ENVIRONMENT ENERGY LEADER AWARDS 2022

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TABLE OF CONTENTS

- Letter from the Publisher p. 4
 - List of Judges p. 5
- Top Product List of Winners p. 6
- Top Project List of Winners p. 7
 - Top Products of the Year p. 8
 - Top Projects of the Year p. 44
 - Panel of Judges p. 70
- About Business Sector Media p. 81

A LETTER FROM THE PUBLISHER

Dear Reader,

Creative entries flooded our desks this year, as always – and, while a large percentage of those did not earn a Top Project or Top Product of the Year Award, all of the entries were well worth reading. Solutions providers continue to innovate and evolve their products and services in a race to meet the world's climate goals, while end-users put these tools to use with a commitment and dedication that is exciting to see. This year's entries reflect that hard work – and the winners had to be head and shoulders above the rest in order to earn an award.

In other words, within these pages, innovations abound!

But don't take my word for it. Check out what a few of this year's judges had to say about some of the winners:

- "In a world increasingly reliant on strong data and analytical tools, this platform is nimble and adaptable..."
- "This project has reached a vital milestone by having the lowest possible GWP among non-flammable refrigerators. This is a great accomplishment."
- "This is an innovative/holistic way to create a water budget, and one not commonly applied by corporations in their facilities planning."
- "I love the idea of gamification and the tie-in with real-time traffic and any incidents that might interact with a trip."
- "In a water short world, this is an important diagnostic tool in an aresenal of water monitoring systems on the market."

Intrigued? Then dive into this year's Awards Ebook to find out more about the products and projects hinted at above, and to learn about so many more.

Explore and enjoy!

Best Wishes, Sarah Sarah Roberts Publisher Environment+Energy Leader

2022 JUDGING PANEL

Salem Afeworki City of Costa Mesa

Glen Anderson ETC Group, LLC

Kisa Baskin WernerCo International

James Boyle Sustainability Roundtable, Inc.

> **Tinika N. Brijlal** KimberlyClark

Paul Campbell Navitas Partners

Claudia Herbert Colfer UN Global Compact Network USA

> **Kirby Dipert** TRC Companies

Aleksandra Dobkowski-Joy The Estée Lauder Companies Inc.

Eric Dominguez Caesar's Entertainment, Inc.

> Harry Etra HXE Partners

Monica Ferrer Equity Lifestyle

Angela Gordon TRC Companies **Jeff King** Bath and Body Works

> Paul Leavoy Thentia

Charles McEwen Atlanta Veterans Health Care Administration

> Trey Menville MasterCard

David Meyer BSI Consulting Services

> **Thomas Pagliuco** TAPco Enterprises

> > Susan Pinera SBM

Jigar Shah DOE

Travis Solberg Solberg MFG

Geoff Stiles Atlanta Hawks

Maud Texier Google

Cyril Toussaint NYC Health & Hospitals Corporation



Judges' Choice Interface, Inc. Carbon Negative Carpet Tiles and Backings

3M Company - Scotch™ Cushion Lock™ Protective Wrap

Arizona Department of Environmental Quality
- Innovative Air Quality Emissions Calculator

Benchmark Digital Partners, LLC - ESG Director™

Carrier Global - Carrier Transicold's Vector® eCool™

Cooper Standard - FortrexTM Lightweight Elastomeric Material

Cority - Cority Sustainability Performance

Ecolab - The Ecolab Smart Water Navigator

Ecometrica - Ecometrica's TCFD Risk Assessor

Ecoppia Scientific Ltd. - H4

ehsAl - ehsAl

Electro Scan - Electro Scan Swordfish

FigBytes, Inc. - FigBytes EST Insight Platform

Fluke Corporation - Fluke ii900

Geno - Geno's Bio-BDO®

ICF - CO₂Sight

Intelex Technologies - Environmental, Social, and Governance (ESG) Software

Kohler Co. - Kohler WasteLAB Abstra Tile

Kulr Technology Group - KULR-Tech Safe Case

Modern Mill - ACRE by Modern Mill

NAVEX - NAVEX ESG

One Motion - Mag-Drive

Plug Power - Green Hydrogen Ecosystem

Rodan Energy Solutions - Rodan's ENERGENT-SCADA as as Service (SCaaS)

