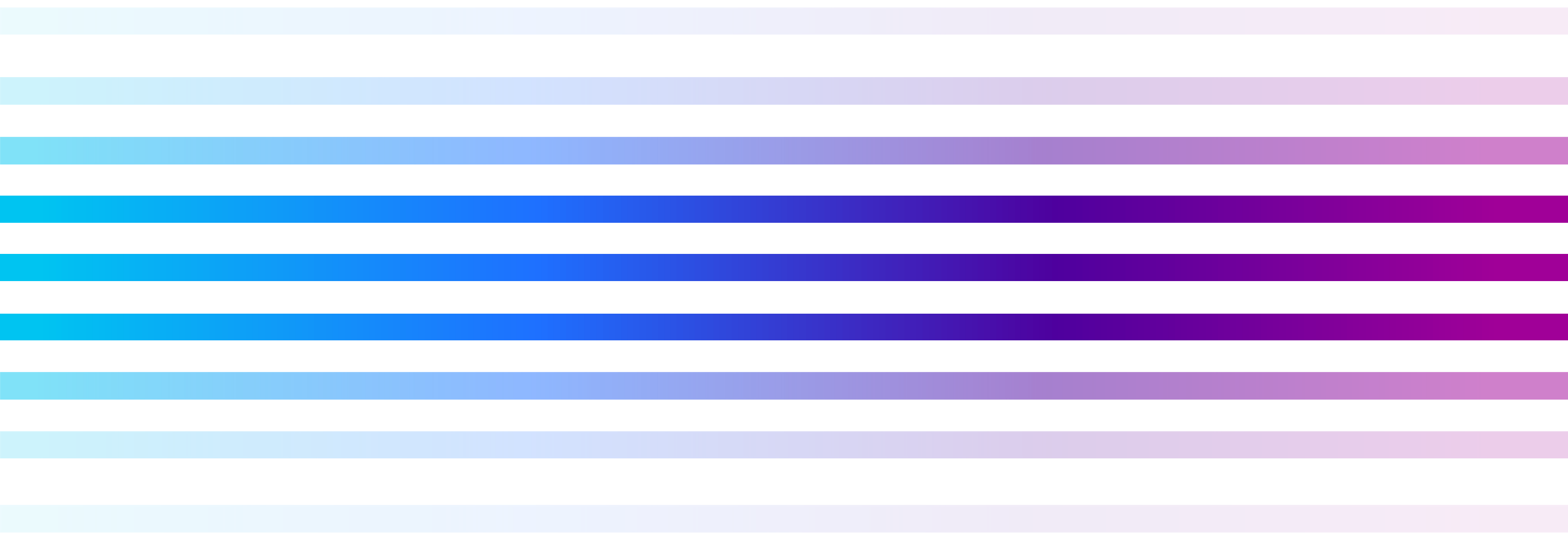


Fiscal Year 2024

# Sustainability Report



FuelCell  
Energy



# Contents

- Introduction ..... 3**
- About This Report.....4
- A Letter From Our CEO .....5
- A Letter From Our CMSO .....6
- About FuelCell Energy .....7
- Sustainability Management and Strategy .....8
- Materiality Assessment .....10
- Stakeholder Engagement .....11
- ESG Ratings.....12
- 2024 in Review: Highlights .....14
- Product..... 15**
- Scalable Solutions to Accelerate Power Availability .....16
- Decarbonizing Power .....17
- Carbon Capture and Recovery .....20
- Hydrogen Electrolysis .....22
- Customer Service and Technical Support.....24
- Climate & Environment ..... 25**
- Working Towards Net Zero .....26
- Climate Risks and Opportunities .....29
- Environmental Stewardship .....31
- Our Approach to Circularity .....35

- People ..... 38**
- Workforce Development and Training.....39
- Talent and Belonging .....41
- Safety, Health and Well-Being .....45
- Responsible Supply Chain .....47
- Community Impact.....48
- Governance ..... 51**
- Corporate Governance.....52
- Enterprise Risk Management.....53
- Ethics and Compliance .....54
- Data Privacy and Information Security .....56
- Appendix..... 57**
- GRI Content Index: Material Disclosures .....58
- GRI Content Index and Data Tables.....60
- SASB Disclosures .....65
- UN SDGs .....66
- Forward-Looking and Cautionary Statements.....68

# Key Terms

- BOP:** Balance of plant
- CDP:** formerly known as the Carbon Disclosure Project
- CHP:** combined heat and power
- CO2:** carbon dioxide
- CO2e:** carbon dioxide equivalent
- DOE:** U.S. Department of Energy
- EHS:** environmental, health and safety
- EPA:** U.S. Environmental Protection Agency
- ESG:** environmental, social and governance
- FY:** fiscal year
- GHG:** greenhouse gas
- GRI:** Global Reporting Initiative
- HHV:** high heating value
- IEA:** International Energy Agency
- IPCC:** Intergovernmental Panel on Climate Change
- IRA:** Inflation Reduction Act
- ISO:** International Organization for Standardization
- kg:** kilogram
- LCA:** life cycle assessment
- MT:** metric ton
- MW:** megawatt
- MWh:** megawatt-hour
- NOx:** nitrogen oxides
- SASB:** Sustainability Accounting Standards Board
- SDGs:** Sustainable Development Goals
- SOEC:** solid oxide electrolyzer cell
- SOFC:** solid oxide fuel cell
- SOx:** sulfur oxides
- TCFD:** Task Force on Climate-related Financial Disclosures
- YOY:** year-on-year

# Introduction

## In this section:

About This Report .....	4
A Letter From Our CEO .....	5
A Letter From Our CMSO .....	6
About FuelCell Energy .....	7
Sustainability Management and Strategy .....	8
Materiality Assessment .....	10
Stakeholder Engagement .....	11
ESG Ratings .....	12
2024 in Review: Highlights .....	14



# About This Report

The 2024 Sustainability Report is the third annual report covering FuelCell Energy’s sustainability progress and performance. This report focuses primarily on fiscal year 2024 activities, unless otherwise noted. All references to a year throughout the report refer to FuelCell Energy’s fiscal years, unless “calendar year” is specified. FuelCell Energy’s fiscal year starts on November 1 and ends on October 31. Information in this report includes all entities and global operations covered in our Annual Report unless otherwise stated.

This report was prepared in accordance with the Global Reporting Initiative (GRI) Standards as well as the Sustainability Accounting Standards Board (SASB) Fuel Cells & Industrial Batteries Sustainability Accounting Standard. We also provide a summary of our progress in addressing climate change in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

GRI reporting principles were applied in this report as defined in GRI 1: Foundation 2021. The principles are:

- **Accuracy:** We provide information that has been internally verified and is, we believe, sufficiently detailed to allow an assessment of FuelCell Energy’s impacts.
- **Balance:** We have aimed to provide a fair representation of FuelCell Energy’s positive and negative impacts, including key challenges.
- **Clarity:** We report in a way that is accessible, using plain and clear language.
- **Comparability:** We disclose information in a way that, we believe, enables analysis of changes in FuelCell Energy’s impacts over time, to the extent possible.
- **Completeness:** We provide information about our activities that have material impact to enable an assessment of FuelCell Energy’s effects during the reporting period.

- **Sustainability context:** We report our sustainability impacts within the wider context of sustainable development with reference to global priorities and trends.
- **Timeliness:** We report on a regular schedule alongside our Annual Report, so that information is available in a timely manner for users to make decisions.
- **Verifiability:** We provide details of the basis of our reporting so information can be examined to establish its quality. The information and data in this report have been internally verified and are believed to be an accurate representation of our performance.

Additionally, the sustainability data in this report, including our Scope 1 and 2 greenhouse gas (GHG) emissions, have been externally assured by an independent Carbon Disclosure Project (CDP) Gold Accredited verifier. The Assurance Statement can be accessed [here](#).

We welcome your queries and feedback and invite you to contact us at [sustainability@fce.com](mailto:sustainability@fce.com).



Note: The use of the logos above is for informational purposes and does not imply an endorsement of the contents of this Sustainability Report by any such organization.

# A Letter From Our CEO

As we reflect on the past year, I am proud to share the progress FuelCell Energy has made in assisting our customers in achieving their sustainability goals and advancing our sustainability mission. At FuelCell Energy, our focus has always been to help our customers on a practical and implementable journey to sustainability for the world we share and the longterm sustainability of their business without asking them to change or stop delivering valuable goods and services. Our commitment to enabling a world empowered by clean energy remains steadfast, and we continue to innovate and deliver solutions that drive meaningful impact.

In 2024, we celebrated several significant milestones that underscore our dedication to sustainability and innovation. We launched the world's first "Tri-gen" hydrogen production system at the Port of Long Beach facility with Toyota North America, marking a major achievement in clean energy technology and assisting our customer, Toyota, in advancing its commitment to hydrogen fueled transportation. We signed an agreement for our fuel cell technology to power a biogeneration microgrid project at the Sacramento Area Sewer District, converting on-site biofuel into clean electricity. What makes this so unique is that once again, FuelCell Energy is demonstrating its differentiated capability to use on-site biogas, eliminating the need for common carrier pipeline transportation and reducing emissions. Additionally, we continued to develop breakthrough carbon capture technology with ExxonMobil, which will be piloted at its Rotterdam Manufacturing Complex.

We also entered into an agreement with Gyoenggi Green Energy to supply 42 carbonate fuel cell modules for the world's largest single-site fuel cell power platform and agreed to jointly pursue hydrogen production projects in South Korea with Korea Hydro & Nuclear Power Co., Ltd. as South Korea seeks to strengthen its energy independence and continue its pursuit of clean power generation and transportation fuels. These initiatives highlight our forward-looking product strategy, which focuses on delivering solutions based on our two electrochemical platforms.

Sustainability is key to our mission of clean energy, and we are dedicated to achieving success now and in the future. External rating agencies, including the Institutional Shareholder Services (ISS) ESG, Sustainalytics, MSCI ESG and CDP, have all evaluated our performance, and their ratings reflect the progress of our sustainability strategy. FuelCell Energy's mission is to enable a world empowered by clean energy, and we are proud of the impact our customers have on the world through the use of our energy delivery and emission management platforms. We count our customer wins as wins for their shareholders and for society as a whole. We are pleased to support our customers in their sustainability journeys, providing solutions that help them reduce their carbon footprints, enhance energy security, support economic development and focus on delivering valuable goods and services without disruption while supporting their commitment to social responsibility.

As we look ahead, we remain focused on our goals and strategies for continuous improvement and growth. We are committed to addressing the opportunities and challenges in the evolving energy landscape, and we will continue to lead the way in clean energy innovation.

Thank you for your continued support and partnership. Together, we are creating a cleaner, more sustainable future and company.

Sincerely,



**Jason Few**

President and Chief Executive Officer



# A Letter From Our CMSO

We are pleased to present FuelCell Energy’s 2024 Sustainability Report, underlining our commitment to sustainability and progress over the past year. Our sustainability strategy is intricately aligned with our business goals, emphasizing ethical, responsible and transparent operations so that we can positively impact our communities, the environment and society at large.

Our sustainability strategy prioritizes key environmental, social and governance (ESG) responsibilities and stakeholder needs, with an emphasis on our customers’ needs. We have aligned our efforts with global trends and standards, including the United Nations Sustainable Development Goals (SDGs) and the GRI and SASB standards.

In 2024, we achieved significant milestones in our company’s sustainability journey, incorporating adaptation and mitigation strategies as part of our comprehensive sustainability strategy. We are dedicated to decarbonization across our value chain — from our supply chain to our operations and the use phase of our products. Key milestones include:

- Established an internal process for an annual, corporate-level greenhouse gas (GHG) emissions inventory for 2024
- Completed a product-level life cycle assessment (LCA) to understand and potentially reduce GHG emissions throughout the value chain, from production through decommissioning (all of which are informing our circularity strategy)
- Conducted a climate risk assessment aligned with the Task Force on Climate-related Financial Disclosures (TCFD) to analyze the physical

and transition risk across our manufacturing facilities, inform our business strategy and take appropriate mitigation measures

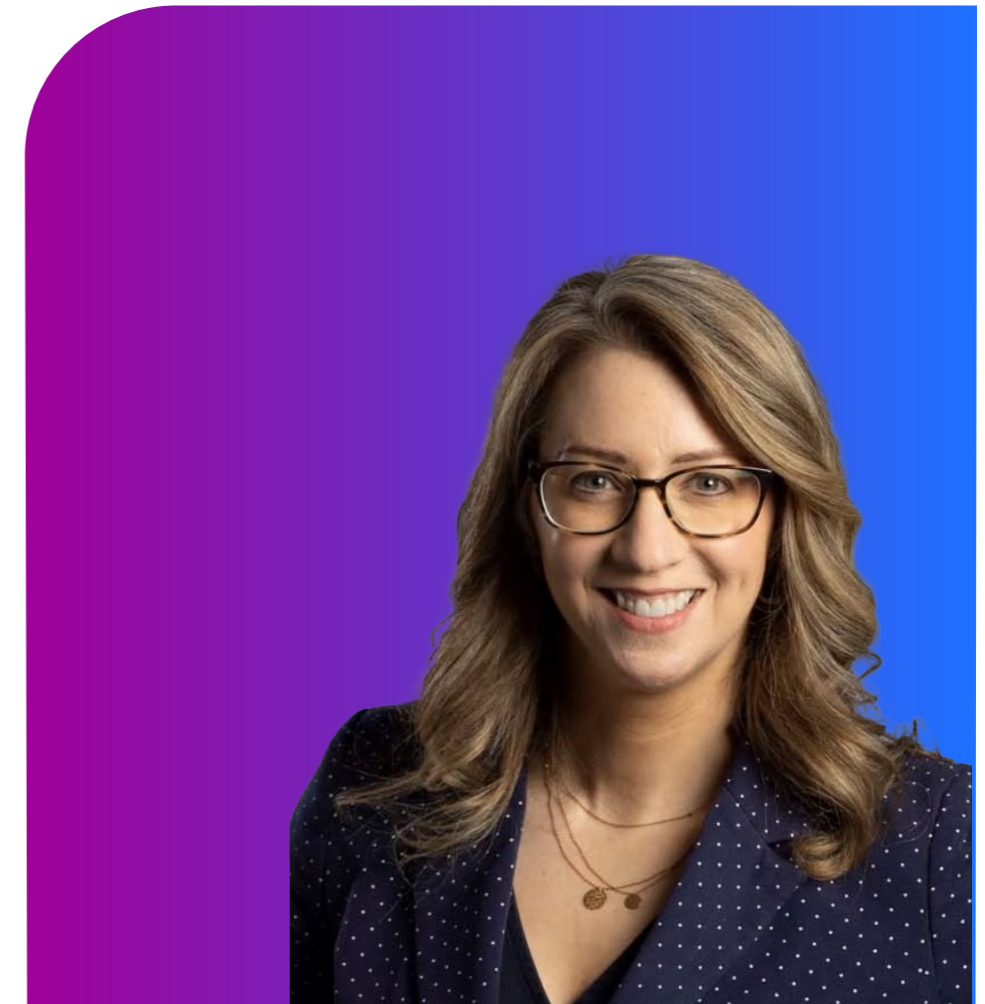
- Continued shaping our sustainability strategy to prioritize and holistically address our key ESG responsibilities and stakeholders’ needs
- Successfully integrated a sustainability governance model into our business processes
- Achieved the ISS ESG Prime status and improved our MSCI and Sustainalytics ratings

Looking ahead, we will continue to prioritize circularity in every aspect of our product life cycle, from design to end-of-life management. A cornerstone of our approach is to improve resource efficiency and conservation, while gradually incorporating closed-loop principles into our processes.

Thank you for your continued support and interest in FuelCell Energy’s sustainability journey.

**Betsy Schaefer**

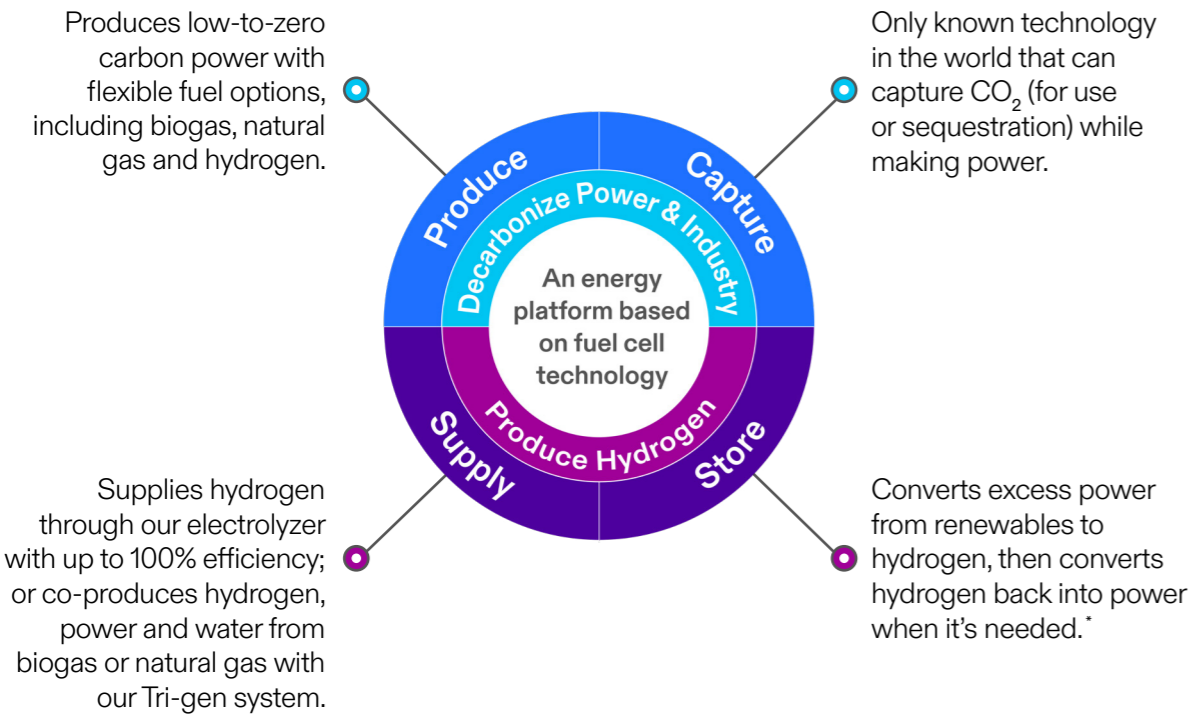
Senior Vice President, Chief Marketing and Sustainability Officer



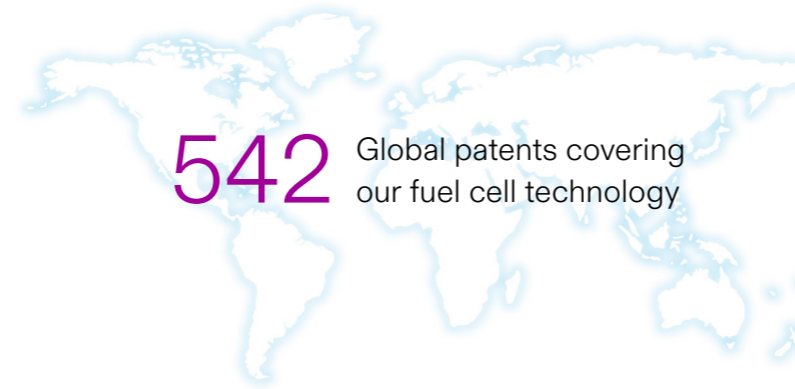
# About FuelCell Energy

FuelCell Energy is an American clean technology and manufacturing company dedicated to improving energy efficiency, resilience and security with low-to-zero carbon solutions.

## Our Technology



## A global leader in fuel cell technology innovation\*\*



## Company Highlights

HQ

Danbury, Connecticut

3

Continents: customers in Asia, Europe and North America

FCEL

Listing: NASDAQ

188

Modules in operation\*\*\*\*

~500

Employees\*\*\*

16

Million MWh generated with patented technology

## Our Values



### Safety

Physical & Psychological

Foster a healthy and safe environment.



### Integrity

In everything we do.



### Innovation

Deliver impactful products to our customers.



### Accountability

To ourselves, our stakeholders and our community.

\* Under development.

\*\* Patents are for FuelCell Energy, Inc. and our subsidiary, Versa Power Systems, Inc.

\*\*\* As of November 30, 2024. As of October 31, 2024, the company had 584 employees.

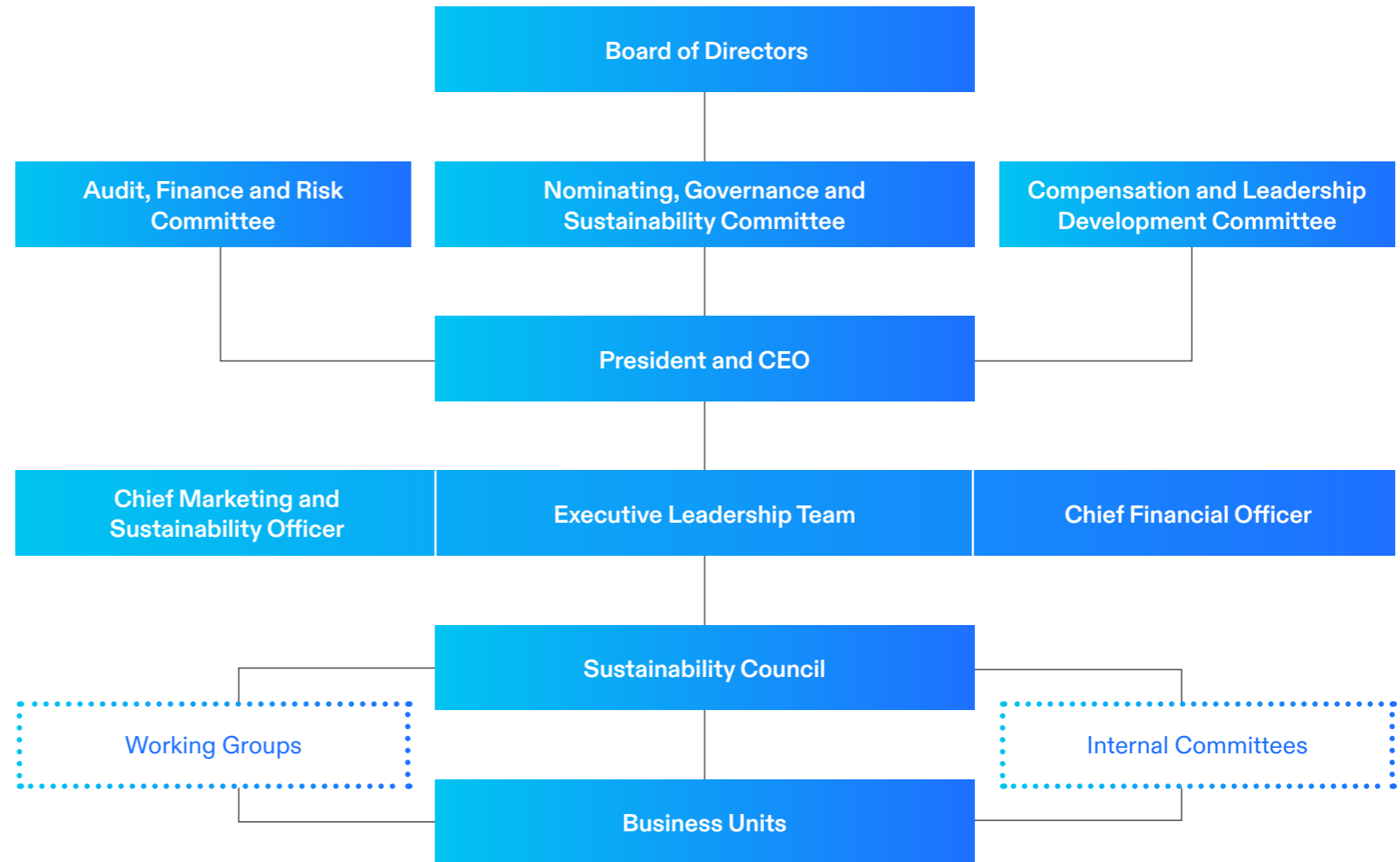
\*\*\*\* As of October 2024, certain sites have multiple platforms. For example, our 14MW Derby, Connecticut, project site has five SureSource 3000 platforms containing a total of 10 modules.