Sphera - SpheraCloud Corporate Sustainability

SUEZ WTS - E.C.O.Film

SUEZ WTS - ZeeLung Membrane Aerated Biofilm Reactor

Turntide Technologies - Technology for Sustainable Operations & Electrification

Uplight - Plus

VelocityEHS - VelocityEHS Environmental, Social and Governance (ESG) Software

Voltus, Inc. - VoltApp - Voltus technology platform

Wärtsilä - Wärtsilä's GEMS Island Grid+ Solution

Wolters Kluwer Enablon - Enablon Vision Platform

World Energy - World Energy's Sustainable Aviation Fuel (SAF)

WSP - Groundwater Plume Analytics Tools



Judges' Choice FuelCell Energy FuelCell Energy Trigeneration project at Port of Long Beach

ADM - Illinois Basin - Decatur Project, a carbon capture and storage project

Agilent - Agilent Certified Pre-Owned Instrument Programs

Ameresco - Solar installation at Bank of America's Chandler, AZ Campus

Armstrong International - SAGE®

Chemours - Gem City Market

Cirba Solutions - Creating a Domestic Cathode Supply Chain from Recycled Batteries

Clean Earth - Supplying Safe, Sustainable Solutions for the Disposal and Recycling of Hand Sanitizer Amid Pandemic

CPower Energy Management - Digihost Emissions-reduction Analysis

CyrusOne - Net Positive Water Data Center - Carrollton

DSD Renewables - DSD's solar-plusstorage project for Mauna Loa's 100% selfsustaining macadamia nut farm

EcoEnergy Insights - An Aircraft Engine Manufacturer transforms facility operations, reducing GHG emissions by over 4,000MT CO2e. **Enel X North America** - Electric BusFleet Powered by Solar+Storage at Martha's Vineyard Transit Authority (VTA)

Flex - Flex ECO2, a circular economy impact calculator

ForeFront Power - Los Altos School District Solar Portfolio

GreenStruxure - Bimbo Bakeries Multi-Site Energy as a Service Partnership

Honeywell - Solstice Portfolio

Honeywell - Upcycle Plastic Recycling Technology

Neste - A Climate Quantum Leap: Sustainable Aviation Fuel is Taking off in San Francisco

PNM - PNM Solar Direct

Resolute Forest Products - Thunder Bay Green Energy Project

STACK Infrastructure - OnePurpose

Sterlite - Zero Waste to Landfills

TerraCycle - TerraCycle's Loop: The World's Largest Reusable Durable Packaging Initiative

Willingboro Municipal Utilities Authority -Willingboro Municipal Utilities Authority ESIP

TOP PRODUCT

Environment + Energy LEADER

AWARDS 2022





Interface, Inc.

WHAT THE JUDGES SAID ...

It's a beautiful flooring option that meets a commercial need and does so in a very planet-friendly manner."

Global flooring manufacturer Interface already produced carpet tiles with the lowest carbon footprint in the commercial flooring industry, but the company recognized the need to reduce the carbon

footprint of its products further as it endeavors to become a carbon negative enterprise by 2040. This led Interface to make carpet tiles that store carbon, keeping it out of the atmosphere and helping to restore the health of the planet. The company achieved this milestone by working with suppliers to change its raw materials, incorporating recycled and bio-based materials, and adopting more sustainable manufacturing practices, like increasing material and energy efficiency and using 99% renewable energy. In the commercial flooring market, carpet tile emissions can exceed 20.5 kg CO2e per square meter. The Interface carbon negative carpet tile has a carbon footprint of -0.3 kg CO2e per square meter. This innovation not only helps Interface reduce its overall carbon footprint, but also helps endusers pursue their own sustainability goals, fulfilling a marketplace need as many top customers declare time-bound goals for reducing Scope 3 emissions. The groundbreaking innovation is among only a handful of commercialized carbontech products that use carbon as a resource, so it cannot contribute to global warming. 🕖





3M Company

WHAT THE JUDGES SAID ...