# Sustainability Management and Strategy

FuelCell Energy is committed to playing a strong role in sustainable development through technology, innovation and the development of climate-friendly solutions that will enable broadscale uptake of clean energy. Since the beginning, FuelCell Energy has prioritized our product and workplace safety as well as environmental stewardship.

While the Environmental, Health and Safety (EHS) management team has been evolving and successfully accomplishing its core responsibilities for several decades, in 2022, FuelCell Energy made an organizational commitment to develop its broader sustainability agenda with the appointment of the company's first Chief Sustainability Officer. A year later, we reinforced our team with the addition of a Director of Environmental, Social and Governance (ESG). In 2024, we continued developing our sustainability governance model to ensure the effective coordination of these efforts between various stakeholders — furthering our objective of having a positive impact on our communities, our people and our planet in measurable and meaningful ways.

Our companywide Sustainability Council collaborates on the systematic execution of our sustainability-related commitments. This work is overseen by the Nominating, Governance and Sustainability Committee of our Board of Directors. From our Board of Directors to our front-line business units, we continue to deepen our expertise and skills and drive sustainability performance at all levels.



Our multi-level sustainability governance model has been established as a foundation for effective development and implementation of sustainability strategies and programs that touch each part of the Company.



# Sustainability Strategy

Our sustainability strategy is deeply aligned with our business strategy and our financial goals. Sustainability is fundamental to our mission of enabling a world empowered by clean energy, and we are committed to conducting our business in a way that facilitates both organizational success today and long-term future growth.

At FuelCell Energy, we are dedicated to operating in an ethical, responsible and transparent manner. We strive to harness the best-in-class capabilities and collective passion of our colleagues to positively impact our communities, the environment and society at large.

Our sustainability strategy prioritizes our key ESG responsibilities and stakeholder needs. This strategy, developed in discussion with our Senior Leadership Team and Board of Directors, was informed by multiple engagements with our customers, business partners, investors and analysts — as well as with our employees throughout the business. We also considered current global trends, ESG standards and frameworks including, but not limited to, the United Nations Sustainable Development Goals (SDGs) and the GRI and the SASB standards specific to our industry.

Our sustainability strategy consists of 12 broad action areas that will define our focus in the coming years. These action areas are defined in accordance with our key material topics and serve as the framework for operationalizing sustainability and helping us achieve our long-term vision. We continue to develop our key objectives along with systems for tracking and measuring our performance.



Our Sustainability Strategy encompasses 12 action areas that will guide our actions in the coming years.

# Materiality Assessment

We have identified 10 sustainability topics that can impact our ability to create value over time. The list of topics was developed following an analysis of the demands of sector-based sustainability standards and investment analyst requirements, as well as global trends, peer benchmarking and customer interest. Similarly, we have examined these topics from the perspective of our impact as an organization on the economy, people and the environment and incorporated this understanding into our overall sustainability strategy and practice. Our materiality assessment was conducted using best-practice methodologies and informed by the guidance of the most widely recognized global organizations, including the GRI and the SASB.

Material Topic	Definition	Key Environmental and Social Impacts	Key Sustainability-Related Risks and Opportunities
<b>Climate Change and GHG Emissions</b>	Advancing access to affordable clean energy and minimizing operational GHG emissions across our value chain	<ul style="list-style-type: none"> <li>+ Improving global access to zero- or low-carbon energy</li> <li>- Emitting GHGs through our value chain</li> </ul>	<ul style="list-style-type: none"> <li>+ Major market opportunities for clean energy; increased revenue through demand for low- and zero-carbon solutions</li> <li>- Potential limits to rapid uptake of affordable clean energy growth due to legislation lagging and not keeping pace with technological advances</li> </ul>
<b>Energy Management</b>	Minimizing use of energy and utilizing clean energy across our operations and supply chain	<ul style="list-style-type: none"> <li>+ Virtually no harmful air pollutants due to non-combustion technology</li> <li>- Use of natural gas-based energy generates GHG emissions</li> </ul>	<ul style="list-style-type: none"> <li>+ Advancement of high-efficiency power and hydrogen generation technologies</li> <li>- Higher cost or lower availability of clean energy to support zero-carbon operations across the entire supply chain</li> </ul>
<b>Product Efficiency</b>	Driving innovation to improve the life cycle performance of fuel cells and related products	<ul style="list-style-type: none"> <li>+ Continuing to invest and deliver breakthrough technology to make fuel cells more efficient than ever</li> </ul>	<ul style="list-style-type: none"> <li>+ Continuous improvement creates opportunities in sales and value for utilities and other consumers</li> <li>- Return on investment in new technology slower than planned due to low market uptake or competitive products</li> </ul>
<b>Product End-of-Life Management</b>	Designing fuel cells for recyclability and ensuring safe disposal at end of life	<ul style="list-style-type: none"> <li>+ Advancing a circular economy</li> <li>- Potential unsustainable disposal of products at end of life</li> </ul>	<ul style="list-style-type: none"> <li>+ Reduced supply cost due to recycling/reuse; increased business resilience through improved control of materials and components</li> <li>- Potential high cost of designing for recyclability or implementing customer take-back schemes</li> </ul>
<b>Hazardous Waste Management</b>	Addressing hazardous waste and safe and sustainable disposal methods	<ul style="list-style-type: none"> <li>+ Continuous adherence and compliance to regulations governing hazardous waste</li> <li>- Hazardous waste impacts on human health and the environment</li> </ul>	<ul style="list-style-type: none"> <li>+ Increased product value due to improved recycling and reuse of hazardous waste</li> <li>- Potential cost of addressing hazardous waste pollution and product design process to minimize the use of hazardous substances</li> </ul>
<b>Product Life Cycle Management</b>	Managing life cycle impacts by design to minimize negative environmental impacts	<ul style="list-style-type: none"> <li>+ Enabling customers to achieve sustainable operations through use of fuel cell based products</li> </ul>	<ul style="list-style-type: none"> <li>+ Increased revenue and product value through improved product operating life</li> <li>- Potential cost of technology required to address all life cycle impacts</li> </ul>
<b>Materials Sourcing</b>	Addressing resource scarcity of critical materials and ensuring ethical supply chains	<ul style="list-style-type: none"> <li>+ Reduced demand for raw materials, as more than 90% of the carbonate fuel cell can be recycled or reused</li> <li>- Depleting limited non-renewable resources; potentially sourcing products from conflict areas</li> </ul>	<ul style="list-style-type: none"> <li>+ Decreased manufacturing cost due to the replacement of raw materials with recycled and reused materials</li> <li>- Potential high cost of ensuring ethical supply of critical materials or replacing them in our product design</li> </ul>
<b>Product Safety</b>	Delivering products that are designed to be safely operated in the use phase	<ul style="list-style-type: none"> <li>+ Improving global access to zero- or lower-carbon energy that is safe for use for customers and communities and has no adverse effects on water, air or soil</li> </ul>	<ul style="list-style-type: none"> <li>+ Avoided cost associated with product recalls involving health and safety risks; strong product reputation supporting business growth</li> <li>- Potential cost of addressing unforeseen safety issues</li> </ul>
<b>Workforce Health &amp; Safety</b>	Advancing a safe working culture and providing a workplace free from safety hazards	<ul style="list-style-type: none"> <li>- Potential risks and hazards due to unsafe practices at work</li> </ul>	<ul style="list-style-type: none"> <li>+ Reduced cost of accidents; improved employee retention; reduced insurance cost</li> <li>- Potential cost increase and disruption of business due to major safety incidents</li> </ul>
<b>Business Ethics</b>	Maintaining a compliant and ethical culture and providing opportunities for speaking up	<ul style="list-style-type: none"> <li>- Potential negative social impacts of corruption or ethical violations in our operations</li> </ul>	<ul style="list-style-type: none"> <li>+ Investor confidence in ethical business supports long-term sustainable growth</li> </ul>

# Stakeholder Engagement

We engage frequently with stakeholders throughout the year to align expectations, as well as to address their needs and concerns in a dynamic business environment. The insights we gain from these interactions inform our prioritization of ESG topics and contribute to the development of our sustainability strategy.

Stakeholder	Types of Engagement	Key Topics We Engage On	Key Expectations of FuelCell Energy	Our Response
<b>Customers</b>	<ul style="list-style-type: none"> <li>Regular, frequent interaction throughout the year to review performance and new requirements</li> </ul>	<ul style="list-style-type: none"> <li>GHG emissions, sustainability targets and challenges</li> <li>Product- and technology-related topics</li> </ul>	<ul style="list-style-type: none"> <li>Affordable clean energy solutions</li> <li>Quality, reliability and cost efficiency</li> <li>Ongoing support and service</li> </ul>	<p>See section:</p> <ul style="list-style-type: none"> <li><a href="#">Product</a></li> </ul>
<b>Employees</b>	<ul style="list-style-type: none"> <li>Regular, daily interactions and communications programs as well as individual performance reviews and Employee Engagement Survey</li> </ul>	<ul style="list-style-type: none"> <li>Health and safety, culture and DEI</li> <li>Company's business and sustainability strategies</li> </ul>	<ul style="list-style-type: none"> <li>Values-based culture</li> <li>Open and transparent communications</li> <li>Competitive reward</li> </ul>	<p>See section:</p> <ul style="list-style-type: none"> <li><a href="#">People</a></li> </ul>
<b>Suppliers</b>	<ul style="list-style-type: none"> <li>Regular meetings and discussions to review our requirements, supplier performance and ongoing plans</li> </ul>	<ul style="list-style-type: none"> <li>Responsible material sourcing</li> <li>Sustainability risks and performance</li> </ul>	<ul style="list-style-type: none"> <li>Fair opportunity to bid for our business</li> <li>Trust-based relationships</li> </ul>	<p>See section:</p> <ul style="list-style-type: none"> <li><a href="#">Responsible Supply Chain</a></li> </ul>
<b>Investors</b>	<ul style="list-style-type: none"> <li>Annual meetings with key investors to present our financial and ESG performance, quarterly earning calls and attendance at investor-focused conferences and events</li> </ul>	<ul style="list-style-type: none"> <li>Sustainability strategy and ESG performance</li> <li>Product safety and sustainability</li> <li>Corporate governance</li> </ul>	<ul style="list-style-type: none"> <li>Positive financial returns</li> <li>Robust corporate governance</li> <li>Strong ESG performance</li> <li>Ethical conduct</li> </ul>	<p>See sections:</p> <ul style="list-style-type: none"> <li><a href="#">Sustainability Management and Strategy</a></li> <li><a href="#">ESG Ratings</a></li> </ul>
<b>Government</b>	<ul style="list-style-type: none"> <li>Ongoing education on the benefits associated with FuelCell Energy's technologies</li> <li>Continuous research, analysis and collaboration with all levels of government</li> </ul>	<ul style="list-style-type: none"> <li>Energy security, reliability and affordability</li> <li>Scaling advanced technologies</li> <li>Carbon capture and decarbonization</li> <li>Grid support and increasing base-load power</li> </ul>	<ul style="list-style-type: none"> <li>Reliable policy resource</li> <li>Accelerating clean energy technology</li> <li>Applying data-driven expertise</li> </ul>	<p>See section:</p> <ul style="list-style-type: none"> <li><a href="#">Product</a></li> </ul>
<b>Communities and Civil Society</b>	<ul style="list-style-type: none"> <li>Engagement to address concerns or consider opportunities to advance low-carbon, clean energy solutions and improve community life</li> </ul>	<ul style="list-style-type: none"> <li>Community development</li> <li>Clean, affordable and reliable power generation</li> </ul>	<ul style="list-style-type: none"> <li>Advancing clean energy solutions</li> <li>Improving air quality</li> <li>Supporting local communities</li> <li>Addressing environmental issues</li> </ul>	<p>See section:</p> <ul style="list-style-type: none"> <li><a href="#">Community Impact</a></li> </ul>

# ESG Ratings

We are rated by several ESG rating agencies, including Institutional Shareholder Services (ISS) ESG, Sustainalytics, MSCI ESG and CDP. Their results show that we are on track with our sustainability strategy and have demonstrated substantial improvements in our performance. We welcome these ratings as objective assessments of our organization, and as a means to identify areas for improvement.

Ratings	Industry average	Score 2023	Score 2024	Change to previous year	Notes
	Not prime	Not prime	Prime	↑	Awarded an ISS ESG Prime status
	BBB	BBB	A	↑	Achieved an MSCI "A" rating
	25.2	24.2	21.3	↑	Improved our Sustainalytics score by 2.9 points and assessed to be at Medium risk
	C	Not scored	B	N/A	In February 2025, we received a CDP SME B score for Climate*

“FuelCell Energy has been a company with sustainability at its core since it was founded more than 50 years ago. We strive to help our customers on their sustainability journey and place a high priority on sustainable practices in our operations. It is essential for us to not only address our material topics effectively but also to communicate our performance to stakeholders accurately and transparently. We are proud that our ESG performance and high level of transparency have earned us ISS ESG Prime status, underscoring our commitment to responsible business conduct.”

**Liubov Volkova**  
Director, ESG

## ISS ESG Rating

In September 2024, our company achieved “Prime” status in the ISS ESG Corporate Rating, along with a C+ score.

ISS is one of the world’s leading rating agencies for corporate governance and sustainable investments. ISS ESG, the responsible investment arm for ISS, scores companies based on an analysis of more than 100 sector-specific ESG factors. Prime status is awarded to companies with an ESG performance above the sector-specific Prime threshold, which means that they fulfill ambitious performance requirements.

Learn more about [ISS ESG ratings here](#).

## Corporate ESG Performance

RATED BY

Prime

Note: The use of the logos above is for informational purposes and does not imply an endorsement of the contents of this Sustainability Report by any such organization.

\* The CDP SME questionnaire is designed for small and medium-sized enterprises (SMEs).

## MSCI ESG Rating

In 2024, FuelCell Energy received an “A” rating in the MSCI ESG Ratings assessment.<sup>1</sup>

MSCI ESG Research provides MSCI ESG Ratings for global public and a limited number of private companies on a scale from AAA (leader) to CCC (laggard), accounting for exposure to industry-specific ESG risks and the ability of a firm to manage those risks relative to its peers.

Learn more about [MSCI ESG ratings here](#).



## Morningstar Sustainalytics ESG Risk Rating

In March 2024, FuelCell Energy received an ESG Risk Rating of 21.3 and was assessed by Morningstar Sustainalytics to be at Medium risk of experiencing material financial impacts from ESG factors.<sup>2,3</sup>

Morningstar Sustainalytics’ ESG Risk Ratings measure a company’s exposure to industry-specific material ESG risks and how well a company is managing those risks. This multidimensional assessment of ESG risk combines the concepts of management and exposure to measure ESG risk, i.e., a total unmanaged ESG risk score or the ESG Risk Rating, comparable across all industries. Sustainalytics’ ESG Risk Ratings provide a quantitative measure of unmanaged ESG risk and distinguish between five levels of risk: negligible, low, medium, high and severe.

Learn more about [Sustainalytics’ ESG Risk Ratings here](#).



## CDP Climate Change Disclosure

In February 2025, we received a CDP SME B score for Climate which was the highest possible SME score in 2024.

CDP scoring methodology assesses the level of detail and comprehensiveness in a response, as well as the company’s awareness of environmental issues, its management methods and progress towards environmental stewardship. The CDP SME questionnaire was designed to provide an improved experience for SMEs. Responders are allocated a letter score for each environmental issue area on which they have been scored, ranging from SME B to SME D. The data disclosed in 2024 through the CDP SME questionnaire will be used to develop and deploy a meaningful methodology for an SME A score for 2025 disclosure.

Learn more about [CDP here](#).



<sup>1</sup> Disclaimer statement: the use by FuelCell Energy of any MSCI ESG research LLC or its affiliates (“MSCI”) data, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement, recommendation, or promotion of FuelCell Energy by MSCI. MSCI services and data are the property of MSCI or its information providers, and are provided “as-is” and without warranty. MSCI names and logos are trademarks or service marks of MSCI.

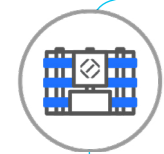
<sup>2</sup> In no event shall this Sustainability Report be construed as investment advice or expert opinion as defined or implied by applicable legislation. The information contained or reflected herein is not directed to or intended for use or distribution to India-based clients or users and its distribution to Indian resident individuals or entities is not permitted, and Morningstar/Sustainalytics accepts no responsibility or liability whatsoever for the actions of third parties in this respect.

<sup>3</sup> Copyright ©2024 Sustainalytics, a Morningstar company. All rights reserved.

This sustainability report includes information and data provided by Sustainalytics and/or its content providers. Information provided by Sustainalytics is not directed to or intended for use or distribution to India-based clients or users and its distribution to Indian resident individuals or entities is not permitted.

Morningstar/Sustainalytics accepts no responsibility or liability whatsoever for the actions of third parties in this respect. Use of such data is subject to conditions available at <https://www.sustainalytics.com/legal-disclaimers/>

# 2024 in Review: Highlights



## Product

More than  
**16,000,000 MWh**  
of power generated with patented technology as of end of FY2024

**19.1 MW**  
added in 2024 to our fuel cell power generation operating portfolio

## Hydrogen

Signed joint agreement on H<sub>2</sub> production projects with Korea Hydro & Nuclear Power Co., Ltd.

Conducting feasibility study for a low-carbon fuel production facility in Malaysia with MMHE.

Launched the world's first "Tri-gen," producing H<sub>2</sub>, water and electricity for Toyota's Port of Long Beach operations.



## Climate & Environment

**170,000 MT CO<sub>2</sub>**  
avoided by our power generation platforms\*

**428 MT NO<sub>x</sub>**  
avoided by our fuel cells\*

**43%**  
of waste diverted from landfills and incineration

**93%**  
of our product materials recycled or reused at end of life



## Biofuel

Announced use of our fuel cell technology to power a biogeneration project for Sacramento Area Sewer District.

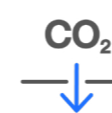


## People

**1.04**  
Total Recordable Injury Rate (TRIR).  
Down 38% from 1.68 in 2023

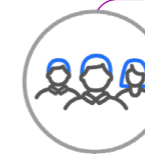
More than  
**22,000**  
completed hours of training by our employees. Up 64% from 13,643 hours in 2023

**26%**  
proportion of women in our workforce. Up 3% from 23% in 2023



## Carbon Capture

Building carbon capture technology with ExxonMobil to be piloted at its Rotterdam Manufacturing Complex.



## Governance

**100%**  
completion rate of human rights and anti-corruption training

**50%**  
Board gender diversity

**38%**  
Board ethnic diversity

**Prime Status**  
awarded by ISS ESG



## Low-Carbon Power

Delivering 42.14 MW of fuel cells to Gyeonggi Green Energy at the world's largest fuel cell park.

\* The estimates of avoided emissions due to generation from the Company's fuel cells are calculated assuming that the generation from the fuel cells replaces electricity generated by the combustion of fossil fuels. Emissions factors used in the calculations are sourced from various databases, including published information provided by the U.S. EPA.

# Product

**In this section:**

Scalable Solutions to Accelerate Power Availability ..... 16

Decarbonizing Power ..... 17

Carbon Capture and Recovery ..... 20

Hydrogen Electrolysis ..... 22

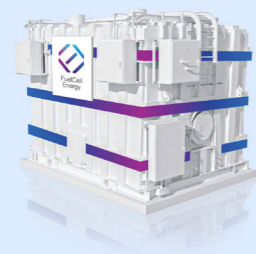
Customer Service and Technical Support ..... 24



# Scalable Solutions to Accelerate Power Availability

At FuelCell Energy, we strive to enable a safe, secure and practical journey to net zero. We believe every company, and every industry, will continue to be impacted by energy policies. We design our technologies to complement every step and aspect of the energy conversation – including renewables, electrification and the decarbonization of power, heavy industries, transportation and other sectors.

## Two electrochemical platforms:



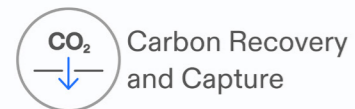
### Carbonate

Power Generation | Heat Recovery  
Carbon Capture and Recovery



### Solid Oxide

Power Generation | Electrolysis



**Carbon Recovery and Capture**

Reliable on-site CO<sub>2</sub> supply, clean power and heat recovery

#### Applications

- Food and beverage
  - Carbonation
  - Food processing
  - Frozen food and preservation
- Refrigeration
- Greenhouses
- Chemical
- Geological sequestration



**Low-to-Zero Carbon Electricity**

Reliable on-site power and fuel flexible, scalable solutions, virtually free of NO<sub>x</sub>, SO<sub>x</sub> and particulate matter emissions

#### Applications

- Data centers
- Universities
- Industrial
- Hospitals
- Grid support
- Wastewater treatment plants



**Hydrogen**

Nuclear or renewable energy and water to create hydrogen via electrolysis

#### Applications

- Green ammonia
- Steel production
- Refineries
- Industrial heat
- Synfuels (SAF, methanol, etc.)

“ Our portfolio of advanced fuel cell technologies demonstrates our commitment to delivering versatile and sustainable energy solutions. Our carbonate fuel cells not only efficiently convert biogas into clean energy but also play a vital role in water treatment applications, supporting a circular economy. Meanwhile, our solid oxide fuel cells provide highly efficient combined heat and power solutions, enabling customers to maximize energy utilization while reducing emissions. Together, these innovations showcase how we are addressing diverse energy challenges and empowering a more sustainable future. ”

**Myalee Muller**

Senior Product Manager

[Learn more about our solutions](#)



# Decarbonizing Power

Deep decarbonization efforts will be necessary to achieve global climate change mitigation targets. At FuelCell Energy, we offer practical and reliable solutions for energy decarbonization. Our innovative platforms co-produce valuable resources while mitigating the environmental impacts of industrial processes.

- Our fuel cell plants **generate electricity and usable heat** or steam from the same unit of fuel

- Our microgrids **increase energy resilience** while establishing predictable energy costs
- Our carbon-recovery platform **separates and purifies carbon dioxide (CO<sub>2</sub>)** recovered from our fuel cells as a valuable resource for utilization or sequestration
- We offer the only known platform that can **capture carbon from an external source and simultaneously co-produce power and hydrogen**

The only fuel cell manufacturer with demonstrated performance of platforms over

## 10 MW, 20 MW and 58 MW

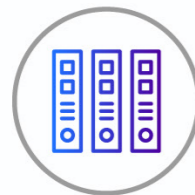
with more than five years of run time.

## Large-Scale Projects Delivering Resilient and Low-Carbon Power



Large-scale operations expertise

- Eight operating platforms larger than 10 MW, for a total of 180 MW
- Seven-plus year average operating age of large-scale projects
- Platforms supporting mission-critical manufacturing operations
- Providing grid resiliency, reliability, and redundancy
- Supporting improved air quality and reduced emissions



Leading position in fuel cell microgrids and absorption chilling

- Five projects installed into microgrids, providing reliable baseload power to the grid and islanding into a microgrid to support critical resources during outages
- Supplying 7.4 MW of power to a microgrid powering a U.S. Naval Submarine Base
- Supporting a community to ensure critical delivery of essential services during a grid outage
- Proven delivery of thermal energy for combined heat and power and absorption chilling



Integration with other generation assets

Battery Energy Storage



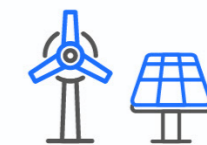
Turbines



Diesel Gensets



Solar and Wind



## Microgrids and Low-Carbon Power for Data Centers and Buildings

Power demand is growing faster than it has in previous decades. Due to variables such as the popularity of electric vehicles, the growth of the data center industry and the mandate to lower carbon footprints worldwide, electricity demand is projected to more than double by 2050.<sup>4</sup> But grid reliability in many countries, including the United States, still varies. To adapt to this new reality, The Department of Energy (DOE) has estimated that the U.S. needs to grow its transmission infrastructure by 57% by 2035.<sup>5</sup>

### Fuel cell microgrids for optimized energy outcomes

FuelCell Energy powers microgrid resiliency by providing large-scale, reliable power in the face of increasing power insecurity. As a trusted solution for critical power applications, we operate microgrids across the U.S., which provide reliable baseload power in the case of utility outages. Globally, we have demonstrated successful large-scale fuel cell power plants, including one 58.8 megawatt (MW) plant in South Korea. Our fuel cells are proven to operate with a variety of distributed generation assets, including battery energy storage and solar and wind power. Our low-carbon technology reduces emissions, limits risk and aims to avoid costly outages by facilitating a near-continuous source of clean, on-site power.

### Expanding decarbonized power production

In 2024, we continued to build on our longstanding legacy of providing efficient power production using electrochemical platforms.

FuelCell Energy manufactures fuel cell platforms and operates them on the basis of long-term service agreements, enabling our customers to reap the benefits of an efficient and reliable clean power supply. With options to run our power platforms using different fuels, including biogas and zero-carbon hydrogen, our clients can progressively improve their carbon footprint while delivering energy security for local populations as well as efficient energy for businesses, bolstering local economies.

### A long-term commitment to clean energy in South Korea

In South Korea, we have been supporting affordable clean energy for more than two decades. We maintain and operate a 20 MW power plant for the Korean Southern Power Company, and in 2023, we strengthened our engagement through a long-term service agreement for an additional 20 MW fuel cell plant owned by Noeul Green Energy Co., Ltd.

In 2024, the South Korean energy company Gyeongii Green Energy Co., Ltd. (GGE) purchased 42 1.4 MW upgraded carbonate fuel cell modules to replace existing fuel cell models at the Hwaseong Baran Industrial Complex, the world's largest fuel cell platform. This platform, established in 2013 with FuelCell Energy's design and technology, has the capacity to produce 58.8 MW of electricity from 42 fuel cell modules. It can power around 135,000 homes and generate 250 billion kilocalories of hot water, heating approximately 20,000 homes annually. Currently, our technology is deployed across South Korea and produces more than 100 MW of sustainable energy without combusting fuel.

Additionally, this year, Fuel Cell Energy announced a partnership with Korea Hydro & Nuclear Power Co., Ltd. through which the two companies will jointly pursue the development and implementation of hydrogen business initiatives. Our cooperative approach will combine South Korea's domestic clean energy sources with FuelCell Energy's electrolyzer platform to produce lower-cost, domestic clean hydrogen, with the ultimate goal of diversifying South Korea's hydrogen supply.

In 2024, we also reinforced our commitment to the South Korean market during an event in Seoul, "Accelerating Korea's Energy Transition with Advanced Fuel Cell Solutions." The event, which was attended by FuelCell Energy executives and leaders in the South Korean energy industry, outlined advancements made to our carbonate fuel cell platform, including its carbon capture abilities. We also presented on our solid oxide platform, which we believe will play a vital role in Korea's commitment to providing clean, efficient and reliable energy by supplying 15 gigawatts of power from fuel cells by 2040, according to the country's Hydrogen Economy Roadmap.

In 2024, our fuel cell platforms generated more than


# 1.7 million MWh of electricity

That's equivalent to the grid electricity consumption of more than 35,000 average U.S. households for one year.\*

We estimate that more than

# 170,000 MT CO<sub>2</sub> and

# 428 MT NO<sub>x</sub> were avoided last year.\*\*

 Learn more about [fuel cell microgrids](#)

\* Note: the calculations are based on the U.S. EPA Greenhouse Gas Equivalencies Calculator <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

\*\* Note: the estimates of avoided emissions due to generation from the Company's fuel cells are calculated assuming that the generation from the fuel cells replaces electricity generated by the combustion of fossil fuels. Emissions factors used in the calculations are sourced from various databases, including published information provided by the U.S. EPA.

<sup>4</sup> [Global Energy Perspective 2024](#), McKinsey, September 17, 2024.

<sup>5</sup> National Transmission Needs Study, [U.S. Department of Energy](#), February 2023.

# Biogas and Wastewater Treatment Plants

Our technology produces low-to-zero carbon power with flexible fuel options including biogas, natural gas and hydrogen. We have been doing business in California since 2005, partnering with several government entities to provide innovative solutions for clean power — including successful biogas-fueled projects in Riverside, San Bernadino and Tulare.

## A solution for clean power using biogas

In 2024, we announced that our carbonate fuel cell technology would be used in a new biogeneration project developed by Ameresco for the Sacramento Area Sewer District. A 2.8 MW carbonate fuel cell platform will convert on-site biofuel into clean electricity and useful heat. The project also has the potential to integrate our carbon recovery feature, which would make the renewable, carbon-neutral project carbon negative.

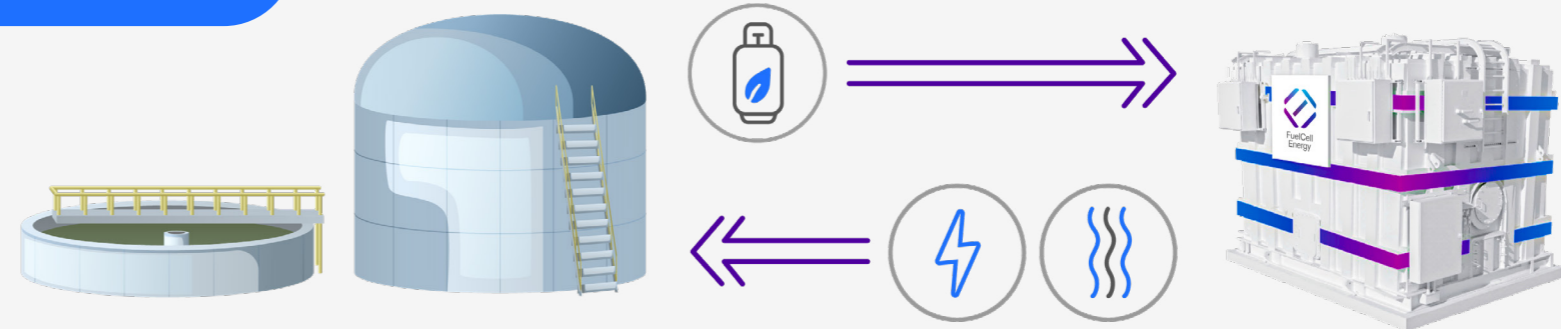
As part of the system, waste heat generated by the fuel cell will be used to support the anaerobic digestion process, creating biogas, while our proprietary fuel clean-up system will remove unnecessary compounds and maximize efficiency. Using our technology, the city of Sacramento will further its sustainability goals by avoiding the use of combustion-based heat, as well as increase its resiliency and limit dependence on the local grid.

Our carbonate fuel cell systems are designed to thrive in applications that use anaerobic digester gas.

- Our system runs directly off digester gas at high efficiency to produce renewable electricity and useful heat.
- Our proprietary treatment system removes siloxanes and sulfur compounds to maximize useable biogas.
- The gas does not need to be cleaned up to pipeline standards, reducing cost and improving efficiency.

[Learn more about fuel cell biogas systems](#)

## FUEL CELL BIOGAS SYSTEMS



Biogas in. Renewable energy out.

## CITY OF RIVERSIDE (1.4 MW)

The SureSource 1500™ fuel cell plant cleans and consumes renewable biogas from the wastewater treatment process to generate carbon-neutral power and heat for the facility.



Carbonate fuel cells are uniquely capable of operating with on-site biogas

- No performance impact from low-Btu, diluted on-site biogas
- No need to upgrade gas to pipeline quality

500,000

operating hours of experience from

14

biogas-fueled projects

# Carbon Capture and Recovery

FuelCell Energy offers the only known platform that can capture carbon from an external source while simultaneously generating power and hydrogen.

The World Economic Forum has described CO<sub>2</sub> as an industrial feedstock that could change the world, predicting trillion-dollar markets in the manufacturing sector.<sup>6</sup> In purified form, CO<sub>2</sub> can be used for water treatment, the creation of dry ice for pharmaceuticals and in a number of agricultural applications. In addition to capturing carbon dioxide from external sources, our fuel cell generation platforms have the capacity to extract and purify carbon dioxide produced by the fuel cell power-generation process — allowing for the efficient utilization of a valuable resource.

## Carbon Utilization for the Food and Beverage Industry

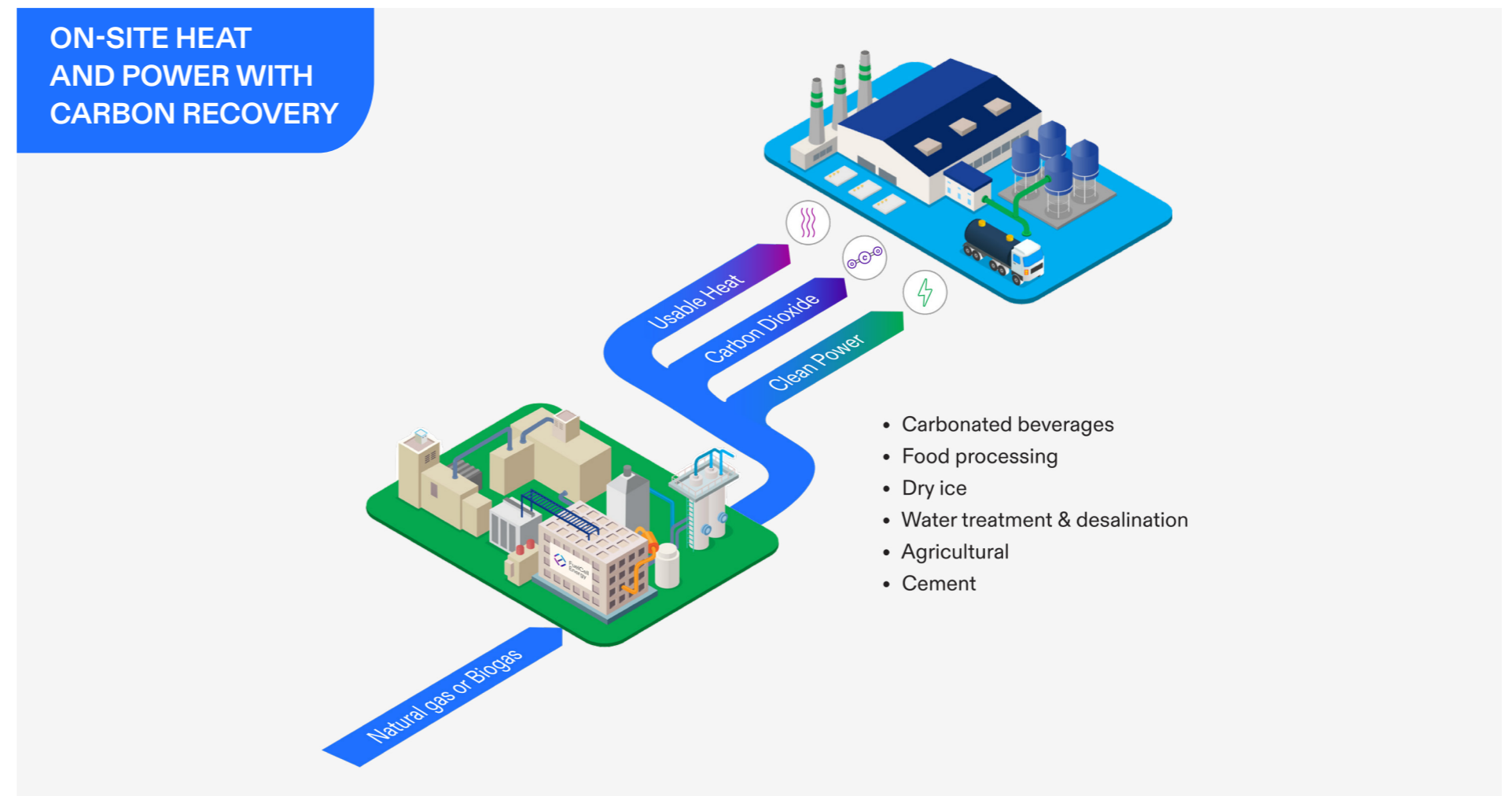
CO<sub>2</sub> is an essential raw material in the food and beverage industry, with global demand reaching close to 10 MT CO<sub>2</sub> per year as of 2019, according to the IEA.<sup>7</sup> Many companies rely on a stable supply of beverage-grade CO<sub>2</sub> to keep their operations running, for purposes such as carbonating beverages and purifying water. Over the last few years, intermittent shortages of beverage-grade CO<sub>2</sub> have forced some businesses to slow or cease production entirely.<sup>8</sup>

Often this CO<sub>2</sub> is transported to its destination over long distances, at significant cost. But by using our novel carbon capture technologies, companies can simultaneously reduce the carbon footprint of generated power and provide critical raw materials for the food and beverage industry. Inside our fuel cells, methane is steam-reformed and converted into hydrogen and CO<sub>2</sub>, recycling the CO<sub>2</sub> into a valuable product. By producing CO<sub>2</sub> on-site, companies can reduce costs and provide vital materials for food processing, beverage carbonization and other key industrial functions.

In addition to capturing carbon dioxide from an external source, our fuel cell power generation platforms have the capacity to extract and

purify carbon dioxide produced by the fuel cell power generation process. Our carbon separation technology allows carbon dioxide to be extracted and purified for utilization or sequestration. This is a win-win because it reduces the carbon footprint of generated power from our fuel cell platforms, while at the same time providing a valuable raw material for a range of industries, including the carbonated drinks sector.

We are able to incorporate our carbon capture-ready modified fuel cell module into new platforms as well as retrofit existing systems during upgrades. Over time, as we replace fuel cell stacks in our deployed modules, we plan to integrate our carbon separation technology, affording every FuelCell Energy customer the possibility of carbon separation and utilization.



[Learn more about carbon utilization for the food and beverage industry](#)

[Take a virtual CO<sub>2</sub> recovery tour](#)

<sup>6</sup> [Using CO<sub>2</sub> as An Industrial Feedstock Could Change the World](#), World Economic Forum, January 9, 2020.

<sup>7</sup> [Putting CO<sub>2</sub> to Use](#), IEA, September 2019.

<sup>8</sup> [Greenhouse Gas Emissions from Energy Data Explorer](#), IEA, August 2, 2024.

# Carbon Capture in Hard-to-Abate Industries

According to the IEA, carbon capture and storage is one of the critical technologies necessary to achieve net-zero emissions. Carbon emissions from energy combustion and industrial processes account for 89% of energy-related GHG emissions globally.<sup>9</sup> Using carbonate fuel cells, these emissions can be reduced dramatically, with cost-effective and efficient carbon capture.

**FuelCell Energy offers the first and only known platform that can capture CO<sub>2</sub> as it produces electricity and hydrogen.**

Our flexible carbonate fuel cell platform has the unique ability to capture CO<sub>2</sub> as it produces power, and it can co-produce hydrogen and clean water. We believe this technology holds tremendous potential to accelerate decarbonization in industrial settings — a feat which has historically been difficult to achieve.

FuelCell Energy and ExxonMobil have been working together to develop a technology which our research indicates could capture over 90% of CO<sub>2</sub> from the exhaust of an industrial plant, preventing the CO<sub>2</sub> from being released into the atmosphere. In 2024, we advanced our ongoing joint development agreement with ExxonMobil Technology and Engineering Company through December 31, 2026, to allow for

continued development work on the technology, including support of the pilot project at the Esso Nederland BV Rotterdam Manufacturing Complex.

Carbonate fuel cells have a unique ability to capture CO<sub>2</sub> emissions from industrial sources before they are released into the atmosphere, while simultaneously generating valuable co-products. This feature increases the overall efficiency of the capture process and provides additional value streams — ultimately reducing the cost of carbon capture and storage and providing a path for a wide range of industries to work towards a decarbonized future.

## KEY TAKEAWAYS

- We're developing a breakthrough emissions-reduction technology.
- Carbonate fuel cells could capture CO<sub>2</sub> more efficiently and cost-effectively.
- We'll demonstrate this technology at ExxonMobil's Rotterdam site starting in 2026.

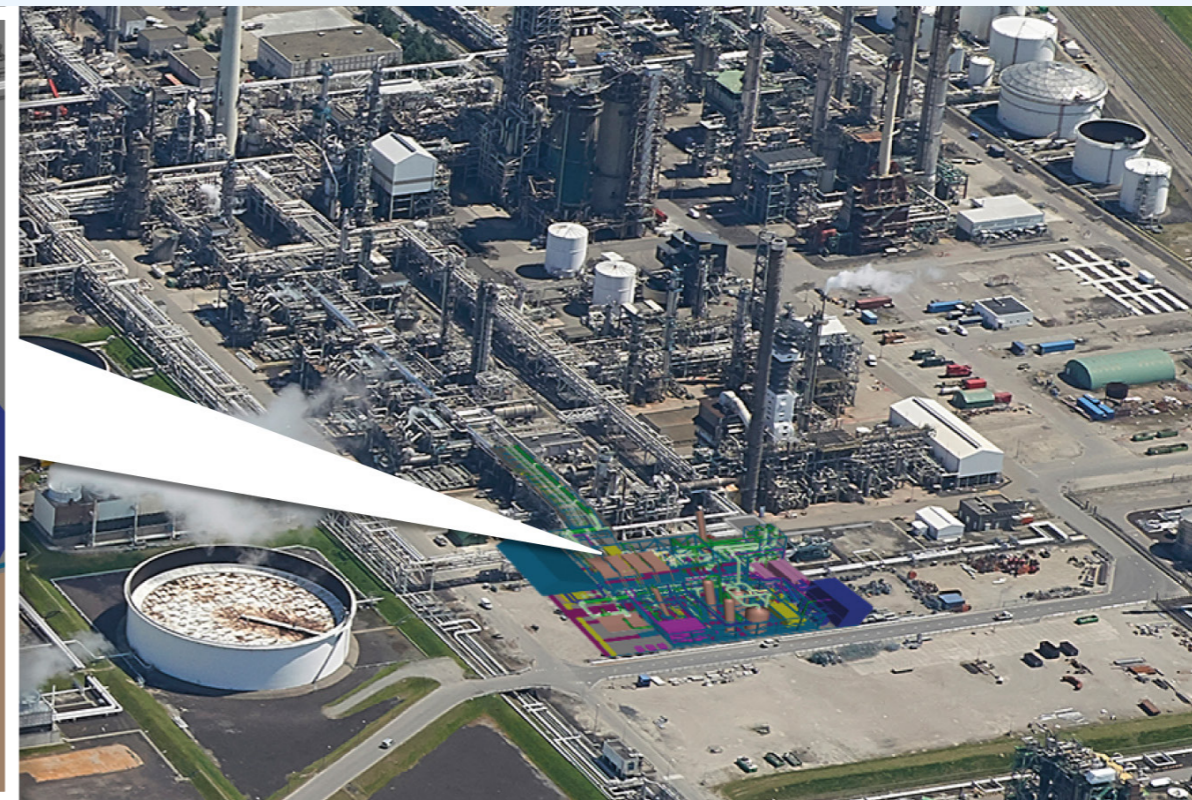
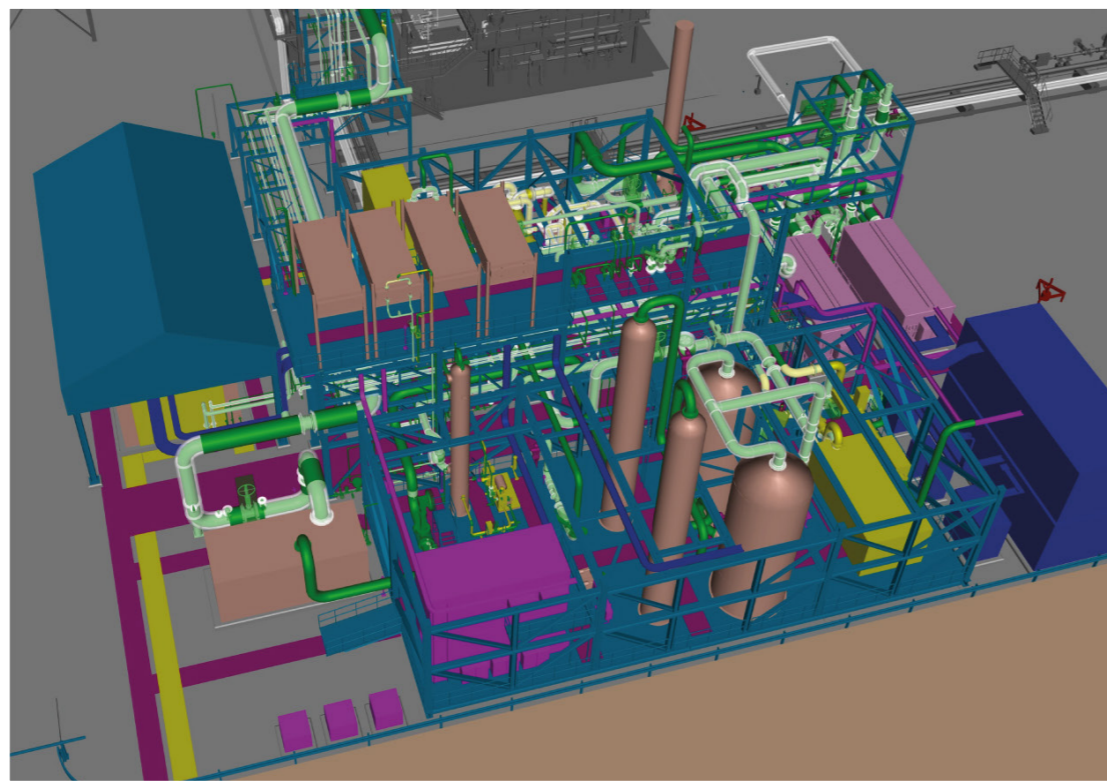


Photo: the pilot plant project at Esso Nederland BV Rotterdam Manufacturing Complex

[Learn more about the Esso Nederland BV Rotterdam Manufacturing Complex](#)

<sup>9</sup> [Greenhouse Gas Emissions from Energy Data Explorer](#), IEA, August 2, 2024.