3M Scotch Lock Protective Wrap will be very useful in providing companies with environmental benefits ... is a sustainable alternative to plastic."



Looking to ship sustainably without compromising on protection? Scotch Brand delivers with its sustainable alternative to plastic bubble, Scotch Cushion Lock Protective Wrap. This durable all-in-one expanding paper wrap conforms to offer nested protection that immobilizes your items while on the move – be it moving, shipping or storing. And because it is made with 100% recycled paper, you can curbside recycle after use with ease.

With a pull, Cushion Lock begins to work by expanding up to 60x in volume, providing stabilized cushion while eliminating the need for additional void fill materials. The expansion

doesn't stop there. Expanding 1.5x in length while in use, packers alike can wrap more, with less.

To create this new-to-the-market kind of packaging solution, Scotch Cushion Lock is engineered via a proprietary process with a proprietary hexagonal pattern that brings this product to life. While other honeycomb paper wraps exist today, Scotch Cushion Lock's unique design takes it further to provide cushion, immobilization & greater expansion filling more space with less material.

Now you can package your items with the confidence of protection without the guilt of plastic. Just expand, wrap, protect – with Scotch Cushion Lock. *(*



Arizona Department of Environmental Quality

WHAT THE JUDGES SAID...

The environmental calculator seems to be a useful tool and easy to use and the upgrades to the website were probably helpful in allowing visitors to navigate and access the tool."

During the pandemic, the transportation landscape underwent massive changes, and employers sought answers for mandatory travel reduction goals- including an accurate telework emissions reduction calculator. ADEQ developed and launched a new telecommute emissions reduction calculator that allows employers to estimate how telecommuting



programs reduce pollutants that contribute to regional air quality problems. Developed with community/ local business input, the calculator was included as an upgrade to a regional transportation demand management platform and includes the following innovative features: Telework emissions reductions calculations for regionally specific pollutants (NOx, VOC and PM10) to show how telework prevents air pollution – the first program in the region to share such detail. Easy to understand, presentation-ready emissions reduction totals are translated into equivalencies for more widely understood activities (e.g., decommissioning leaf blowers), and plug and play telework emissions reduction tables simplify employer sustainability reports. See the calculator: bit.ly/TelecommuteEmissionsReductionCalculator. *e*



Benchmark Digital Partners, LLC

WHAT THE JUDGES SAID ...

ESG Reporting tends to be very time-consuming and repetitive process across different disclosure frameworks. Having an integrated tool like this can help collect multiple ESG data sources and feed the information to report against multiple frameworks. Several existing solutions in the market only focused on few frameworks."



As a comprehensive digital hub for ESG data management and reporting, ESG Director meets the challenges of compiling and disclosing investment-grade ESG data head-on. ESG Director centralizes and streamlines ESG program management for even the most complex global operations, offering real-time cross-functional collaboration, visibility, and control. At the heart of ESG Director is the Benchmark Data Exchange Portal (DXP) that enables users to seamlessly pull in data from any source in the enterprise for comprehensive ESG performance analysis, ensuring data accuracy, tracking of performance KPIs, and enabling ESG impact. With ESG Director, leaders can take charge of ESG data management with an intuitive, at-a-glance dashboard to easily assign ownership of KPIs, monitor progress toward corporate ESG goals, and deliver on those commitments—ultimately revealing opportunities to improve operations and effortlessly report ESG performance in alignment with everchanging industry standards and stakeholder demands. *e*



Carrier Global

WHAT THE JUDGES SAID ...

Checks all the decarbonization, electrification, and performance boxes relative to previous generation products. Highly impactful since introduction in Europe."



Carrier Transicold has reaffirmed its commitment to reducing emissions, improving sustainability, and increasing efficiency across the refrigerated transport sector with the launch of the first fully autonomous, all-electric engineless refrigerated trailer system, the Vector eCool. This new technology represents a giant step forward for trailer refrigeration. The eCool system is a sustainable solution that ticks all of

the boxes of electrification and decarbonisation that produces no direct engine polluting emission. A sustainable and low noise solution utilizing a new energy recovery and storage system, the Vector eCool converts kinetic energy generated by the trailer axle and brakes into electricity that is then stored in a battery pack powering the refrigeration unit. This loop creates a fully autonomous system that produces no direct carbon dioxide or particulate emissions. *I*



Cooper Standard

WHAT THE JUDGES SAID ...

Product has significant climate benefits vs. current solutions, this will help auto companies help meet climate targets as proved by LCA."

Launched in 2017, Cooper Standard's award-winning Fortrex Chemistry Platform was the first materials breakthrough for automotive sealing systems in over 40 years. Fortrex offers improved performance and is now providing solutions to challenges in key industries outside of automotive.

Fortrex offers weight savings up to 30% versus traditional EPDM with sustainability benefits across the entire material and production chain. Additionally, the chemistry can be modified for a broad range of applications and performance solutions for a diverse set of consumer and industrial markets including footwear, building/construction, and tire.

Fortrex's advantaged carbon footprint is 53% lower than EPDM and 22% lower than TPV. This, combined with its significantly lighter weight and enhanced performance such as improved resilience and energy return, compression set and abrasion resistance, durability, and resistance to UV rays and weathering, makes it the clear choice for our customers. *I*





Cority

WHAT THE JUDGES SAID ...

This software platform provides a way to consolidate data from various sources which will help any user analyze at a glance trends and results over time."

The Cority Sustainability Performance solution is uniquely positioned to grow with a customer as their sustainability program matures. As goals and initiatives become more sophisticated, so do the data requirements of the program. From built-in best practices and standards that help companies get started, to advanced capabilities necessary to manage complex operational data and programs, Cority's

Sustainability Performance solution seamlessly expands to meet the ever-changing needs of organizations. As an integrated solution within the broader CorityOne platform, it benefits from additional capabilities and data sourced throughout the organization to fuel programs such as asset and process-based emission calculations needed for project evaluations, supplier data collection, scope 3 emissions determinations, and employee safety rates.

Leveraging the powerful, intuitive dashboards to view all the relevant data, users can create and manage an informed sustainability strategy and plan, track, and measure their progress in the same place to ensure performance improvements. *(*





Ecolab

WHAT THE JUDGES SAID ...

In a water short world, this is an important diagnostic tool in an arsenal of water monitoring systems on the market. However, this tool is highly sensitive and adaptable at the local level."

As businesses rely on water to operate and grow, water issues present a growing risk to organizations. And while most corporations have goals to reduce water use, it can be difficult to close the gap between corporate targets and local action. It has become crucial for businesses to achieve resilience through smart water management practices to address local shared water challenges and reduce risk. Ecolab's Smart Water Navigator is a free, publicly available online tool that helps businesses understand the value of water in their operations and take action to achieve strategic water goals. The platform uses a proven, four-step process to enhance business resilience at all levels of an organization by identifying waterrelated risks, setting water withdrawal targets, recommending practical projects to advance corporate water targets and tracking performance over time. Whether businesses are just beginning their smart water journey or are ready to track year-over-year progress, the Smart Water Navigator can guide users to effective water management through an automated analysis of water availability, quality, and current business practices that allow users to set informed, context-based water withdrawal targets that consider water basin health in surrounding communities and environments. The Smart Water Navigator then offers a practical roadmap to help facilities improve the way water is used to enable more efficient operations in



a water-scarce world. The Smart Water Navigator, first introduced in 2019 and enhanced in 2021, supports Ecolab's broader mission to help industries reuse, recycle and reduce water, supporting resilient operations and healthy communities. *#*



Ecometrica

WHAT THE JUDGES SAID

This is one of the few software solutions for climate-risk reporting that is primarily focused on physical risk assessments."