# Hydrogen Electrolysis

We believe hydrogen is a critical tool for our clean energy future. Its unique properties make it an ideal energy carrier, with the capacity to be readily and affordably scaled. By 2050, the consultancy McKinsey expects clean hydrogen demand to account for between 75% and 100% of total hydrogen demand globally. Across scenarios, clean hydrogen demand is expected to reach 125 to 585 million tons per year by 2050.<sup>10</sup>

## Flexible Hydrogen Solutions

Using our platforms, hydrogen can be produced from non-renewable feedstocks with carbon capture, providing a path to inexpensive, low-carbon hydrogen. It can also be made through the electrolysis process with zero-carbon renewable or nuclear power, a process with the potential to produce zero-carbon hydrogen.

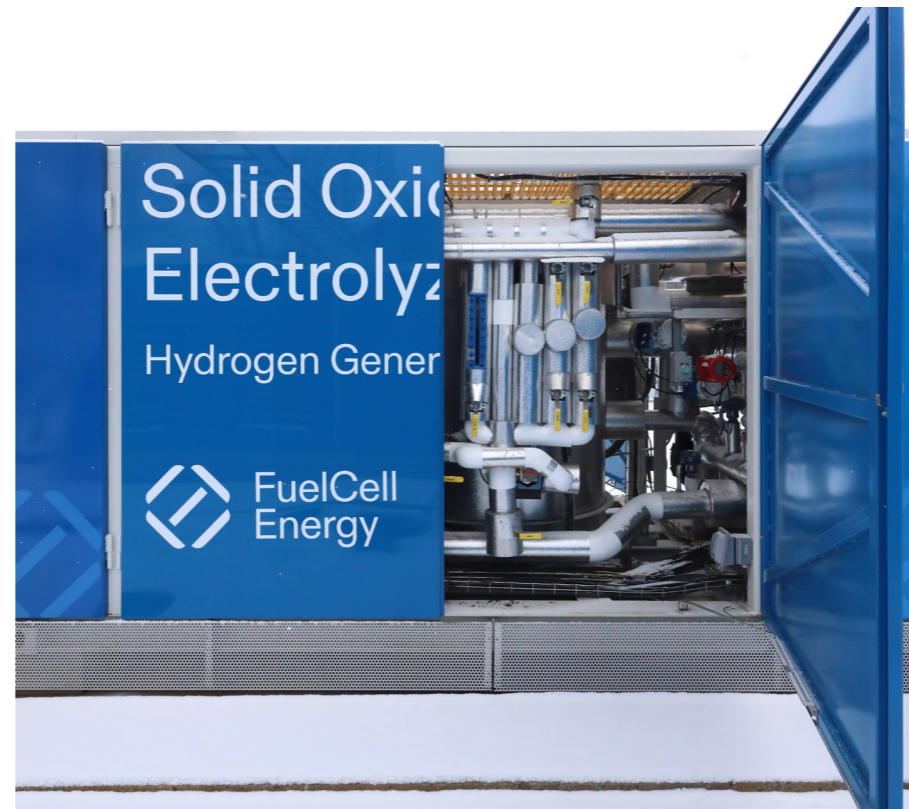
Hydrogen:

- Can be **used as fuel to produce high-grade heat** for industrial applications such as steel and glass production. This is in addition to its traditional uses for the refining process: making ammonia, cement and chemicals; in-building heating; combustion power-generation and residential heating.
- Is an **effective medium for the storage of energy**, offering a reliable, secure and environmentally friendly storage option.
- Can be **produced near end users**. Distributed hydrogen production avoids transportation of compressed or liquid hydrogen and can lessen the significant transmission infrastructure needed to support large-scale electrolysis.
- Provides **near-continuous power** and, with the ability to store hydrogen, enables overall grid independence or supplements the intermittent energy production of renewables such as wind or solar.
- Enables **zero-emissions transportation** by utilizing a zero-carbon feedstock as the fuel to power cars, trucks, buses, ships, trains and, in the future, aircraft and other aerospace applications.

Learn more about our [hydrogen production platforms](#)

## Reducing Emissions

Lower- and zero-carbon hydrogen products support a clean energy future by providing a scalable, affordable path to reducing emissions.



“ At Fuel Cell Energy, our commitment to continuous, customer-driven innovation is at the core of everything we do. By leveraging cutting-edge advancements, we are not only enhancing the performance and reliability of our fuel cell platforms but also driving the development of groundbreaking carbon capture and carbon recovery technologies. These advancements reflect our dedication to providing sustainable energy solutions that support global decarbonization goals while delivering exceptional value to our partners and the communities we serve.”

**Shankar Achanta**  
Executive Vice President, Chief Product and Technology Officer

<sup>10</sup> [Global Energy Perspective 2023: Hydrogen Outlook](#), McKinsey, January 10, 2024.

## Solid Oxide Electrolyzer

**Solid oxide electrolyzer cell (SOEC): A highly efficient, fuel-flexible and hydrogen-ready platform to support customers as they work to meet their sustainability goals.**

Our patented solid oxide fuel cell (SOFC) technology enables high-efficiency power generation, allowing for more affordable production of low-carbon power. These systems can be deployed in combined heat and power applications using natural gas, biogas or hydrogen fuel. The same cells can be used in electrolysis systems. A fuel cell makes power and water from fuel, but an electrolyzer makes hydrogen from power and water. When used in electrolysis systems, our SOECs can operate at up to 100% electrical efficiency. With their small footprint, they're easy to scale up or down given an organization's needs. Additionally, they're flexible enough to ramp up or down depending on day-to-day energy availability and hydrogen requirements.

### HOW DOES SOEC WORK?

Solid oxide is among the most efficient commercially available electrolysis technologies: Our SOEC technology has demonstrated about 90% efficiency (HHV) when operating solely on electricity and can operate at 100% efficiency (HHV) when paired with available excess heat from industrial or nuclear facilities. Learn more about the fundamentals of SOEC, and how it reduces the cost of hydrogen production, [from our white paper](#).

“ Our Calgary facility is integral to our solid oxide fuel cell development. By expanding our facilities, increasing production capacity and investing in cutting-edge R&D we are driving efficiency improvements and solidifying our leadership in this critical sustainable technology. ”

**Guenther Brandstetter**  
General Manager, Solid Oxide Development (Canada)

### Investing in green hydrogen production for energy

In 2023, we began commercialization of our unique solid oxide platform, which we believe is among the most efficient available power generation technologies. In 2023, we began expanding our solid oxide operations in Calgary, Canada and Danbury, Connecticut to enable our further growth. These developments followed significant investment in and support for our technology: In October of 2020, the U.S. DOE awarded FuelCell Energy and the Idaho National Laboratory a \$12.5 million grant for a project integrating hydrogen production and nuclear power in a demonstration at the laboratory.

### Collaborating for green hydrogen on the global stage

Lowering the cost of energy remains a critical factor in scaling clean energy production and accessibility. Through a collaboration with Malaysia Marine and Heavy Engineering Sdn. Bhd., a wholly owned subsidiary of Malaysia Marine and Heavy Engineering Holdings Berhad, we're designing large-scale electrolyzer facilities for potential deployment in Asia, New Zealand and Australia to help transform access to energy resources. We believe the design of these facilities will increase efficiency and reduce the cost of green hydrogen production. Our joint project is expected to produce zero-carbon hydrogen to decarbonize industrial, mobility and power applications.



# Customer Service and Technical Support

At FuelCell Energy, we believe in providing dependable support for the life of our systems and offer support 24 hours a day, seven days a week. We approach customer service and support through a comprehensive lens: From a world-class ecosystem of partners ensuring safe and timely installation to waste management on decommissioned products, we work tirelessly to increase the efficiency of our systems and minimize waste.

Our **dedicated account managers** work to ensure that our systems' daily needs are always met.

**Operation technicians** in our Global Monitoring and Control Center (GMCC) monitor systems remotely, 24/7, to ensure that they are operating at peak efficiency and provide data-driven insights to proactively anticipate issues.

Our experienced **field service technicians** staff service centers near our customers and create proactive maintenance plans, reducing downtime and maintaining availability for rapid on-site support.

Customers can access a customized dashboard in real time via FuelCell Energy's **online portal** to view their system's key metrics to continuously improve performance.

We operate and maintain all of our project platforms for the life of the project, regardless of ownership structure. For any operating platforms not covered by a power purchasing agreement (PPA), our customers enter into a long-term service agreement (LTSA), which can span as many as 20 years. Under both of these ownership structures, we offer a comprehensive portfolio of services including engineering, project management and installation as well as long-term operating and maintenance programs.

In addition to our service agreements, we provide comprehensive warranties protecting against manufacturing or performance defects. Our environmental and safety policies are applicable to all the fuel cell plants we operate, regardless of ownership. Safety data sheets are available to 100% of our clients, and region-specific EHS personnel provide support for all of FuelCell Energy's products.



 Learn more about our [customer service and technical support](#).



# Climate & Environment

**In this section:**

Working Towards Net Zero .....	26
Climate Risks and Opportunities .....	29
Environmental Stewardship.....	31
Our Approach to Circularity .....	35



# Working Towards Net Zero

As a company providing best-in-class solutions for a clean energy future, we're proud of our dual commitments: to offer innovative, sustainable products to help our customers meet their environmental goals, and to ensure that our own operations maintain a minimal climate footprint. Our sustainability strategy complements our business process, providing avenues to continuously reduce our emissions, mitigate waste and protect the natural environment throughout our manufacturing and production processes.

## Our Net-Zero Approach

FuelCell Energy is a business delivering solutions for a greener future, and a company committed to enabling a world empowered by clean energy. As such, our most significant positive climate and environmental impacts are delivered through our fuel cell technologies, as well as our other offerings to our customers around the world. We've continued to innovate and enhance our current platforms to give our customers the best options for carbon management, emissions reduction and other environmental benefits. In addition, as a manufacturing company with plans for growth, we are committed to ensuring that our own operations are consistent with global sustainable development objectives.

In fiscal year 2024, we continued addressing and managing the material impacts of our own operations. Our key advancements in climate change mitigation and environmental strategy include:

- Performing a corporate-level GHG emissions inventory for 2024.
- Completing a product-level life cycle assessment (LCA) to understand and potentially reduce GHG emissions throughout the value chain, from production through decommissioning.
- Conducting a climate risk assessment aligned with TCFD to analyze the physical and transition risk across our manufacturing facilities, inform our business strategy and take appropriate mitigation measures.
- Continuing to develop our sustainability strategy to prioritize and holistically address our key ESG responsibilities and stakeholders' needs.
- Successfully integrating an ESG governance model into our business processes.

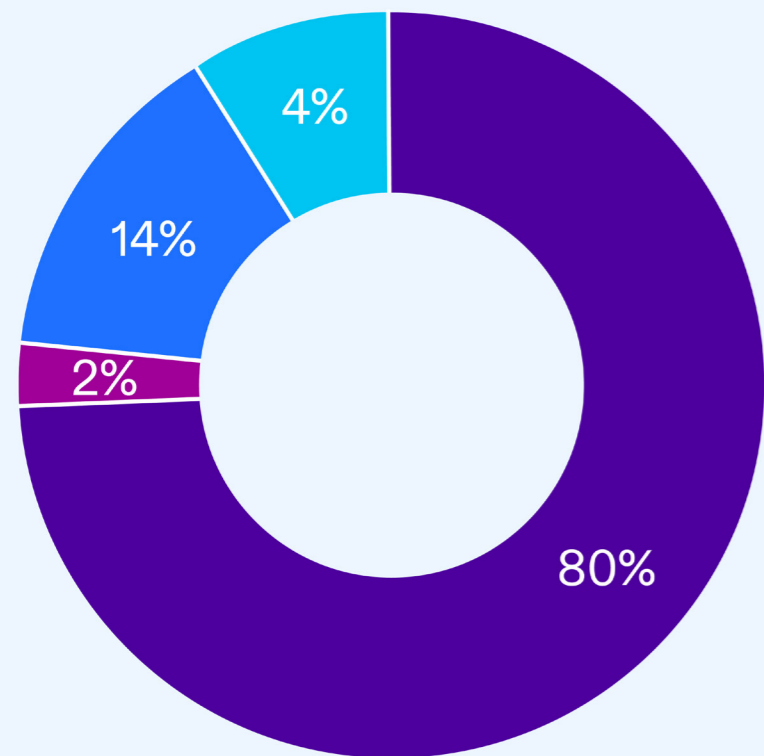


# Net Zero Carbon Emissions by 2050: Our Approach

## Where We Are Now

### Our Achievements

- Annual carbon inventory
- Product-level LCA
- Climate risk assessment
- Net zero action plan



- Scope 1 from manufacturing and power generation
- Scope 2 from purchased electricity
- Scope 3 category 3 from fuel- and energy-related activities
- Biogenic emissions

## How We Will Get There

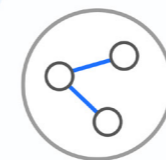
### Key Action Areas

- Advancing our technology
- Driving energy and resource efficiency
- Driving circularity and lean manufacturing
- Engaging suppliers



#### Scope 1 and 2 Own Operations

- Accelerate energy efficiency across our own facilities and increase our generation and use of renewable electricity
- Expand our deployment of product-level life cycle analyses to identify and adopt opportunities to reduce carbon across our own operation and across our value chain
- Continue to drive circularity in our design and production to eliminate waste and achieve maximum reuse of materials across our operations
- Advance the use of biogas for power generation
- Educate our workforce to drive carbon reduction and achieve maximum reuse and minimum waste



#### Scope 3 Upstream Supply Chain

- Work closely with our suppliers to drive down their operational and logistics emissions through energy efficiencies, efficiencies and low-carbon materials and products across our supply chain
- Use our product-level life cycle analyses to identify and adopt opportunities to reduce carbon across our supply chain
- Work with suppliers on the design and procurement of our components to accelerate sourcing of low-carbon materials



#### Scope 3 Downstream Customers

- Expand the products and solutions we offer to customers and work closely with them in implementation and monitoring to help them achieve carbon reduction goals
- Continue to invest in developing scalable technologies for producing hydrogen, including green hydrogen and other carbon-friendly clean power solutions such as carbon capture, separation and utilization
- Continue to engage with governments and across industry to advance a low-to-zero carbon hydrogen economy within a global energy transition

# GHG Emissions and Energy Consumption

FuelCell Energy takes a systemic approach to climate change, including adaptation and mitigation strategies, in keeping with our FuelCell Energy Sustainability Strategy. We are committed to decarbonization along our value chain — from our supply chain to our own operations and the use phase of our products.

In addition to furthering our own core purpose of empowering our customers with net-zero technology and solutions, we continuously aim to reduce our operational carbon footprint. This includes making organizational and technical improvements to continually reduce our GHG emissions. We have evaluated our GHG emissions for the last five years and continue to track and carefully analyze our carbon footprint on a regular basis. We measure our carbon footprint assessment in accordance with the GHG Protocol, applying the financial control approach when identifying our operation boundaries. We classify our GHG emissions as follows:

**Scope 1 emissions** are GHG emissions directly caused by FuelCell Energy activity. We calculate Scope 1 emissions based on the fuel consumptions of our fuel cell plants as well as the natural gas and industrial gases used in our manufacturing processes.

**Scope 2 emissions** are associated with the consumption of purchased electricity by our offices and manufacturing facilities. We calculate these emissions based on the electricity consumption data received from electricity suppliers.

**Scope 3 emissions** encompass indirect emissions that occur in our upstream and downstream activities, including the emissions of our

suppliers and customers. We have identified the following categories as the most significant to our business:

- Purchased goods and services
- Capital goods
- Fuel- and energy-related activities not included in Scope 1 or Scope 2
- Upstream transportation and distribution
- Waste generated in operations
- Use of sold products

The categories that are considered relevant but not significant are:


- Waste generated in operations
- Business travel
- Employee commuting
- End-of-life treatment of sold products

Based on our analysis, including the product-level LCAs conducted in 2023–2024, the following categories are classified as irrelevant to our activities and are therefore not included in our carbon inventory:

- Upstream leased assets
- Processing of sold products
- Downstream leased assets
- Franchises
- Investments

In 2024, the main source of our Scope 1 and 2 emissions remained associated with the consumption of natural gas and purchased electricity. Between 2023 and 2024, FuelCell Energy experienced growth across key activity metrics, including the size of our power generation portfolio and manufacturing capabilities. Commensurate with this growth, we experienced increases in certain GHG inventory categories driven by increased activity factors like consumed natural gas and purchased electricity. Compared to 2023, our total absolute emissions in 2024 increased 39% overall, inclusive of our Scopes 1 and 2 inventories. The increase is associated with the new fuel cell power plants added to our portfolio, including the Toyota Project, which became operational during the first quarter of fiscal year 2024, and the Derby Projects, both of which became operational in December 2023.

In 2024, we completed our LCA that allowed us to identify the most significant categories of Scope 3 emissions. Purchased goods, or Scope 3 category 1, is one of the most substantial categories in our value chain emissions. We continue to seek partners who can provide products that are more carbon efficient and work with our dealers and supply chain partners to improve the environmental profile of our value chain activities. We are also working to better manage the lower-impact Scope 3 categories over which we have direct control, including employee commutes and business travel.

 Learn more about our [2020-2024 carbon inventory and energy consumption](#) on p.61 of this report.

# Climate Risks and Opportunities

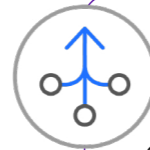
The Task Force on Climate-related Financial Disclosures (TCFD) framework, developed by the Financial Stability Board (FSB), is a voluntary framework that facilitates effective climate-related disclosures that could promote informed investment and other financial decisions. The following is an overview of our current operations, in line with the TCFD framework.



## Governance

**Board oversight:** FuelCell Energy’s Board of Directors is actively engaged in guiding our sustainability strategy and ESG performance. The Board is supported by the Nominating, Governance and Sustainability Committee, which has oversight of the evaluation, management, mitigation and communication of our climate-related risks and opportunities. The Board also reviews and approves specific, climate-related goals and targets, including our target to deliver net-zero value chain emissions by 2050. The Senior Vice President of Investor Relations provides quarterly reports to the Board on climate risks, opportunities and performance against our net-zero target.

**Management’s role:** Accountability for our net-zero strategy and performance rests with our Chief Financial Officer and Chief Marketing and Sustainability Officer, who are supported by a cross-functional team of senior leaders, including the Chief Operating Officer and the Chief Product and Technology Officer. This team monitors performance and provides support and guidance to the organization to help reach our goal.



## Strategy

Our corporate purpose is to empower a clean energy future. To support this, and our business strategy, we have formalized a Sustainability Strategy that encompasses 12 action areas that will define our focus in the coming years, including those related to climate change and achieving net-zero emissions. We incorporate climate and carbon considerations into every aspect of our business.

**Climate-related risks and opportunities:** For FuelCell Energy, we believe that climate change opportunities outweigh the risks, since our company is focused on driving emissions down across the value chain and the facilitation of access to affordable clean energy, including zero-carbon hydrogen as an essential power source.

As the need for clean energy grows in the U.S. and around the world, and governments become bolder in incentivizing a transition to clean energy, we expect to grow our business in a sustainable manner.



## Risk Management

**Process and management of risk:** An assessment of climate-related financial risks is included in our annual enterprise risk management process, which is led by our senior leadership team and approved by the Board of Directors. Short, medium and long-term risk factors across current and emerging ESG-related risks, including climate-related risks, are assessed and prioritized for mitigating action. In 2024, we performed a detailed scenario analysis of physical climate risks and evaluated transition risks, in line with the TCFD methodology.

**Climate change integration:** Mitigating climate change is an integral consideration across all of our business activities, in line with our purpose of empowering a clean energy future. Our goal is to help our customers reduce their carbon footprint and climate change impact, and in doing so, we aim to ensure that our own operations achieve this goal. Resource efficiency and energy and emissions reduction are key objectives within our operations, from design to delivery to customer service, and are addressed at every stage of our planning, manufacturing and supply.



## Metrics and Targets

**Metrics:** We measure our Scope 1, 2 and 3 emissions, as well as biogenic emissions, in accordance with the GHG Protocol standards.

**Performance:** During fiscal year 2024, we performed our carbon inventory and continued to develop our approach to achieve net-zero emissions by 2050, including a net-zero action plan.





**Targets:** We are committed to achieving net-zero emissions across our value chain by 2050 and have defined our net-zero path to deliver this target.