Ecometrica Platform's TCFD Risk Assessor brings together spatially-explicit climate scenario data and organizational sustainability reporting with end-users' operational locations for the most effective Task Force for Climate Related Finance Disclosure (TCFD) disclosure possible.

This product enables end-users to understand and prioritize the potential physical climate impacts associated with their sites and how these impacts are expected to change in future decades across a range of best-case to worst-case scenarios. The tool's Scenario Analysis capabilities allows this information to feed into the TCFD reporting process, thereby



assisting end-users to meet an important, although often complex, component of TCFD reporting.

By providing quick and easy-to-interpret information which identifies regions that are anticipating the most dramatic change, the end-users can make informed decisions about where adaptation/mitigation actions can be prioritized.

Ecometrica's TCFD Risk Assessor, built as a tool running on the Ecometrica Platform, is the only software solution which can incorporate organizational sustainability reporting, detailed spatial analysis, and climate science all in one place. Available as a one-click stand alone report or integrated within our comprehensive suite of sustainability reporting web solutions. *#*



Ecoppia Scientific Ltd.

WHAT THE JUDGES SAID ...

66

With the growing need for solar capacity, this product appears to provide superior cleaning benefits with clear economic benefits vs. current water-based cleaning methods."



The H4 is our newest safe, effective, and smart robotic solution for both fix tilt and Single Axis Tracker installations, Ecoppia's H4 represents the pinnacle of innovation in robotic cleaning solutions. Having cutting-edge features such as the Helix Technology that enhances the cleaning quality of the panels, and other revolutionary innovations such as speed adaptability, bidirectional cleaning and counting with frameless and flexible frame models, allow the H4 to provide the safest, most effective, and versatile solution in the market.



ehsAl

WHAT THE JUDGES SAID ...

This product would be an extremely useful addition to any team that has to review, digest and comply with a myriad amount of regulations."

ehsAl, a revolutionary software utilizing the power of Al and ML, helps you reduce the cost and risks of poor EHS compliance. ehsAl works with your team, allowing you to process complex compliance documents with more accuracy and speed than any human could alone. *I*

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Electro Scan

WHAT THE JUDGES SAID ...

This technology has allowed U.S. water utilities to provide its customers with unambiguous location and reporting of buried lead pipes, safeguarding the health & safety of drinking water networks allowing them to prioritize service line replacements."



Electro Scan Inc.'s Swordfish represents a breakthrough in underground lead pipe detection. By accurately locating buried lead pipes, Swordfish eliminates the need to dig costly test pits in a customer's yard to expose pipes for visual inspection and testing. Representing an easy-to-use solution, including Amazon Web Service (AWS) cloud reporting, Swordfish is designed to be a cost-effective solution for over 150,000 US drinking water providers subject to requirements of the Safe Drinking Water Act (SDWA). Recent studies indicate that up to 22 million Americans obtain their drinking water through lead pipes, with a disproportionate number found in disadvantaged communities. A key advantage of Swordfish is the ability to take 30 minutes or less to confirm a lead pipe, in many cases without entry onto a customer's property, thus eliminating costly landscape destruction, renovation, and customer inconvenience which often lasts months. While a number of aboveground and in-pipe sensors tried to locate lead pipes, no technique had been previously developed to effectively differentiate underground lead-based water lines from lines containing other materials. As a result, Electro Scan's Swordfish stands alone in helping to prioritize \$15 billion in government funding earmarked to replace 100% of lead service lines in the United States.



FigBytes, Inc.

WHAT THE JUDGES SAID ...

Excellent use of project examples with demonstrable results. In a world increasingly reliant on strong data and analytical tools, this platform is nimble and adaptable by users as a Form to Fit tool."

Connect data with purpose. The FigBytes ESG Insight Platform captures environmental, social, and governance data from across an organization, its existing systems, and external sources, and manages it in one integrated, cloud-based platform that connects organizational strategy, automates industry reporting, and simplifies stakeholder engagement.

The FigBytes platform was purpose-built to address the complex world of ESG, is fully integrated to deliver a unified experience, and is comprehensive, addressing both the ESG challenges of today and the emerging issues of tomorrow.

FigBytes clients have been able to consolidate data from across global operations, save time and resources by moving from manual to automated processes, and reduce the reporting burden from their sustainability teams so they can focus on achieving their goals.

The FigBytes ESG Insight Platform can help your organization:

- Meet your net zero goals
- Reduce your water footprint
- Manage your community impact
- Support an inclusive workplace

- Optimize your supply chain
- Mitigate ESG risk
- And more!

Learn more at <u>www.FigBytes.com</u> *<*





Fluke Corporation

WHAT THE JUDGES SAID ...

This has an excellent opportunity of helping companies on their energy conservation journey. It will help identify the low hanging fruit. Also, again ease of use will help companies that do not have energy experts."

The Fluke ii900 Industrial Acoustic Imager is a handheld tool used to detect compressed air, gas, steam, and vacuum leaks. Compressed air is a common and costly component of the energy used in facilities in many industries. A 100 hp air compressor can consume around \$50K in electricity annually and as much as 30% of that electricity goes toward pressurizing air lines that leak. One significant and straight forward way to reduce greenhouse gas emissions is to cut wasteful use of electricity. The Fluke ii900 easily detects



compressor system leaks, calculates their size, and records their location for follow up verification of fixes in the effort to reach energy management goals and reduce the amount of compressor system waste.

In addition to compressed air, the ii900 can be leveraged to reduce energy loss from steam and vacuum leaks. In other situations, it's not the energy loss but the cost of gas leaks such as argon, nitrogen or oxygen which provide significant operational savings and improved safety. *(*



Geno

WHAT THE JUDGES SAID ...

The development of a product that can be used in place of petroleum based material and is competitive in durability and cost represents a real win for this company."

Many everyday products - like sneakers, spandex, plastics, foams, car coatings, and electronics - are made using an ingredient called 1,4-butanediol (BDO). Traditionally derived from fossil fuels, over 2 million tons of BDO are produced annually worldwide. As a response to the urgent climate crisis, Geno has successfully created, scaled and commercialized a plant-based alternative: Geno Bio-BDO. Geno's Bio-BDO replaces fossil fuel feedstocks with plant sugars reducing carbon emissions by up to 88% compared to conventional coal sources in the market. The first commercial plant powered by Geno's technology was built by partner Novamont with a production capacity of ~30,000 tons per year. In May 2022, Qore, a joint venture between Cargill and HELM, broke ground on a second commercial facility, which will move global capacity to 100,000 tons. Geno's technology drives sustainability impact at scale, while delivering on performance and cost. 🕖





ICF

WHAT THE JUDGES SAID ...

This platform promises to provide clear direction for utilities and others to meet their energy reduction goals. If it can deliver real world solutions, the product shows high value."

CO₂Sight is a strategic planning platform that helps utilities and government agencies chart pathways to achieve clean energy and decarbonization goals. The platform integrates over a million ICFdeveloped decarbonization pathways across major energy demand and supply sectors, allows for customization specific to any partner's data, and is built on 40+ years of ICF expertise and models used for hundreds of clean energy and climate action strategies, policies and regulations.



The models CO₂Sight integrates have been used to support policies, programs and studies across the country such as helping New York City develop a pathway to becoming carbon neutral, and aiding the California Low Carbon Fuel Standard and the Regional Greenhouse Gas Initiative. Its early foundations have been leveraged for a number of climate action plans for state and local governments, like Fairfax County, VA and Pennsylvania.

ICF leads partners through a five-step process to leverage their foundation, select methods and collect data, screen pathways, conduct targeted granular analysis, and develop and report key insights. In ICF's easy to use dashboard, users can drive action with confidence, building their case for stakeholders with clear data visualizations. With CO_2 Sight, partners can compare and contrast different pathways and understand the costs and benefits of different decarbonization. \checkmark



Intelex Technologies

WHAT THE JUDGES SAID ...