## Climate Scenario Analysis

In accordance with the TCFD recommendations, we categorize our risk assessment into two primary areas: risks associated with the physical impacts of climate change, and risks and opportunities related to the transition to a lower-carbon economy. To this end, we are continually working to enhance our methodology and data accuracy.

In 2024, we conducted an in-depth analysis of climate-related risks and opportunities. Transition risks and opportunities related to climate change are integrated into the business cases for our investments in new assets and activities, and we consistently monitor political, technological, market and reputational developments. Additionally, during the design and construction phases of our assets, we perform climate risk assessments to evaluate both acute and chronic weather patterns.

A crucial element of risk and opportunity analysis, as recommended by the TCFD, is the use of scenario analysis across various time horizons to account for the long-term nature of climate change. The key findings from the scenario analysis of physical risks are summarized in the table below.

Risk	Category	Driver	Impact	Likelihood
Increasing risk of facility damage from acute flooding damage	Acute	Flooding, storms and hurricanes	 Moderate across scenarios and time horizons	Unlikely and rare occurrence across scenarios and time horizons
Increasing risk of business interruptions from acute flooding and wildfire events	Acute	Flooding, wildfire and extreme heat	 Moderate across scenarios and time horizons	Increases with time and warming assumption
Increasing risk of supply chain disruptions from acute physical events such as flooding and wildfires	Acute and chronic	Flooding, storms, hurricanes and heat	 Moderate across scenarios and time horizons	Increases with time and warming assumption
Increasing risk of water access issues due to chronic water stress and drought	Acute	Water stress and drought	 Minor across scenarios and time horizons	Increases with time and warming assumption

# Environmental Stewardship

## Environmental Management System

As a fuel cell manufacturer, we facilitate the production of power and hydrogen in an efficient, environmentally friendly way. We are committed to comprehensive environmental protection throughout the entire life cycle of our systems — from design, sourcing and manufacturing through operation, decommissioning and recycling. Our overarching aim in the years to come is to further reduce the environmental footprint of our fuel cells and our entire company.

Our EHS department is responsible for operational environmental protection. We have implemented an integrated, high-quality occupational safety, health protection and environmental management system. This system is applied across the entire company, including in all global facilities and sites.

Our management system is certified according to the relevant International Organization for Standardization (ISO) standards: 9001:2015, 14001:2015 and 45001:2018. More than 90% of employees are under the scope of the management system, including the entirety of our U.S. and German operations. Moreover, it enables us to meet

our compliance requirements and environmental objectives in line with the principles defined by our EHS Policy. We regularly conduct internal audits to review and optimize our processes, with the aim of continuous improvement.



“ By embedding rigorous practices and innovative solutions into our global manufacturing and operations, FuelCell Energy strives to minimize impact while maximizing efficiency. Our environmental management systems reflect our dedication to preserving natural resources, reducing emissions and driving the transition towards a greener future. ”

**Robert Strobl**  
Senior Vice President, Europe, Carbonate Manufacturing and Operations

# Waste

Our design and manufacturing processes aim to minimize waste throughout our production processes and optimize the reuse and recycling of our operational waste. We generate modest amounts of waste through our manufacturing and R&D facilities, aiming to minimize waste at the source and work on increasing the reuse of parts and materials in our operations. As part of our ISO-certified Environmental Management System, we maintain a cradle-to-grave Waste Management Policy designed to ensure that all waste types (including hazardous waste, non-hazardous waste and universal waste) are properly and safely managed from their generation through handling, storage and preparation for transportation and disposal. The policy defines how waste is managed in each waste stream in accordance with applicable federal, state and local regulations.

We also maintain a Waste Minimization Program in which we apply the following practices, among others:

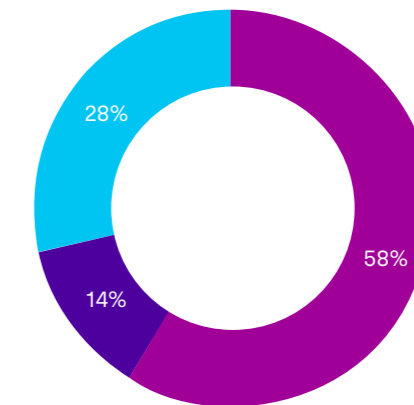
- Pollution prevention efforts to reduce or eliminate pollution and waste at the source, including recovery of metals via recycling and energy recovery through the conversion of nonrecyclable waste materials into usable heat, electricity or fuel
- Incorporation of waste minimization into management practices to ensure ongoing efforts to reduce waste in product design, production operations and maintenance
- Incorporation of waste minimization as an integral part of organizational strategies to increase productivity and quality
- Working with suppliers to develop products and procedures that will assist in reducing waste
- Working towards internal targets for the reduction of both the volume and toxicity of waste streams
- Maintaining an employee awareness and training program to involve employees in waste minimization planning and implementation

Most of the waste we divert to landfills is non-hazardous waste for which there is no current viable alternative. We maintain efforts as part of our Waste Minimization Program to replace input materials with non-hazardous options wherever possible and to reduce overall waste in our processes.

The generation of both hazardous and non-hazardous waste is one of the most heavily reviewed and controlled environmental aspects at our factories, R&D facilities and plant installations. At all of our sites, we collaborate with authorized service providers specializing in waste management to handle the waste generated. Internally, we continuously track our waste generation at the manufacturing level on a quarterly and annual basis. When tracking our impacts associated with waste, we differentiate not only between hazardous and non-hazardous waste, but also between various waste recovery and disposal methods in accordance with the GRI Standards.

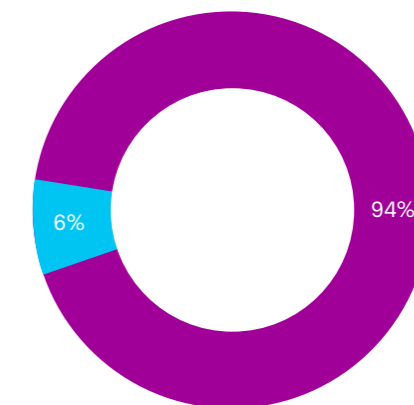
## 2024 Total Waste by Type, Metric Tons

Metals	67.6
Other recyclable	131.3
Other waste	273.4



## 2024 Total Waste: Hazardous and Non-Hazardous, Metric Tons

Hazardous	30.54
Non-Hazardous	441.8





## Hazardous Substances

We are committed to the highest standards of safety and environmental stewardship in managing hazardous chemicals and substances of concern, ensuring compliance with evolving regulations and prioritizing the well-being of our workers and the environment. FuelCell Energy complies with laws regulating the use of chemical substances and their potential impacts on both human health and the environment, such as the Toxic Substances Control Act. We actively monitor and manage our operations as new chemicals regulations are developed.

We regularly check whether material substitutions are possible to reduce the overall number of hazardous materials as well as their respective water hazard class, thus reducing the extent of any potential environmental damage. Such substitutions can make it easier to develop occupational safety, environmental and health protection measures, while also simplifying logistics processes and reducing operating expenditure and administrative effort. We employ a range of measures at our manufacturing facilities to protect our employees, partners and the environment against hazardous materials.

We pay close attention to handling hazardous materials in an environmentally friendly way and to safely transporting these materials to project sites and regional service points. As a result, training courses play an integral role for the safe handling, disposal, storage and transportation of hazardous materials. We ensure that all personnel who work with and around hazardous materials are sufficiently trained as part of our Hazard Communication Program.

### Hazardous Materials Management Program

We obtain or develop Chemical Safety Data Sheets (SDS) for all chemicals utilized during the fuel cell manufacturing process. The Chemical SDS are stored in the online library accessible to all employees. We follow a thorough chemical review process to ensure that our EHS group reviews all new chemicals before they come into a manufacturing facility. In 2024, key employees were given a refresher training on the new chemical review process.



“Responsible waste management is a cornerstone of our commitment to sustainability. By minimizing waste generation, optimizing recycling and ensuring safe disposal practices, we not only protect the environment, but also set a standard for operational excellence.”



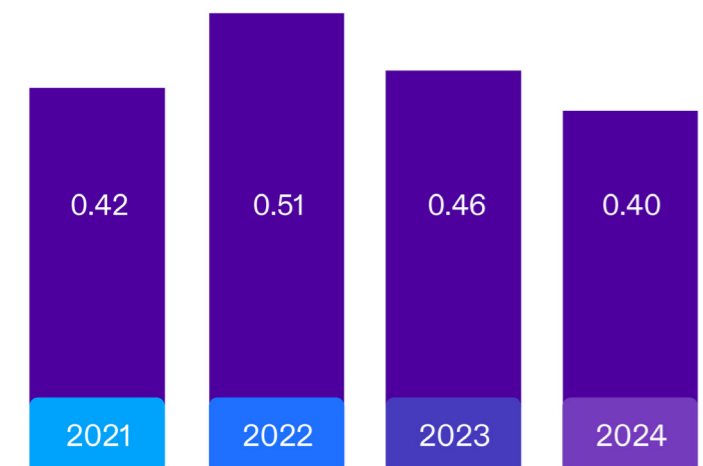
**Leah Scott**  
 Manager, Environmental, Health and Safety

## Water

We are modest users of water, which we use for power generation, the manufacturing processes, R&D processes and non-production related maintenance processes. Our water consumption in fiscal year 2024 was 0.4 megaliters, or 5% of the total water withdrawal, which is 10% lower than in fiscal year 2023<sup>11</sup>. All the water we use is withdrawn from municipal systems; part of it is processed and released into the air, while the remaining water is returned to the municipal systems. We strive to minimize our water use through water-saving mechanisms at all our facilities.

In addition to our commitment to water efficiency and conservation in our manufacturing facilities, our carbonate fuel cells have the capacity to produce usable water while generating electricity. Our Tri-gen power plant in Long Beach, California can produce up to 1,440 gallons of excess water per day through an electrochemical process that converts renewable biogas into power, while co-producing renewable hydrogen. The excess water is then distributed to our client's car wash operations.

### Water Usage in Operations, Megaliters



## Air Pollution

We recognize that air emissions from our operations can have significant environmental and health implications. Therefore, we prioritize emissions reduction and control through the following initiatives:

- **Emissions monitoring and reporting:** We employ state-of-the-art monitoring systems to track and analyze emissions from our facilities, enabling us to provide real-time data monitoring and reporting to regulatory authorities and stakeholders.
- **Emissions reduction:** We seek to minimize our emissions through the use of control technologies, chemical management best practices and material substitution.

Our unique non-combustion technology produces power without emitting harmful emissions. Our manufacturing facilities do not impact local air quality. In particular, our processes emit only insignificant amounts of emissions, such as nitrogen oxides (NOx) and sulfur oxides (SOx) or particulates through our production and our power-generating platforms. In 2024, we successfully demonstrated continuance of minimal harmful emissions produced across our power plants and obtained renewed Distributed Generation certifications with the California Air Resources Board (CARB). Obtaining the certifications validates the clean air profile of our plants and allows local air quality management districts in California to exempt the fuel cell installation from the clean air permitting process.

## Biodiversity

FuelCell Energy is committed to protecting biodiversity, and our manufacturing practices are designed to minimize disruption to our natural environment. Protecting biodiversity is an integral aspect of our product development, and we also take it into consideration when commissioning new operational sites. To the best of our knowledge, we do not operate facilities located in or near protected areas or with valuable levels of biodiversity.

As we use natural resources such as water and fuels in our offices, manufacturing facilities and sites, we interact with the environment and could potentially introduce negative impacts into local ecosystems, habitats and species. Therefore, the conservation of biodiversity is integrated into our environmental management system as well as into instructions for both manufacturing locations and project sites, with the goal of avoiding or minimizing the negative impacts of our operations. Wherever we could cause potential impacts, engineering and administrative controls are initiated to mitigate possible negative influence on the environment.



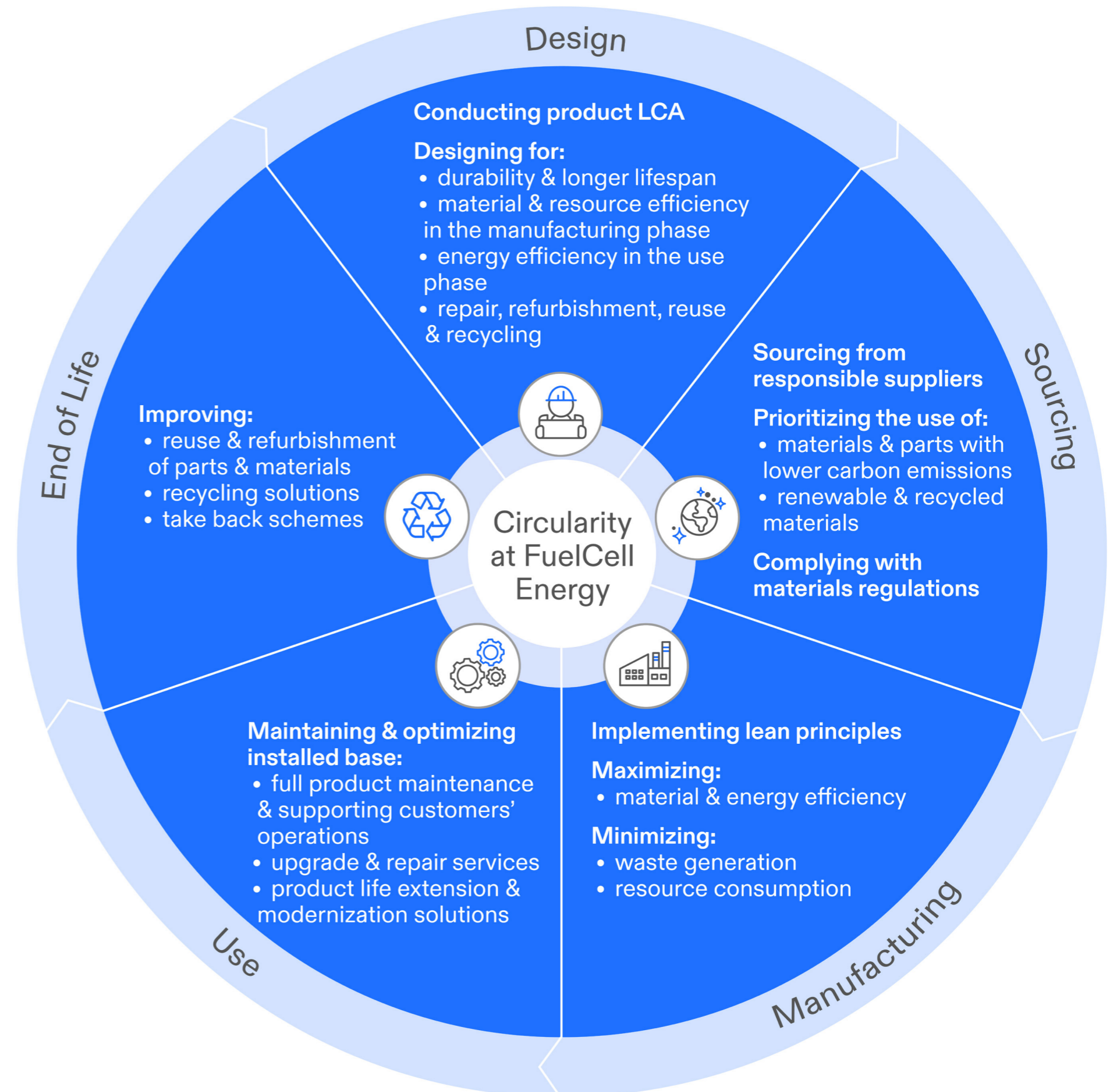
<sup>11</sup> Water consumption: the difference between water withdrawal and water discharged.

# Our Approach to Circularity

FuelCell Energy prioritizes circularity throughout the entire product life cycle, from design to end-of-life management. We are committed to continuous improvement in resource efficiency and conservation.

In 2024, we developed a framework for our approach to circularity which includes five stages of the product life cycle. The framework outlines the primary actions we take to keep materials in circulation, reducing waste and the necessity for new raw materials, and are gradually incorporating closed-loop principles into our processes.

By design,  
**93%**  
of our entire energy platform (on a weight basis) can be reused or recycled at the end of its useful life





## Circular Product Design and Engineering

### Designing for durability, longer lifespan, material and resource efficiency in the manufacturing phase

We consider variables associated with the durability, efficiency, maintenance, ease of repair and recyclability and reuse of materials during the design stage, while aiming to extend the useful in-service life of our product and its parts. Durability and longer lifespan are some of the key considerations in the selection of materials. Selecting the right material reduces the need for frequent replacements. Our balance of plant (BOP), representing the mechanical and electrical components surrounding the fuel cell, is designed to have an operating life of 25 to 30 years.

In 2024, we continued investing in research and development, focusing on the advancement of our core carbonate and solid oxide cell module capabilities and supporting our commercial fleet with product enhancements and improvements. As it relates to our fuel cell modules, these improvements center around delivering more uniform temperature distribution within the stack modules. Our intent is to improve output over the life of the modules and achieve the product's expected design life. Continued extension of design life and output of our modules over time is a core research and development focus.

### Product Efficiency

The electrical efficiency of our carbonate fuel cell solutions ranges from approximately 47% to 60% upon initial operations of our platforms, depending on the configuration. When configured for combined heat and power (CHP), our system efficiencies can potentially reach up to 90%, depending on the application. Our solutions are designed to deliver high electrical efficiency where the power is used, avoiding transmission line losses, which average around 5% for the U.S. grid.

In 2024, we continued exploring new ways of further improving the efficiency and effectiveness of our platforms. Our objective is to continue improving our competitive position. We plan to meet these goals by investing in areas such as the offering of multiple platform solutions.

Additionally we're investing in methods for producing clean hydrogen, solid oxide and carbon recovery and carbon capture in order to add value for customers looking for clean and renewable energy and to aid in their decarbonization goals.

We continue to work on improving and maturing our products, implementing lessons learned into our product designs and manufacturing process subsequent to introduction. We also have continued to invest in improvement initiatives with respect to our core carbonate technology. This includes reducing internal temperatures to improve thermal management and improving the performance of our electrical balance of plant. Additionally, we're exploring implementing design changes to our commercial platforms, which are expected to improve overall product performance and efficiency.

### Life Cycle Assessment

To understand, measure and reduce the environmental impact of our products over the entire life cycle and to identify circularity potentials, we conduct regular LCAs. This year, we completed a product-level LCA for our standard carbonate fuel cell platform (natural gas and biogas options), as well as for the fuel cell with carbon recovery. The LCA focused on carbon footprint assessment and was conducted in accordance with the ISO standards 14040:2006, 14044:2006, 14067:2018 and 14026:2017.

The results from LCAs are used to:

- Identify opportunities to improve environmental performance in all life cycle stages, from the design of the product to its end of life
- Provide us with detailed information on the environmental impacts of our products, such as the highest emission materials, manufacturing processes, transport, installation and operations activities and inform our decisions and drive circularity initiatives
- Communicate environmental performance and improvement potential to internal and external stakeholders
- Give our customers clear insights into how our products will affect their emissions as they continue to focus on clean technologies



## Sustainable Materials and Supply Chain

We prioritize the use of renewable and recyclable materials, parts with lower embodied carbon emissions and sourcing from responsible suppliers. This is an essential part of our strategy to engineer and develop sustainable products.

In 2023, we invested in a digital manufacturing insights platform. This platform improves our product cost management and design, enhancing manufacturability, sustainability and supplier collaboration. It also allows us to reduce material waste by optimizing product design, shape and material. The system enables access to carbon data on a product-level model. Through this system, we can compare suppliers globally, identify carbon emissions of various components and materials and choose best-in-class suppliers while minimizing carbon emissions. In 2024, we continued integrating the system into our design, engineering and procurement processes.



## Efficient Manufacturing and Operations

Resource-efficient operations contribute to our broader circularity approach and improve our product life cycle footprint. This includes reducing our energy and water consumption, as well as mitigating waste and pollution in our facilities. We aim to enhance our environmental management systems, aligned with ISO 14001:2015, and improve our resource efficiency through sustainable design and lean practices.

We strive to maximize metal recovery, such as scrap, at our manufacturing sites and work with recyclers and waste managers who collect and recycle scrap materials. These reuse and recycling solutions allow us to reduce the portion of virgin materials and create material efficiency at the production level by capturing value from manufacturing reverts.



In 2024, we began efforts to adopt lean operating principles more fully at FuelCell Energy. The lean methodology is a proven framework to effectively identify waste, seek continuous improvement and pursue exceptional achievements in quality and productivity.



**Kix Ryen**  
Senior Vice President, Chief of Staff and Transformation Officer



## Extended Use

We operate and maintain all of our plants for the life of the project, regardless of the ownership structure. We offer a comprehensive portfolio of services, including engineering, project management and installation, and long-term operating and maintenance programs, including trained technicians who remotely monitor and operate our platforms around the world, 24 hours a day and 365 days a year. We commit to providing high-standard maintenance and repair services and continuous optimization of our installed base to ensure safe, resilient and long-term operation.



## End-of-Life Solutions

We maintain a chain of custody and responsibility for our products throughout the product life cycle and strive for “cradle-to-cradle” sustainable business practices, incorporating sustainability into our corporate culture. When our platforms reach the end of their useful lives, we decommission them, refurbish and reuse certain parts and then recycle most of what we cannot reuse. By weight, approximately 93% of the entire power plant can be reused or recycled at the end of its useful life.

On a regular basis, our Global Monitoring and Control Center (GMCC) determines if there is a need for platform repairs or upgrades. The materials that cannot be reused are sent to recycling facilities. As a result, out of an approximately 110,000-pound carbonate fuel cell module, the weight of components that go to landfill without a recycling, reuse or refurbishment stream comprises approximately 6,300 pounds, or less than approximately 7% of its total weight. Typical components that go directly to landfill without refurbishment or recycling are sealants, adhesives, filters, tape, non-recyclable plastics, insulation materials and ceramic components.

In 2024, we made adjustments to our waste analysis to support a more accurate picture of our waste management, reuse and recycling. We also started exploring new ways to recover metals in our internal manufacturing shops to increase recoverability rates and deliver more reclaimed metal to our supply chain and back to the production processes.

When we decommission our platforms at the end of their useful life, there are multiple end-of-life management pathways available:

- Parts can be upgraded, repaired and returned to the manufacturing process, reducing the number of new parts required for production.
- Parts can be recycled and returned to the raw material stream, then re-enter the value chain.



The mild environment of carbonate fuel cells means that many components can be recovered from end-of-life modules, refurbished to as-new condition and redeployed into new builds. In 2024, we were focusing on working with our module deconstruction vendors to identify best opportunities for component reuse, which we will be pursuing into 2025. This will reduce our carbon footprint, reduce the amount of virgin material sourced and — of course — significantly reduce cost.



**Jan de Bakker**  
Supervisor, Project Engineering

# People

**In this section:**

Workforce Development and Training ..... 39

Talent and Belonging..... 41

Safety, Health and Well-Being..... 45

Responsible Supply Chain .....47

Community Impact ..... 48



# Workforce Development and Training

At FuelCell Energy, we're building an exciting, inclusive community while striving to enable a world empowered by clean energy. We believe that the most innovative workplaces embrace people of all experiences, and we're energized by bringing a diverse group of committed individuals together to work towards a shared vision.

## Prioritizing Our People

We don't just believe in building a sustainable future — we also believe in creating a sustainable business community for our partners and employees. These practices include hiring from a diverse candidate pool, fostering deep engagement as part of our company culture and training the next generation of innovators. Some notable highlights from fiscal year 2024 include:

- The company-wide deployment of a mentorship program, SuccessFUEL, to exchange ideas and provide support outside traditional reporting structures
- A successful first year of PowerFUEL Women, our employee resource group for women and their allies
- An employee engagement survey suggesting improved performance in key areas including accountability and communication
- An expanded strategic diversity, inclusion and belonging plan outlining critical initiatives and metrics for success
- A new employee resource group, Fuel4Life, devoted to developing key initiatives around physical, emotional and financial wellness

## Employee Engagement Survey

### A continuous culture of excellence

A company's culture is continuously evolving. We strive to listen to our people and iterate accordingly. In 2023, FuelCell Energy launched an annual employee engagement survey to better understand the needs of our growing global workforce. We've continued this practice into 2024. The response rate for this year's employee engagement survey was 75%, and we were excited to see progress in a number of areas. Our

community indicated we had improved performance in several ways, including:

- Performance and accountability
- Communication
- Management effectiveness

Noting some areas in which FuelCell Energy's workforce suggested room for improvement, we launched a series of focus groups with team members to better understand concerns and ensure better outcomes.



## Developing the Talent of Tomorrow

As a leader in our industry, we take our responsibility to train the workers of today and of tomorrow seriously. Our training and development programs are designed to foster best-in-class safety practices and empower strong leaders in the sustainability sector.

### Nurturing the next generation of clean energy pioneers

At FuelCell Energy, we've been thrilled to introduce young scientists and engineers to our vision for a clean energy future. This past year saw the continuation and expansion of our internship program, which launched in 2023. In 2024, we welcomed six students from five universities, all studying mechanical or chemical engineering, to our Danbury and Torrington, Connecticut, offices. In our Calgary location, 13 additional interns from four universities joined our rigorous co-op program, in which young people are placed in our mechanical, automation, engineering, materials or research departments. Over the course of an eight- to 16-month term, co-op participants are assigned to a specific project, building critical skills and applying them to meaningful work.

### Leveraging the diversity of our people for success

This year, we launched SuccessFUEL, a formal mentorship program co-developed by FuelCell Energy's Human Resources department, and PowerFUEL Women, our employee resource group for women and allies. The program was designed to facilitate the exchange of new ideas and enable growth within our community, as well as leverage the diversity of our people for our collective benefit. By building active and trusting relationships across reporting lines, mentors and mentees can accelerate their professional development and freely exchange ideas to meet their business goals. For junior employees from groups traditionally under-represented in the science, technology, engineering and mathematics (STEM) fields, a formal mentorship opportunity can represent a particularly critical opportunity for support.

The program pairs employees seeking an opportunity for professional development with leaders who are eager to provide career guidance and support. For leaders, the engagement brings fresh ideas and an opportunity for reflection. During a four-month pilot program in early 2024, open exclusively to members of PoweFUEL Women, mentors and mentees met every two to four weeks. The pilot had excellent results: 100% of the 20 mentors and mentees opted to continue their relationship, resulting in a broader rollout of the program across the entire FuelCell Energy community in July.

“Our people remain our greatest asset. This year, we made tremendous strides by enhancing training and professional development, formalizing mentorship partnerships and expanding our internship program. These achievements not only empower our workforce, but also strengthen our ability to deliver world-class sustainable energy solutions.”

**Christine Alba Quaranto**  
Director, Learning and Talent Development

2

Two full-time employees at FuelCell Energy deliver in-person training across the organization year-round.

Approximately

\$538,000

invested in formal training for employees in fiscal year 2024.

75%

of employees strongly agreed or agreed that they were provided with sufficient training to perform their roles in our fiscal year 2024 Employee Engagement Survey.

38

hours of formal training per employee in fiscal year 2024 were delivered, supplementing significant on-the-job training for all employees.

100%

of FuelCell Energy employees are eligible for an annual performance review. In fiscal year 2024, 100% of employees received a review.



# Talent and Belonging

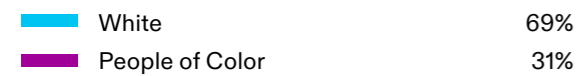
We believe a diverse company is a strong company, and that innovation is fostered in a safe and empowering community whose members possess varied backgrounds and viewpoints. Our strategic diversity, inclusion and belonging framework guides how we foster an inclusive workplace that supports all employees.

## Our Belonging Strategy

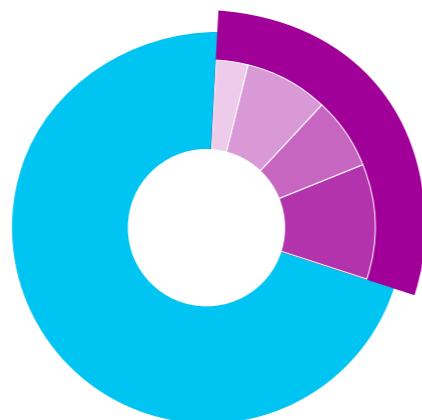
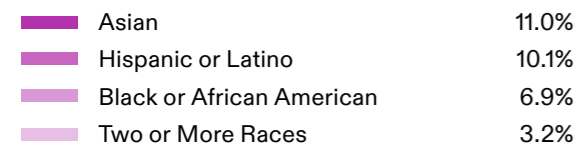
We continuously reinforce the principles of diversity, inclusion and belonging through our hiring practices, our Human Resources policies and in our employee training. FuelCell Energy tracks key workforce diversity metrics at every level of the organization and conducts regular audits to identify and address disparities within the business. As a growing company, we have identified three pillars of focus as we continue to build a workplace in which inclusivity is valued and every employee feels comfortable.

### Workforce Diversity at FuelCell Energy, Fiscal Year 2024

#### Employees Diversity



#### People of Color Representation in Workforce



### Education and building awareness

FuelCell Energy provides ongoing education to promote understanding and respect among employees. We believe such ongoing learning, including training programs focused on cultural competency and unconscious bias, can raise awareness and foster a respectful environment. We also prioritize inclusive communications, striving to ensure that company policies and messaging are gender neutral and mindful of difference. We are in the process of developing additional comprehensive training for all employees, focusing on understanding the complex interplay of diversity, equity, identities, cultures and abilities in the workplace as well as the importance of inclusive language and spaces.

### Community engagement and partnerships

As a company, we work to facilitate partnerships and engagements that help ensure that the communities in which we work are thriving. FuelCell Energy has consistently worked with a wide variety of stakeholders to tailor our installations to the needs of the local community, including working directly with municipalities and/or nonprofits to address specific concerns, such as improving air quality or promoting more general needs, like raising awareness regarding the many sources of clean energy.

### Talent life cycle development

At FuelCell Energy, we prioritize equitable hiring practices by ensuring a diverse slate of candidates for every role to be filled and cast a wide net to recruit the most capable talent. We periodically review promotions and the progression of current roles to ensure fairness and equity, and track the representation of groups along the lines of gender, age, disability status and race/ethnicity at all levels of the organization. We regularly examine turnover and areas with low engagement scores to see where we might be able to improve our practices.

“By embracing diverse perspectives and fostering belonging, we unlock innovation and create a workplace that reflects the world we’re working to sustain. This commitment is foundational to our success.”

**Danielle Chateauf**  
Director, Talent Acquisition and Belonging

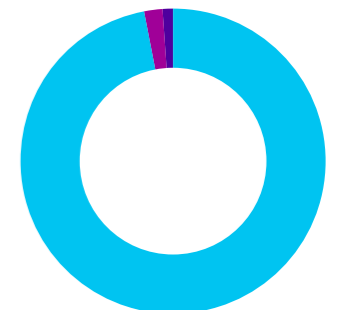
### Employees by Gender 2024

Women	26%
Men	73.6%
Other	0.3%



### Employees by Region 2024

U.S. and Canada	96.6%
Europe	1.9%
Asia	1.5%



### New Hires by Gender 2024

Women	34.3%
Men	65.7%



### New Hires by Age 2024

Age below 30	39.4%
Age 31-50	46.5%
Age above 50	14.1%



## Advancing Women

Last year, FuelCell Energy community members launched the PowerFUEL Women employee resource group, a collective of women and their allies. The group aims to empower and develop all who identify as women at FuelCell Energy by fostering an inclusive environment through strong, supportive connections, while amplifying their voices, encouraging allyship, promoting professional growth and making a positive impact beyond the workplace. In October 2024, the group celebrated its first anniversary following a productive year. The mentorship program the group co-launched, SuccessFUEL, was a major success and has been rolled out companywide.

In 2024, PowerFUEL Women hosted four “Fuel4Thought” lunch-and-learn events, with topics ranging from building leadership skills to reading financial statements. In addition, the group brought together members in two PowerFUEL Women lunches, one in Torrington and one in Danbury, Connecticut, where community members could engage in smaller groups. The group also hosted a speaker event in which Ivana Jemelkova, a globally recognized leader in energy and sustainability, spoke about the importance of women in clean energy. As part of its commitment to equity and social sustainability, PowerFUEL Women regularly partners with local organizations, donating employee time to support community members in need.

## Employee Resource Group

In 2024, FuelCell Energy launched a new employee resource group (ERG), a three-pronged initiative to support our team’s overall wellness. The Fuel4Life ERG was formed to create a supportive and inclusive working environment and help our colleagues live their best lives. Fuel4Life focuses on three forms of wellness to support a range of goals:

- **Physical wellness:** Focused on healthy eating and physical activity by sharing recipes, organizing fitness challenges and facilitating group activities such as hiking clubs and 5K events
- **Emotional wellness:** Offering peer support and social connection and facilitating work-life balance by promoting mindful practices and sharing educational resources
- **Financial wellness:** Helping the FuelCell community achieve financial health by organizing workshops and resources around budgeting, investing and saving

Each section of Fuel4Life is helmed by a dedicated chairperson and steering committee, who meet regularly to develop wellness initiatives and plan events.

“Empowering women is essential to shaping a more inclusive and innovative workplace. By creating a culture where women thrive, we’re not only driving diversity, but also sparking ideas that advance our mission of sustainability and social progress.”



**Robin Dudley**  
Co-Chair and Treasurer of PowerFUEL Women,  
Trade Show Specialist

# Employee Volunteering

At FuelCell Energy, we take pride in our culture of volunteerism and strive to make a positive impact on the communities in which we operate. In 2024, as we scaled our technology globally, we worked on a local level to improve the places we call home.

## Earth Day Cleanup: A global effort for local sustainability

On Earth Day, FuelCell Energy’s global workforce demonstrated its unwavering commitment to sustainability by organizing and participating in Earth Day cleanup from Connecticut to Germany. In our Connecticut offices, team members participated in a cleanup of the surrounding Danbury and Torrington areas, collecting a staggering 262 pounds of garbage. In our German office, FuelCell Employees organized an Earth Month cleanup. Simultaneously, our colleagues in South Korea, Japan and those working remotely or in the field joined the Great Global Cleanup 2024 or participated in their own local events. These achievements reflect our broader commitment to environmental stewardship, both on the global scale and in our local communities.

### Calgary, Alberta, Canada

In June, members of our Calgary team dedicated their time to the Calgary Down Syndrome Association’s Ups and Downs Street Meet event to help support families and people with Down syndrome. The event, which brought together members of the broader Calgary community, included a 3K walkathon, live entertainment, face painting and a barbeque lunch. Nine members of our FuelCell Energy Calgary team participated in the event, helping to raise money for this critical local cause.

### Danbury and Torrington, Connecticut

In 2024, the PowerFUEL Women group partnered with four organizations operating in and around our offices in Connecticut to further its mission of creating strong and supportive connections. In January, the group assembled 60 lasagnas for local families in need in collaboration with Lasagna Love, a global nonprofit facilitating homemade meal delivery between neighbors in the hopes of eliminating the stigma of asking for help. For the back-to-school season in August, members partnered with

South Street Elementary School in Danbury and Southwest Elementary School in Torrington to help students and teachers stock up on much-needed supplies. During the Back-to-School Drive, the PowerFUEL Women group solicited donations of commonly requested supplies from the FuelCell community, then packaged and delivered 100 supply

bags, greatly exceeding their goal to supply one classroom for each school. In December, the PowerFUEL Women sponsored a family of five through the FISH emergency shelter in Torrington by hosting a drive to collect clothes, toys, food and necessities as they await permanent supportive housing.

Calgary, Canada



Torrington, Connecticut

Danbury, Connecticut



Taufkirchen, Germany

# Safety, Health and Well-Being

We are committed to being an industry leader when it comes to protecting the safety, health and well-being of our people and the communities in which we operate. We strive to create a culture of shared responsibility throughout our organization to foster a physically and psychologically safe environment. All FuelCell Energy employees, onsite contractors and visitors must comply with our EHS Policy. In addition to upholding all applicable laws and regulations related to occupational health and safety in the workplace, we aim for zero injuries and zero safety incidents. We also expect partners in our supply chain to adhere to these standards.

Overall, FuelCell Energy maintains a strong safety record, the result of ongoing education and training for our employees, risk and hazard assessment and continuous improvement in all areas in line with our Occupational Health and Safety (OHS) Management Standard and policies. In 2024, we furthered this mission by increasing visual safety awareness and training, as well as forming a cross-departmental internal group to evaluate injuries and new reporting mechanisms to expedite health and safety communications. This fiscal year, we also added additional environmental expertise to our safety and security team. In addition, FuelCell Energy completed a successful audit of our ISO 14001:2015 certification, a crucial framework concerned with the reduction and management of our facilities' environmental impacts.

## Our Occupational Health and Safety Management System

We aim to deliver quality products and services to our customers to meet their requirements, in line with our quality management system. Our organization is committed to a Six Sigma culture that motivates us to drive continuous improvement in our capabilities and performance. In 2024, we certified 23 Six Sigma practitioners at our company: 12 Black Belts and 11 Green Belts. We also trained 105 employees in the 8D Problem Solving Process.

FuelCell Energy's operations are certified to three core ISO standards:

- ISO 9001:2015 – Quality management systems
- ISO 14001:2015 – Environmental management systems
- ISO 45001:2018 – Occupational health and safety management systems

### Total Recordable Injury Rate (TRIR)

2022	2023	2024	YOY
2.16	1.68	1.04	-38%

**Take charge of your SAFETY**

- See it (Eye icon)
- Act on it (Arrow icon)
- Fix it (Checkmark icon)
- Eliminate it (X icon)
- Talk about it (Speech bubble icon)
- You are the key (Key icon)

FuelCell Energy

## Promoting Employee Well-Being

To encourage employees to maintain their well-being and overall fitness, we promote activities throughout the year that help them stay healthy in both body and mind. For example, in the spring of 2024, we launched the FuelCell Energy Fitness Fundamentals Challenge to promote a well-rounded, holistic fitness routine.

And on World Mental Health Day in October, our Fuel4Life ERG launched a MindFUEL lunch-and-learn series. The program aims to help employees manage stress, cultivate resilience and improve their overall well-being through 30 minutes of mindfulness practice.

### Our 2024 Fitness Challenge results:

139

employees joined

More than

44,000,000

steps walked



# Responsible Supply Chain

FuelCell Energy requires suppliers to comply with our [Supplier Code of Conduct](#), which specifies their obligations in terms of ethical and compliant business performance, upholding human and labor rights and operating in an environmentally responsible manner, among other things.

## Insisting on Ethical Supplier Conduct

In fiscal year 2024, we implemented AI-powered supply chain risk management software that permits real-time monitoring of our global supply base across key risk attributes, including financial risk, cybersecurity, catastrophic, geopolitical, restrictions and environmental, social and governance across our Tier I, II and III suppliers. This software augments our existing risk management process, which evaluates suppliers against additional attributes such as cost, quality and delivery performance. Both tools highlight opportunities to mitigate risks for our business and our customers.

 [Supplier Code of Conduct](#)

“ Ethical sourcing is essential to our mission of driving sustainable innovation. By ensuring transparency and accountability throughout our supply chain, we not only uphold our values, but also strengthen relationships with our partners. This commitment to responsible sourcing supports the integrity of our products and helps us create positive impacts across communities and the environment. ”

**Johanna Sayers**

Vice President, Supply Chain

## Eliminating Conflict Minerals in Our Supply Chain

Our fuel cell power plants utilize minor amounts of 3TG minerals (tin, tungsten, tantalum and gold) that are classified as conflict minerals. Production of fuel cells, including the manufactured fuel cell parts and completed fuel cell module, does not utilize 3TG minerals; however, some procured components, such as computer circuit boards, include minimal amounts of 3TG minerals. In fiscal year 2024, 3TG minerals accounted for less than 0.0003% of the total shipment weight of our products.

In line with U.S. regulations, we monitor our supply chain for the presence of conflict minerals and disclose our results annually. In 2024, we contacted 134 active suppliers and asked them to complete a conflict minerals questionnaire, a query to which 85% responded. The majority of suppliers confirmed that they do not source 3TG metals for their products, and only 14 confirmed that they procure at least one of the four conflict minerals. Of those 14 suppliers, four indicated that they have policies and plans to source 3TG metals in non-conflict areas, and we continue to work with the balance of suppliers to implement those policies and plans in 2025. Failure to implement policies and plans by this date may result in us terminating our relationship. Supplier contractual agreements include the requirement to comply with conflict mineral regulations. We continue to exercise due diligence in this area.

 [2023 Conflict Minerals Report on Form SD](#)

# Community Impact

We believe that by providing access to clean and reliable energy, we create opportunities within communities while improving our environment. We strive to advance our technology to provide communities with clean and affordable power while supporting resiliency, economic development and social impact. But our impact is not limited to the products we produce. As we have grown as a company, we have committed to embracing sustainability — not just in our technology, but through a shared vision of a more equitable and climate-friendly future.

## We enable local, high-efficiency power generation

Fuel cells can ensure that a reliable energy supply is available to maintain operations in the event of a grid disruption due to unforeseen events. Increasingly, energy resilience is critical for communities, such as during grid interruptions from severe weather or natural disasters.

At FuelCell Energy, our teams of engineers, scientists and researchers have spent years advancing technologies allowing us to produce high-efficiency power at the location where the power is used, improving overall energy efficiency and enhancing grid reliability. Locating power near a user also often provides opportunities to use the waste heat from a fuel cell in combined heat and power applications, creating additional sustainability benefits by reducing the use of thermal fuel.

## We minimize land use to maximize community access to green space

Our fuel cell modules are land-efficient, suitable for use even in dense residential areas with limited space. A single acre of land supports a fuel cell park capable of generating 10 MW of power, a fraction of the land required by a solar farm to generate the same output. In a time when green energy is generally land-intensive, our solutions leave more land for parks, schools or other productive uses.

“In Danbury, Connecticut, we have a strong interest in sustainability and environmentally friendly initiatives. That is why we are so proud that fuel cell technology is being designed and perfected right here in Danbury. Communities across the State of Connecticut have benefitted from this impressive technology for decades, and we’re excited to see what FuelCell Energy has been able to accomplish right in our backyard.”

**Roberto Alves**  
Mayor of Danbury



<sup>12</sup> [Overview of EPA's Brownfields Program](#), EPA, January 19, 2021.



### Providing Clean Power to the City of Derby, Connecticut

In 2024, we completed the deployment of two fuel cell sites delivering clean and affordable power to the city of Derby, Connecticut as part of the state’s effort to expand renewable energy sources. This project is the second-largest fuel cell park in North America — following only FuelCell Energy’s Bridgeport Park — and supplies clean power to more than 10,000 households while generating substantial tax revenue for the city. Additionally, all the components of the fuel cell stacks in this facility were made locally, in FuelCell Energy’s Torrington, Connecticut, factory.

## How it works:

Fuel cells at this site produce 14 Megawatts of clean, low-carbon power for Connecticut.



**1** Fuel cells electrochemically convert the natural gas to electricity.



**2** The fuel cells produce enough electricity to power more than 10,000 homes.



**3** The fuel cells’ electrochemical reaction is virtually free of emissions.



**4** Connecticut utilities purchase the electricity, which flows onto the grid.



### Our technology provides clean power to improve community health

At FuelCell Energy, we believe that a community should never have to make a choice between reliable access to energy and living in a healthy environment. Since the company’s inception, our engineers, scientists and researchers have been dedicated to perfecting power-generation technologies that are efficient and do not produce harmful emissions. Our fuel cells electrochemically combine fuel and air to create power without combustion, through a process that is virtually free of NOx, SOx and particulate matter emissions — making our technology safe for communities.

### FuelCell Energy supports energy resilience for critical infrastructure

Fuel cells can ensure that a reliable energy supply is available to maintain operations in the event of a grid disruption due to storms and other events. Energy resilience can be very beneficial to communities during grid interruptions from severe weather or natural disasters. A 2.2 MW fuel cell microgrid in Woodbridge, Connecticut provides power to a local high school and other nearby buildings. During power outages, the fuel cell can switch to microgrid mode to provide reliable and uninterrupted power to seven critical town facilities.

### We embrace economic development to address longstanding environmental concerns

In 2021, the U.S. Environmental Protection Agency (EPA) estimated that there were more than 450,000 brownfields in the U.S.<sup>12</sup> Brownfields pose environmental exposure risks to community members via access to the sites or the contamination of soil, air and/or water at the site. Cleaning up and reinvesting in these properties requires significant resources.

Our platforms can be and have been situated on polluted properties where the project pays for remediation, returning the property to city tax rolls. When we situate our platforms on brownfields, we clean up and sustainably reuse the land, which leads to improved local environmental quality. It also attracts businesses, creates jobs and provides additional tax revenue for local governments, all while enhancing local power reliability.

### Providing Energy Reliability, Security and Resilience to Critical Infrastructure: U.S. Navy Submarine Base, Connecticut

In 2024, Naval Submarine Base New London (SUBASE) celebrated the launch of a new cybersecure microgrid that can fully power the base in case of a grid outage, thereby delivering clean energy to this vital infrastructure installation. FuelCell Energy’s platforms supply 7.4 MW of power to the microgrid.

Situated on the banks of the Thames River in Groton, Connecticut, SUBASE is known as the Navy’s “First and Finest Submarine Base.” It houses the Naval Submarine School, a submarine medical research laboratory and approximately 6,500 military personnel and their families. With more than 1,000 civilian employees, it stands as one of the largest employers in the region.

“Our microgrid at SUBASE is the first of its kind in the entire Navy to support such a complex electrical infrastructure.”

**Captain Kenneth Curtin Jr.**

Commanding Officer of Naval Submarine Base New London, Connecticut

### Reducing Air Pollution and Improving Community Health in the City of Long Beach, California

In the spring of 2024, we, along with Toyota Motor North America (Toyota), celebrated the grand opening of a globally unique Tri-gen system at the Port of Long Beach, California.

The Tri-gen system in Toyota’s facility will help contribute to a reduction in emissions both for Toyota and the surrounding area while simultaneously generating water and power, supporting the processing of approximately 200,000 new Toyota and Lexus vehicles annually. It also provides excess electricity to the local power utility, Southern California Edison, helping support the local electric grid.

The Los Angeles-Long Beach metropolitan area has historically been among the most ozone-polluted regions in the nation.<sup>13</sup> Our breakthrough system uses fuel cells to convert methane-rich directed biogas into electricity, clean hydrogen and usable water to power Toyota’s sprawling facility without harming the neighboring ecosystem.

With funding from the U.S. DOE, Tri-gen was developed initially as part of a project in 2011 at the Orange County Sanitation District’s wastewater treatment plant in Fountain Valley, California. In 2023, construction on the Tri-gen facility was completed, and in 2024, we celebrated, along with Toyota, the grand opening, where the system was officially demonstrated to California policymakers, local officials, media outlets and our other partners.

In addition to being the first facility of its kind and generating 100% on-site electricity, hydrogen and water simultaneously, this project displays our company’s commitment to environmental justice in the areas where we operate. Our circular system is powered by organic waste, avoiding landfills, and it puts that waste to purposeful use. In a California community where water can be scarce, our Tri-gen system provides 1,400 gallons of water per day while producing up to 2.3 MW of electricity and 1,200 kg of hydrogen to power port operations.

Crucially, the system shows a pathway to eliminating emissions and provides cleaner air, with fewer emissions, to the immediate area, helping our neighbors live happier and healthier lives. Thanks to our groundbreaking Tri-gen system, we’ve estimated that more than 9,000 tons of CO<sub>2</sub> will disappear annually from the California ecosystem. This major milestone is an example of FuelCell Energy’s ability to realize and scale our unique fuel cell technology, an increasingly critical solution in the global effort to reduce carbon emissions and empower a clean energy future.



“FuelCell Energy and Toyota’s collaborative effort signifies technological innovation and also positions Long Beach at the forefront of global leadership in renewable energy solutions.”

**Rex Richardson**  
Mayor of Long Beach



“I grew up in Southern California and remember the days when there were third-stage smog alerts and we had to stay indoors. Fifteen years ago, there would have been a lot more soot and pollution. Today, that air is clearer thanks to unique systems like Tri-gen. Tri-gen not only benefits businesses and delivers zero-emission transportation for light- and heavy-duty vehicles, but it also improves air quality in our community, reduces water usage and provides immediate and long-term benefits to the environment.”

**Paul Fukumoto**  
Director, Tech and Product Solutions

<sup>13</sup> [State of the Air: Los Angeles-Long Beach](#), American Lung Association, December 13, 2024.

# Governance

**In this section:**

Corporate Governance ..... 52

Enterprise Risk Management ..... 53

Ethics and Compliance ..... 54

Data Privacy and Information Security ..... 56



# Corporate Governance

Robust, responsible corporate governance is essential to maintain trust in our business and ensure our continuity. Our Board of Directors is deeply engaged with our sustainability strategy and performance — as well as with other processes that lead to ethical, responsible, accountable and transparent conduct throughout our organization.

## Maintaining Robust and Responsible Corporate Governance

Enabling a clean energy future requires a strong foundation of corporate governance. Our Board of Directors is charged with overseeing company performance, compliance programs and effective risk management. It also provides strategic guidance to the Chief Executive Officer and senior leadership. In 2024, we welcomed Tyrone Michael (“T.J.”) Jordan to our Board of Directors. The Chairman of the Board is Mr. James H. England.

Our board has three standing committees:

- The Audit, Finance and Risk Committee
- The Compensation and Leadership Development Committee
- The Nominating, Governance and Sustainability Committee

## Board Engagement on Sustainability

Our Board is fully committed to our sustainability strategy. Our Nominating, Governance and Sustainability Committee, a body composed entirely of independent directors, supports the Board in decision-making related to these matters. This includes reviewing our sustainability strategy, setting targets and monitoring our progress.

The Board of Directors receives quarterly updates on our sustainability progress and reviews our annual sustainability report prior to publication to endorse its content. Members of our Board also regularly engage with investors to discuss our business and sustainability plans.

 [Corporate Governance Policies](#)

 [Contact the Board](#)

### FuelCell Energy Board of Directors\*

Total number of directors (including the Chair)	8
Separation of Chair and Chief Executive Officer roles	Yes
Independent directors	7 (88%)
Non-executive directors	7 (88%)
Directors with financial expertise	8 (100%)
Directors with technology expertise	4 (50%)
Directors with ESG expertise	8 (100%)
Women directors	4 (50%)
Directors from ethnically diverse groups	3 (38%)
Age span of directors	58 - 78 (average age: 65)
Tenure of directors	Less than 1 year - 16 years (average years: 6)

\* As of February 12, 2025.



“ FuelCell Energy is committed to providing advanced, sustainable solutions to meet growing demand for zero-to-low-carbon energy delivery and decarbonization. TJ’s addition to the board is a testament to the company’s dedication to deepening the FuelCell Energy Board of Directors’ operational skill base as the company scales globally. ”

### Natica von Althann

Director, Chair of the Nominating, Governance and Sustainability Committee

# Enterprise Risk Management

## Managing Risk, Securing Our Future

We continue to invest in identifying and managing risk as we work to facilitate a safe, secure and practical journey to net zero. Our Enterprise Risk Management Committee (ERMC) is comprised of leaders with varied functions across the company. It is chaired by our Chief Financial Officer.

ERMC members are tasked with ensuring that risk management plans are implemented for key risks identified in each of their function areas. The team meets on a quarterly basis and oversees our formal risk management process. During the annual risk assessment, approximately 30 executives and directors are interviewed.



“ Effective enterprise risk management is critical as we navigate the evolving landscape of climate challenges. By proactively identifying and mitigating risks related to climate change, we ensure the resilience of our operations and continue to drive sustainable growth. ”

**Michael Bishop**

Executive Vice President and  
Chief Financial Officer

## Climate Risk Management

A potential risk related to sustainability has been our ability to track and disclose key metrics. Since we identified this key area in 2022, we have invested in robust reporting leadership and processes. In 2023, we completed our first comprehensive carbon inventory. In 2024, we performed a detailed climate-related risk assessment.

[Learn more about our 2024 climate risk assessment in the Climate Risks and Opportunities section of this report.](#)

# Ethics and Compliance

At FuelCell Energy, we're committed to operating with honesty and integrity and in full compliance with local laws and regulations — for the health of our company, for our employees and for the states and countries in which we do business.

## Our Business Culture and Values

As we work to enable a world empowered by clean energy, we believe sustainability extends to the products we create and the resources we use as a business. We win as a team by bringing passion to our work and creating an environment of physical and psychological safety where everyone can bring their authentic selves to work every single day. We are guided by four central principles:

- **Safety:** Physical and psychological: to foster a healthy and safe environment
- **Integrity:** in everything we do
- **Innovate:** to deliver impactful products to our customers
- **Accountability:** to ourselves, our shareholders and our community

## Our Code of Business Ethics

Our Code of Business Ethics outlines the values and the conduct we expect at FuelCell Energy. It also provides information on key policies, procedures and resources. In 2024, we updated our Code of Business Ethics and aligned it with best practices and the highest industry standards. The code is designed to deter unethical behavior by the company or its employees, as well as to promote:

- Honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships

- The avoidance of conflicts of interest, including disclosure to the Audit, Finance and Risk Committee of the Board of Directors of the Company (the "Audit Committee") of any material transaction or relationship that reasonably could be expected to give rise to such a conflict
- Full, fair, accurate, timely and understandable disclosure in reports and documents that the Company files with, or submits to, the Securities Exchange Commission, and in other public communications made by the Company
- Compliance with applicable governmental laws, rules and regulations
- The application of the highest professional standards and fair business practices to every project and assignment
- Respect for the confidentiality of information, including the information of our customers
- Social responsibility and fair treatment of others
- Prompt internal reporting to the Audit Committee of violations of the Code
- Accountability for adherence to the Code

 [Code of Business Ethics](#)



## Human Rights Policy

FuelCell Energy is committed to fully upholding laws and regulations in all countries in which we operate. We endeavor to foster and promote human rights throughout our operational sites and subsidiaries worldwide. We expect our employees and business partners, including our suppliers and customers, to share our commitment to respecting human rights.

Respect for human rights is fundamental to the way we manage our business. We recognize that human rights are inherent to all human beings regardless of race, sex, nationality, ethnicity, language, religion or any other status. Human rights include, but are not limited to, the right to life and liberty, freedom from slavery or torture, freedom of opinion and expression as well as the right to work and pursue education.

Our approach to respecting and upholding human rights is informed by:

- The international human rights principles as encompassed in the Universal Declaration of Human Rights (as part of the International Bill of Human Rights)
- The UN Guiding Principles on Business and Human Rights
- The International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work
- The OECD Guidelines for Multinational Enterprises

We do not tolerate child labor, forced labor or human trafficking. Additionally, we do not tolerate any use of force or other forms of coercion, fraud, deception, abuse of power or other means to achieve control of another person for the purpose of exploitation.

We confirm our commitment to take all reasonable possible measures throughout our operations, including our partnerships and extended supply chain, to act with respect for all individuals, and to protect and uphold their rights. FuelCell Energy, to the best of our knowledge, refrains from working with business partners that are using forced or compulsory labor in their operations.

We provide mandatory training on human rights and the role and responsibilities of every FuelCell Energy employee to uphold them; we also assess human rights throughout our business as part of our annual risk assessment process.

## Anti-Bribery and Corruption Policy

FuelCell Energy operates in a wide range of legal and business environments. As a company, we strive to conduct ourselves according to the highest standards of ethical conduct. Throughout our operations, we seek to avoid even the appearance of impropriety in the actions of our directors, officers, employees and agents.

Accordingly, our Anti-Corruption Policy reiterates our commitment to integrity and explains the specific requirements and prohibitions applicable to our operations under anti-corruption laws, including, but not limited to, the U.S. Foreign Corrupt Practices Act of 1977 (FCPA). Our Policy contains information intended to reduce the risk of corruption and bribery from occurring in the Company's activities. We strictly prohibit all forms of corruption and bribery and will take all necessary steps to ensure that corruption and bribery do not occur in our business activities.

Aside from the FCPA, we may also be subject to other non-U.S. anti-corruption laws, in addition to the local laws of the countries in which we do business. Our policy generally sets forth the expectations and requirements for compliance with those laws, including those related to:

- Prohibited payments
- Political and charitable contributions
- Recordkeeping
- Cash payments
- Representatives
- Compliance
- Duty to cooperate

 [Human Rights Policy](#)

 [Anti-Corruption Policy](#)

## Training and Compliance

We conduct annual training in ethical conduct, and all employees are expected to attend. Training in our Code of Ethics is an essential part of new hire orientation. This training also explicitly includes anti-corruption, in line with our Anti-Corruption Policy. In 2024, we incorporated courses on human trafficking and global anti-corruption into our training process for all team members around the world.

All employees are encouraged to report suspected violations of our Code of Ethics, anonymously if they so wish, and without fear of reprisal. We also maintain a year-round program of proactive communications to employees to ensure awareness and willingness to report suspected violations. Our whistleblowing hotline is open to employees in all countries. Reported violations will be promptly investigated. Retaliatory action against any employee or other person who in good faith reports suspected violation of this policy is not permitted, and any such reprisal actions are deemed a violation of this policy.

### Our 2024 training in ethical conduct:

**100%**  
completion rate of training  
on human rights and anti-  
corruption

# Data Privacy and Information Security

FuelCell Energy believes securing information and protecting privacy are both essential to our business continuity and critical in maintaining trust with our employees, customers and partners.

FuelCell energy takes a proactive approach to maintaining the integrity of our information systems and protecting the privacy of those who entrust us with their data. Data privacy and information security are integrated into our enterprise-level risk management system. Our Board delegates oversight of cybersecurity, the impact of emerging technologies, privacy and data management to its Audit Committee. In addition to reviewing cybersecurity practices on a quarterly basis, this committee regularly discusses data security with management and makes recommendations to the Board. We closely collaborate with industry-leading cybersecurity services providers to provide comprehensive 24/7 cyberthreat detection, alerting, containment, remediation and restoration services.

In the past year, we have continued to strengthen the layered protections across our entire information systems environment. Our progress moves us closer to achieving U.S. National Institute of Standards and Technology (NIST) cybersecurity framework compliance, which is widely recognized as an industry-leading practice. Noteworthy achievements in 2024 include:

- Implemented a series of system updates to expand and strengthen the monitoring, detection and response to suspected cyberthreats.
- Strengthened the coordination and alignment between internal Operational Technology (OT), Information Technology (IT) and EHS organizations.
- Revised Information and cybersecurity-related policies to strengthen and clarify policy mandates.

- Improved our ability to identify cybersecurity vulnerabilities and actionable opportunities to strengthen protective measures. Concurrently, we've revamped vulnerability management capabilities to enable an enterprise risk-based approach towards the prioritization and implementation of prescribed system updates.
- Improved the fault tolerance of critical infrastructure components, while also bolstering our ability to recover from system failures.

## Training

In addition to the achievements above, we continue to place significant focus on cybersecurity and data privacy training. All new employees receive such training as part of their initial orientation, and all employees take part in cybersecurity awareness exercises each quarter. In 2024, we've consistently exceeded our goal of 95% training compliance, which demonstrates a strong level of awareness and understanding across our workforce.


To further employee vigilance, we have also expanded our simulated phishing campaigns, where we have seen gains in detection and reporting. Employees who mistakenly interact with a simulated phishing email are provided additional training.

This year, as in prior years, FuelCell Energy has not been subject to any material, high-severity cybersecurity incidents that impacted our information systems, data or operations. In order to maintain this position, we continue to invest in resources, technology and education for all our employees across all dimensions of information security and data protection.

“ The cybersecurity environment continues to be challenging and requires us always to be one step ahead. We block more than 6 million malicious or questionable emails every year and inspect more than 6.5 billion independent data points for cyberthreats every quarter. We can never afford to be complacent and rely on robust systems and highly alert colleagues all across FuelCell Energy to help protect our information, customers, partners and employees. ”

**John Dutsar**

Global Vice President of Information Technology

 [Privacy Policy](#)



# Appendix

**In this section:**

GRI Content Index: Material Disclosures .....58

GRI Content Index and Data Tables.....60

SASB Disclosures .....65

UN SDGs .....66

Forward-Looking and Cautionary Statements ..... 67



# GRI Content Index: Material Disclosures

Material Priority	GRI Standards	GRI Topic-Specific Disclosures	Pages	Omissions
<b>Business Ethics</b>	GRI 3: Material Topics 2021	3-3 Management of material topics	Page 54	
	GRI 205: Anti-Corruption 2016	205-3 Confirmed incidents of corruption and actions taken	None	
	GRI 419: Socioeconomic Compliance 2016	409-1 Noncompliance with laws and regulations in the social and economic area	None	
<b>Climate Change and GHG Emissions</b>	GRI 3: Material Topics 2021	3-3 Management of material topics	Pages 8, 9, 26-30	
	GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Page 61	
		305-2 Energy indirect (Scope 2) GHG emissions	Page 61	
		305-3 Other indirect (Scope 3) GHG emissions	Page 61	
		305-4 GHG emissions intensity	Page 61	
<b>Energy Management</b>	GRI 3: Material Topics 2021	3-3 Management of material topics	Pages 8, 9, 26-28	
	GRI 302: Energy 2016	302-1 Energy consumption within the organization	Page 61	
		302-3 Energy intensity	Page 61	
<b>Workforce Health &amp; Safety</b>	GRI 3: Material Topics 2021	3-3 Management of material topics	Pages 8, 9, 45	
	GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	Pages 45, 64	
		403-2 Hazard identification, risk assessment and incident investigation	Page 64	
		403-3 Occupational health services	Page 64	
		403-4 Worker participation, consultation and communication on occupational health and safety	Page 64	
		403-5 Worker training on occupational health and safety	Pages 45, 64	
		403-6 Promotion of worker health	Pages 43, 46, 64	
		403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Page 64	
		403-8 Workers covered by an occupational health and safety management system	Pages 45, 64	
		403-9 Work-related injuries	Pages 45, 64	Data by gender not available
403-10 Work-related ill health	Page 64			
<b>Waste Management</b>	GRI 3: Material Topics 2021	3-3 Management of material topics	Pages 31-33	
	GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	Page 62	
		306-2 Management of significant waste-related impacts	Pages 31-33	
		306-3 Waste generated	Page 62	
		306-4 Waste diverted from disposal	Page 62	
		306-5 Waste directed to disposal	Page 62	
<b>Materials sourcing</b>	GRI 3: Material Topics 2021	3-3 Management of material topics	Pages 35-37, 47	
		Use of conflict or rare earth minerals (SASB RR-FC-440a.1)	Page 47	

# GRI Content Index: Material Disclosures

Material Priority	GRI Standards	GRI Topic-Specific Disclosures	Pages	Omissions
Product Efficiency	GRI 3: Material Topics 2021	3-3 Management of material topics	Pages 35-37, 65	
		Average energy efficiency of fuel cells (SASB RR-FC-410a.2)	Page 65	
Product Safety	GRI 3: Material Topics 2021	3-3 Management of material topics	Pages 31-34	
Product Life Cycle Management	GRI 3: Material Topics 2021	3-3 Management of material topics	Pages 35-37, 65	
		Percentage of products sold that are recyclable or reusable (SASB RR-FC-410b.1)	Page 65	
Product End-of-Life Management	GRI 3: Material Topics 2021	3-3 Management of material topics	Pages 35-37, 65	
		Weight of end-of-life material recovered, percentage recycled (SASB RR-FC-410b.2)	Page 65	

## Additional Indicators Reported Not Identified as Material

GRI Standards	GRI Topic-Specific Disclosures	Pages	Omissions
GRI 402: Labor/Management Relations 2016	GRI 402-1 Minimum notice periods regarding operational changes	Page 64	
GRI 401: Employment 2016	GRI 401-1 New employee hires and turnover	Page 63	
	GRI 401-2 Benefits provided to full-time employees	Page 63	
	GRI 401-3 Parental leave	Page 63	
GRI 404: Training and Education 2016	GRI 404-1 Average hours of training per year per employee	Page 64	

# GRI Content Index and Data Tables

## GRI 2-7 Employees

Employees by region, gender and contract	2022			2023			2024			
	Women	Men	All	Women	Men	All	Women	Men	Other	All
U.S. and Canada	112	386	<b>498</b>	134	440	<b>574</b>	150	412	2	<b>564</b>
Europe	1	9	<b>10</b>	1	10	<b>11</b>	1	10		<b>11</b>
Asia	1	5	<b>6</b>	1	6	<b>7</b>	1	8		<b>9</b>
<b>All employees</b>	<b>114</b>	<b>400</b>	<b>514</b>	<b>136</b>	<b>456</b>	<b>592</b>	<b>152</b>	<b>430</b>	<b>2</b>	<b>584</b>

### Notes:

- Europe includes Germany. Asia includes Japan, South Korea and Singapore.
- Almost all employees are on full-time contracts; in 2024, there was one part-time employee.
- Employees in management positions (2024): 113 employees with direct reports (25 women and 88 men), globally.

## GRI 2-8 Workers who are not employees

FuelCell Energy engages with external companies to provide on-site services such as cleaning, catering and security. We do not track the specific numbers of employees engaged by such companies to provide these services.

## GRI 2-21 Annual total compensation ratio

In fiscal year 2024, the ratio of the annual total compensation for the organization’s highest-paid individual to the median annual total compensation for all employees was 6.14. Median annual total employee compensation and total compensation for the highest-paid individual increased by 4% in fiscal year 2024. We consistently review market information using an external compensation advisory service to evaluate our competitive position and review pay points across our company.

## GRI 2-28 Membership associations

Among the coalitions and alliances we participate in are:

- The Fuel Cell and Hydrogen Energy Association (FCHEA) (Board membership)
- The U.S. Renewable Energy and Energy Efficiency Advisory Committee (REEEAC) (Board membership)
- The American Biogas Council
- Hydrogen Europe
- Hydrogen Council
- Petroleum Council
- World Economic Forum

We also participate in and support several industry associations in Connecticut and other U.S. states in order to provide expertise and advocacy for a clean energy future.

## GRI 302-1 Energy consumption within the organization

### GRI 302-3 Energy intensity

Energy consumption	Units	2020	2021	2022	2023	2024	YOY
Non-renewable fuel (natural gas)	GJ	1,585,763	1,663,628	2,214,725	2,485,413	3,515,311	41%
Renewable fuel (biogas)	GJ	189,286	243,260	285,115	282,873	182,307	-36%
Purchased electricity	GJ	34,491	42,993	48,585	43,422	46,382	7%
<b>Total energy consumption</b>	<b>GJ</b>	<b>1,809,540</b>	<b>1,949,881</b>	<b>2,548,425</b>	<b>2,811,708</b>	<b>3,744,000</b>	<b>33%</b>
Purchased electricity percentage	%	1.9%	2.2%	1.9%	1.5%	1.2%	-20%
Renewable energy percentage (biogas)	%	10%	12%	11%	10%	4.9	-52%
<b>Energy intensity</b>	<b>GJ/\$1,000,000 revenue</b>	<b>25,533</b>	<b>28,022</b>	<b>19,531</b>	<b>22,786</b>	<b>33,389</b>	<b>47%</b>

## GRI 305-1 Direct (Scope 1) GHG emissions

### GRI 305-2 Energy indirect (Scope 2) GHG emissions

### GRI 305-3 Other indirect (Scope 3) GHG emissions

GHG emissions	Units	2020	2021	2022	2023	2024	YOY
Biogenic emissions	MT CO <sub>2</sub> e	9,342	12,006	14,071	13,961	8,997	-36%
Scope 1	MT CO <sub>2</sub> e	80,634	84,610	112,483	126,189	175,907	39%
Scope 2	MT CO <sub>2</sub> e	2,938	3,628	4,091	3,781	4,276	13%
Scope 3 Category 3 (see note)	MT CO <sub>2</sub> e	10,627	15,329	20,401	21,977	30,423	38%
<b>Total GHG Emissions Scope 1 + 2</b>	<b>MT CO<sub>2</sub>e</b>	<b>83,572</b>	<b>88,238</b>	<b>116,574</b>	<b>129,980.5</b>	<b>180,183</b>	<b>39%</b>

**Note:** GHG emissions are calculated using emission factors sourced from: U.S. Environmental Protection Agency; Canadian Government; IPCC; IEA. Scope 2 factors are location-based. Scope 3 represents Category 3. Fuel and energy-related activities not included in Scope 1 or Scope 2. When calculating GHG emissions, FuelCell Energy applies the financial control approach as defined by the Greenhouse Gas Protocol.

## GRI 305-4 GHG emissions intensity

Scope	Units	2020	2021	2022	2023	2024	YOY
Scope 1 + 2 emissions	MT CO <sub>2</sub> e	83,572	88,238	116,574	129,970	180,183	39%
Total revenue	\$1,000,000 revenue	71	70	130	123	112	-9%
GHG emissions intensity	MT CO <sub>2</sub> e/\$1,000,000 revenue	1,179	1,268	893	1,053	1,607	53%

### GRI 303-3 Water withdrawal

### GRI 303-4 Water discharge

### GRI 303-5 Water consumption

Water metrics	Units	2021	2022	2023	2024	YOY
Water withdrawal (third-party water)	Megaliters	8.4	10.13	9.10	7.99	-10%
Water discharge	Megaliters	7.95	9.62	8.65	7.59	-10%
Water consumption	Megaliters	0.42	0.51	0.46	0.40	-10%

**Note:** All water is third-party water and is discharged to municipal waste streams. Data represents our facilities in the U.S. Water use at our facilities in Canada, Germany and South Korea represents an insignificant share of our total water withdrawal and is not monitored in detail.

### GRI 306-3 Waste generated

Waste generated by type	Units	2021	2022	2023	2024	YOY
Metals	MT	157.3	109.9	98.3	67.6	-31%
Other recyclable	MT	86.68	133.8	149.1	131.3	-12%
Other waste	MT	92.42	217.8	188.9	273.5	45%
<b>Total waste generated</b>	<b>MT</b>	<b>336.4</b>	<b>461.5</b>	<b>436.3</b>	<b>472.4</b>	<b>8%</b>

### GRI 306-4 Waste diverted from disposal

	Type	Units	2021	2022	2023	2024	YOY
Hazardous waste diverted from disposal	Preparation for reuse	MT	3.3	10.8	15.4	8.23	
	Recycling	MT	1.1	2.6	2.7	7.91	
<b>Total hazardous waste diverted from disposal</b>	<b>MT</b>	<b>4.4</b>	<b>13.4</b>	<b>18.1</b>	<b>16.14</b>	<b>-11%</b>	
Non-hazardous waste diverted from disposal	Preparation for reuse	MT	7.9	24	5.4	15.63	
	Recycling	MT	235.4	218.8	212.8	170.23	
	Other recovery operations	MT	0.5	0.9	11	2.49	
<b>Total non-hazardous waste diverted from disposal</b>	<b>MT</b>	<b>243.8</b>	<b>243.7</b>	<b>229.2</b>	<b>188.4</b>	<b>-18%</b>	
<b>Total waste diverted from disposal</b>	<b>MT</b>	<b>248.2</b>	<b>257.1</b>	<b>247.3</b>	<b>204.5</b>	<b>-17%</b>	

### GRI 306-5 Waste directed to disposal

	Type	Units	2021	2022	2023	2024	YOY
Hazardous waste directed to disposal	Incineration (with energy recovery)	MT	0	0.2	0	0	
	Incineration (without energy recovery)	MT	2.5	2.1	3.4	2.4	
	Landfill	MT	0.5	0.7	0.1	7.3	
	Other disposal operations	MT	6.3	4.5	6.6	4.7	
<b>Total hazardous waste directed to disposal</b>	<b>MT</b>	<b>9.3</b>	<b>7.5</b>	<b>10.1</b>	<b>14.4</b>	<b>43%</b>	
Non-hazardous waste directed to disposal	Incineration (with energy recovery)	MT	2.5	0.3	0.9	0	
	Incineration (without energy recovery)	MT	0.4	1.7	3.6	2.8	
	Landfill	MT	76	194.9	172	250.6	
	Other disposal operations	MT	0	0	2.4	0	
<b>Total non-hazardous waste directed to disposal</b>	<b>MT</b>	<b>78.9</b>	<b>196.9</b>	<b>178.9</b>	<b>253.4</b>	<b>42%</b>	
<b>Total waste directed to disposal</b>	<b>MT</b>	<b>88.2</b>	<b>204.4</b>	<b>189</b>	<b>267.8</b>	<b>42%</b>	
<b>Total waste generated</b>	<b>MT</b>		<b>461.5</b>	<b>436.3</b>	<b>472.4</b>	<b>8%</b>	
<b>Waste diverted from disposal</b>	<b>%</b>		<b>74%</b>	<b>56%</b>	<b>57%</b>	<b>43%</b>	<b>-13%</b>

## GRI 401-1 New employee hires and turnover

New hires and turnover, 2024		Women <30	Women 30-50	Women >50	Men <30	Men 30-50	Men >50	All Women	All Men	Total
<b>New hires</b>	U.S. and Canada	10	20	3	27	25	10	33	62	95
	Europe	0	0	0	0	1	0	0	1	1
	Asia	1	0	0	1	0	1	1	2	3
	<b>Total</b>	<b>11</b>	<b>20</b>	<b>3</b>	<b>28</b>	<b>26</b>	<b>11</b>	<b>34</b>	<b>65</b>	<b>99</b>
<b>New hire rates</b>	U.S. and Canada	1.7%	3.4%	0.5%	4.6%	4.3%	1.7%	5.7%	10.6%	16.3%
	Europe	0.0%	0.0%	0%	0.0%	0.2%	0.0%	0.0%	0.2%	0.2%
	Asia	0.2%	0.0%	0%	0.2%	0.0%	0.2%	0.2%	0.3%	0.5%
	<b>Total new hires</b>	<b>1.9%</b>	<b>3.4%</b>	<b>0.5%</b>	<b>4.8%</b>	<b>4.5%</b>	<b>1.9%</b>	<b>5.8%</b>	<b>11.1%</b>	<b>17.0%</b>
<b>Turnover</b>	U.S. and Canada	5	6	6	23	23	47	17	93	110
	Europe	0	0	0	0	0	0	0	0	0
	Asia	1	0	0	0	0	0	1	0	1
	<b>Total</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>23</b>	<b>23</b>	<b>47</b>	<b>18</b>	<b>93</b>	<b>111</b>
<b>Turnover rates</b>	U.S. and Canada	0.9%	1.0%	1.0%	3.9%	3.9%	8.0%	2.9%	15.9%	18.8%
	Europe	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Asia	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.2%
	<b>Total turnover</b>	<b>1.0%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>3.9%</b>	<b>3.9%</b>	<b>8.0%</b>	<b>3.1%</b>	<b>15.9%</b>	<b>19.0%</b>

**Note:** New hire rate = new hires/ total workforce; turnover rate = terminations/ total workforce.

## GRI 401-2 Benefits provided to full-time employees

FuelCell Energy provides a range of market-competitive non-salary benefits to provide our employees with additional financial and health-related security. Our policies apply to key operational locations in the U.S. Employees in other markets may have different plans that align with regulations or market norms. Key benefits include:

- Life insurance plans
- Health plans with a choice of medical, dental and vision options
- Disability and invalidity coverage including short-term disability at 70% of base pay for 60 days and 60% thereafter, as well as long-term disability after 180 days at 60% of base pay
- Parental leave at four weeks of paid leave for birth or adoption
- Retirement provision with an employer contribution equivalent to 50% of the employee contribution up to 6% of base pay. Employees may contribute more without employer matching.
- Employee Stock Purchase Plan: In 2022, we expanded the stock ownership plan to all salaried employees and plan to extend this for hourly employees at management's discretion during merit reviews. All stock plans are approved by FuelCell Energy's Board of Directors.

## GRI 401-3 Parental leave

Parental leave, 2024	Women	Men	Total
Employees entitled to parental leave	121	341	462
Employees who took parental leave	5	14	19
Employees returning to work after parental leave ended	5	12	17
Employees returning to work and still employed after 12 months	5	12	17
Return to work and retention rates of employees that took parental leave	100%	86%	89%

### GRI 402-1 Minimum notice periods regarding operational changes

We aim to provide employees with reasonable notice of changes in our business that may affect their employment circumstances to allow them to accommodate changes as needed. Employees are offered notice periods beyond legal minimum requirements if these are compatible with operational needs.

### GRI 403-1 Occupational health and safety management system

At FuelCell Energy, we are committed to conducting business in a safe and environmentally sound manner by promoting a culture of shared responsibility throughout the organization. We integrate environmental as well as occupational health and safety management practices in all aspects of our business. Our EHS systems and related performance targets promote continual improvement, the prevention of injuries and incidents and compliance with all applicable statutes and regulations. We are certified to ISO 45001:2018. This standard is our framework to assess, monitor and reduce exposure of the workforce to human health hazards. Our Senior Director of EHS and Security is accountable for our OHS performance.

### GRI 403-2 Hazard identification, risk assessment and incident investigation

Work-related hazards are identified through workplace inspections and safety observations as defined in our OHS Management System.

### GRI 403-3 Occupational health services

FuelCell Energy does not provide occupational health services onsite.

### GRI 403-4 Worker participation, consultation and communication on occupational health and safety

Safety Committees operate at all our manufacturing sites in line with our OHS and include representation from management and employees.

### GRI 403-5 Worker training on occupational health and safety

We provide OHS training for all new employees and additional training where required covering specific risks associated with identified roles.

### GRI 403-6 Promotion of worker health

FuelCell Energy promotes health and wellness and aims to raise awareness among employees through various activities throughout the year, including activities during Mental Health Awareness Month and World Mental Health Day to raise awareness about mental health, reduce stigma around mental illness and share resources to support our employees. Annually, we organize our Fitness Challenge, a company-wide activity program designed to encourage employees to adopt healthier habits, reduce stress and improve overall health while strengthening workplace connections.

We provide health- and wellness-related benefits in different countries in line with local market norms, such as medical insurance, dental insurance and more. Our Employee Assistance Program (EAP) provides employees with no-cost, confidential solutions to life's challenges, including counseling services and resources for psychological support. Our EAP is offered to all full-time U.S.-based employees, and we are currently looking for ways to expand the program to include all global team members.

### GRI 403-8 Workers covered by an occupational health and safety management system

All FuelCell Energy employees are covered by our OHS management system.

### GRI 403-9 Work-related injuries

Work-related injuries and injury rates		2021	2022	2023	2024
Hours worked	Hours	732,743	1,018,519	1,071,429	1,150,065
<b>Injuries</b>					
Fatalities	Number	0	0	0	0
Recordable work-related injuries	Number	5	11	9	6
High-consequence work-related injuries	Number	0	0	0	0
<b>Injury rates</b>					
Fatalities	Rate	0	0	0	0
Recordable work-related injuries	Rate	1.36	2.16	1.68	1.04
High-consequence work-related injuries	Rate	0	0	0	0

**Note:** Injury rates are calculated on the basis of 200,000 work hours. Contractor hours are not included and represent less than 0.5% of our total work hours. Gender split of data is not available at this time.

### GRI 403-10 Work-related ill health

FuelCell Energy has not identified any significant cases of work-related ill health in 2024.

### GRI 404-1 Average hours of training per year per employee

Training hours in 2024	Women	Men	Total
All employees	4,994.72	17,436.5	22,431
Average training hours per employee per year	32.86	40.55	38.41

**Note:** The data doesn't include the 599.65 hours of training in information security and data privacy.





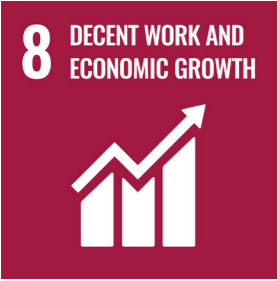

# SASB Disclosures

## Fuel Cells & Industrial Batteries Sustainability Accounting Standard, October 2018

Topic	Code	Accounting Metric	Measure	Response
<b>Energy Management</b>	RR-FC-130a.1	(1) Total energy consumed (2) Percentage grid electricity (3) Percentage renewable	GJ, %	See GRI 302-1, page 61.
	RR-FC-320a.1	(1) Total recordable incident rate (TRIR) (2) Fatality rate	Rate	See GRI 403-9, page 64.
<b>Workforce Health and Safety</b>	RR-FC-320a.2	Description of efforts to assess, monitor and reduce exposure of workforce to human health hazards	N/A	See GRI 403, pages 45, 64
	RR-FC-410a.1	Average storage capacity of batteries, by product application and technology type	Wh/kg	Not relevant. FuelCell Energy does not manufacture batteries.
<b>Product Efficiency</b>	RR-FC-410a.2	Average energy efficiency of fuel cells as (1) electrical efficiency and (2) thermal efficiency, by product application and technology type	%	The electrical efficiency of our fuel cell power plants starts at 47% and declines slightly over stack life, averaging about 45% with slight variations due to local conditions, such as elevation or extreme temperatures. Our platforms also co-produce other energy streams, usually thermal but also (in the case of our Tri-gen platform) hydrogen. Total thermal efficiency depends on the customer use of these thermal streams and ranges from 60% to 90%.
	RR-FC-410a.3	Average battery efficiency as coulombic efficiency, by product application and technology type	%	For the hydrogen-based reversible solid oxide system we are developing, energy efficiency (the combination of coulombic and voltaic efficiency plus system losses) will range from 60% to 70%, depending on the application and the age of the stacks. The main driver for energy efficiency is stack voltage in discharge (fuel cell) mode and system losses. Coulombic efficiency of the stacks will be in the 90% range.
	RR-FC-410a.4	Average operating lifetime of fuel cells, by product application and technology type	Hours	Fuel cell life for our carbonate platform ranges from five to seven years, depending on the year of manufacture. Our latest stack module designs have a seven-year target design life.
	RR-FC-410a.5	Average operating lifetime of batteries, by product application and technology type	Number of cycles	Not relevant. FuelCell Energy does not manufacture batteries.
	RR-FC-410b.1	Percentage of products sold that are recyclable or reusable	%	By weight, 93% of the entire power plant can be reused or recycled at the end of its useful life.
<b>Product End-of-Life Management</b>	RR-FC-410b.2	Weight of end-of-life material recovered, percentage recycled	Metric tons, %	
	RR-FC-410b.3	Description of approach to manage use, reclamation and disposal of hazardous materials	N/A	
	RR-FC-440a.1	Description of the management of risks associated with the use of critical materials	N/A	Our use of conflict or rare earth minerals is virtually zero. Trace amounts of 3TG minerals add up to less than 0.0003% of our total shipments by weight (in FY24). See page 5-37.
<b>Materials Sourcing</b>	RR-FC-000.A	Number of units sold		This information is not available.
<b>Activity Metric</b>	RR-FC-000.B	Total storage capacity of batteries sold		Not relevant. FuelCell Energy does not manufacture batteries.
<b>Activity Metric</b>	RR-FC-000.C	Total energy production capacity of fuel cells sold		This information is not available.

# UN SDGs

The 17 Sustainable Development Goals (SDGs) are central to the 2030 Agenda for Sustainable Development, which was adopted by all United Nations Member States in 2015. As we scale our business responsibly, we integrate SDGs into our sustainability strategy and acknowledge that our greatest potential for impact lies in the areas of Clean Water and Sanitation (SDG 6), Affordable and Clean Energy (SDG 7), Decent Work and Economic Growth (SDG 8), Industry, Innovation and Infrastructure (SDG 9), Sustainable Cities and Communities (SDG 11), Responsible Consumption and Production (SDG 12) and Climate Action (SDG 13).\*

SDG	Most Relevant SDG Targets	Our Impact	
	Secure water and sanitation for a sustainable world	<b>6.3</b> By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	See section: <ul style="list-style-type: none"> <li><a href="#">Environmental Stewardship</a></li> </ul>
	Ensure access to affordable, reliable, sustainable and modern energy for all	<b>7.1</b> By 2030, ensure universal access to affordable, reliable and modern energy services <b>7.2</b> By 2030, increase substantially the share of renewable energy in the global energy mix <b>7.3</b> By 2030, double the global rate of improvement in energy efficiency <b>7.a</b> By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology <b>7.b</b> By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programs of support	See sections: <ul style="list-style-type: none"> <li><a href="#">Product</a></li> <li><a href="#">Community Impact</a></li> </ul>
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	<b>8.4</b> Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10 Year Framework of Programs (10YFP) on Sustainable Consumption and Production, with developed countries taking the lead <b>8.5</b> By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value <b>8.8</b> Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	See section: <ul style="list-style-type: none"> <li><a href="#">People</a></li> </ul>
	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	<b>9.1</b> Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all <b>9.4</b> By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	See sections: <ul style="list-style-type: none"> <li><a href="#">Product</a></li> <li><a href="#">Community Impact</a></li> </ul>

Note: Use of the icons above is for informational purposes and does not imply endorsement.  
 \* <https://www.un.org/sustainabledevelopment/>

**SDG**
**Most Relevant SDG Targets**
**Our Impact**

	<p>Make cities and human settlements inclusive, safe, resilient and sustainable</p>	<p><b>11.6</b> By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</p>	<p>See section:</p> <ul style="list-style-type: none"> <li>• <a href="#">Community Impact</a></li> </ul>
	<p>Ensure sustainable consumption and production patterns</p>	<p><b>12.2</b> By 2030, achieve the sustainable management and efficient use of natural resources  <b>12.4</b> By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment  <b>12.5</b> By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse</p>	<p>See sections:</p> <ul style="list-style-type: none"> <li>• <a href="#">Environmental Stewardship</a></li> <li>• <a href="#">Our Approach to Circularity</a></li> <li>• <a href="#">Responsible Supply Chain</a></li> </ul>
	<p>Take urgent action to combat climate change and its impacts</p>	<p><b>13.1</b> Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries</p>	<p>See sections:</p> <ul style="list-style-type: none"> <li>• <a href="#">Product</a></li> <li>• <a href="#">Working Towards Net Zero</a></li> <li>• <a href="#">Climate Risks and Opportunities</a></li> </ul>
	<p>Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</p>	<p><b>16.2</b> End abuse, exploitation, trafficking and all forms of violence against and torture of children  <b>16.5</b> Substantially reduce corruption and bribery in all their forms  <b>16.b</b> Promote and enforce non-discriminatory laws and policies for sustainable development</p>	<p>See sections:</p> <ul style="list-style-type: none"> <li>• <a href="#">Responsible Supply Chain</a></li> <li>• <a href="#">Ethics and Compliance</a></li> </ul>
	<p>Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development</p>	<p><b>17.16</b> Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries  <b>17.17</b> Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships</p>	<p>See section:</p> <ul style="list-style-type: none"> <li>• <a href="#">Product</a></li> <li>• Our website: <a href="#">Partnerships and Collaborations</a></li> </ul>

Note: Use of the icons above is for informational purposes and does not imply endorsement.

# Forward-Looking and Cautionary Statements

This Sustainability Report (this “report”) contains forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 regarding future events or our future financial performance that involve certain contingencies and uncertainties, including those discussed in our Annual Report on Form 10-K for the fiscal year ended October 31, 2024 in the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” The forward-looking statements include, without limitation, statements with respect to the Company’s anticipated financial results and statements regarding the Company’s plans and expectations regarding the continuing development, commercialization and financing of its current and future fuel cell technologies, the expected timing of completion of the Company’s ongoing projects, the Company’s business plans and strategies, the Company’s capacity expansion, the capabilities of the Company’s products, the sales pipeline for the Company’s products and the markets in which the Company expects to operate. Projected and estimated numbers contained herein are not forecasts and may not reflect actual results. These forward-looking statements are not guarantees of future performance, and all forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those projected. Factors that could cause such a difference include, without limitation: general risks associated with product development and manufacturing; general economic conditions; changes in interest rates, which may impact project financing; supply chain disruptions; changes in the utility regulatory environment; changes in the utility industry and the markets for distributed generation, distributed hydrogen and fuel cell power plants configured for carbon capture or carbon separation; potential volatility of commodity prices that may adversely affect our projects; availability of government subsidies and economic incentives for alternative energy technologies; our ability to remain in compliance with U.S. federal and state and foreign government laws and regulations; our ability to regain and maintain compliance with the listing rules of The Nasdaq Stock Market; our ability to implement a reverse stock split and the impacts of a reverse stock split, if implemented; rapid technological change; competition; the risk that our bid awards will not convert to contracts or that our contracts will not convert to revenue; market acceptance of our products; changes in accounting policies or practices adopted voluntarily or as required by accounting principles generally accepted in the United States; factors affecting our liquidity position and financial condition; government appropriations; the ability of the government and third parties to terminate their development contracts at any time; the ability of the government to exercise “march-in” rights with respect to certain of our patents; our ability to successfully market and

sell our products internationally; our ability to develop new products to achieve our long-term revenue targets; our ability to implement our strategy; our ability to reduce our levelized cost of energy and deliver on our cost reduction strategy generally; our ability to protect our intellectual property; litigation and other proceedings; the risk that commercialization of our new products will not occur when anticipated or, if it does, that we will not have adequate capacity to satisfy demand; our need for and the availability of additional financing; our ability to generate positive cash flow from operations; our ability to service our long-term debt; our ability to increase the output and longevity of our platforms and to meet the performance requirements of our contracts; our ability to expand our customer base and maintain relationships with our largest customers and strategic business allies; and concerns with, threats of, or the consequences of, pandemics, contagious diseases or health epidemics, including the novel coronavirus, and resulting supply chain disruptions, shifts in clean energy demand, impacts to our customers’ capital budgets and investment plans and impacts on the demand for our products, as well as other risks set forth in the Company’s filings with the Securities and Exchange Commission, including the Company’s Annual Report on Form 10-K for the fiscal year ended October 31, 2024. The forward-looking statements contained herein speak only as of the date of this report. The Company expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any such statement contained herein to reflect any change in the Company’s expectations or any change in events, conditions or circumstances on which any such statement is based.



FuelCell  
Energy

[fuelcellenergy.com](http://fuelcellenergy.com)