With a robust automated calculation methodology for GHG emissions across scope 1, 2, and 3 categories, Intelex' ESG Management software is among the tops for ease of importing data and leveraging information to help businessed monitor their issues and benchmark against those of competitors."



Intelex's new ESG Management Software helps organizations collect, analyze, action, report, and improve their ESG-related data from all areas of the business. With a specific focus on environmental and sustainability performance, the software helps users organize and integrate their data into a "single source of truth" via APIs linked to utility meters/bills, connections with emissions hardware, streamlined employee data entry,

automated asset hierarchy imports, and interfaces with other systems that house ESG data such as ERP software. Intelex's robust and configurable Calculation Engine then turns that raw data into clean, normalized, and reportable data points. This information can then be used for disclosure frameworks (GRI, SASB, TCDF, etc.), internal sustainability reporting, disclosure to ratings agencies, or any other purpose.

What differentiates Intelex's ESG solution is that its scope covers much more than reporting. First, via an exclusive partnership with Datamaran, Intelex users can continuously assess and prioritize material ESG risks directly within the Intelex platform. Once the risks are identified, Intelex's inherent strengths in tasking, workflow configuration, and document control take over and let Intelex users manage ESG, not just report it. Measure, manage, and improve in all facets of ESG with a true ESG Operating System. *e*



Kohler Co.

WHAT THE JUDGES SAID ...

I love the innovation of Kohler WasteLAB, the reuse of the materials, and increasing availability of green options. I also love that it help individuals meet their own personal sustainability goals."

The Abstra Collection by Kohler WasteLAB is made from nearly 100% recycled waste materials. It explores the tenets of a circular economy, inspired by nature as a model for sustainable processes. Each tile is unique and handcrafted, allowing architects, designers, and end users to purchase sustainably without

sacrificing beauty or functionality. Kohler WasteLAB's goal is to reimagine the approach to waste by finding the value in landfill-bound material and engaging in a manufacturing process where nothing is wasted. Abstra is the second tile collection to come from Kohler WasteLAB and the first to explore new uses for wastewater sludge.

The finished product is a tile inspired by the play of light and shadow naturally created on reliefs. Abstra is a true testament to the fact that you don't need to compromise on beauty and style for sustainability.

Through this approach, we're taking a step toward building a better planet, one in which we reuse, rethink and repurpose our waste streams as part of a sustainable circular economy to create beautiful, thoughtful products. *<*





Kulr Technology Group

WHAT THE JUDGES SAID ...

The KULR-Tech Safe Case is designed to be reusable – creating a greener and healthier environment for ourselves and for future generations."

Kulr's Safe Case is a reusable transportation case for batteries and electronics that prevents cell to cell thermal runaway propagation and prevents heat, fire, and explosion from exiting the enclosure. Its technology is enabling a circular battery economy, which is essential for a successful electric transition and a more environmentally sustainable society. Developed in partnership with NASA, Safe Case uses Kulr's patented Thermal Runaway Shield (TRS), its Internal Short Circuit device's destructive testing and instrumentation, and extensive expertise in thermal management and safety design. TRS has been proven by various government testing authorities to stop or mitigate the impacts of dangerous lithium-ion battery failures, and Safe Case is the only commercial product in the world approved by the United States Department of Transportation to store and transport lithium-ion batteries for recycling. Today, KULR's Safe Case technology is used to store astronauts' laptops on the International Space Station. *I*



cooler · lighter · safer



Modern Mill

WHAT THE JUDGES SAID

The product has impressive credential with regard to aligning to principles of a circular economy. With regard to impact, ease of adoption is helped because it can be handled similarly to real wood, while being lighter and more durable."



ACRE by Modern Mill is a revolutionary material offering the look and feel of wood. It is regularly specified to replace ipe, cedar, or teak in a myriad of applications.

ACRE is a sustainable, lowmaintenance alternative to wood, made from up-cycled rice hulls in a zero-waste manufacturing facility and is 100% recyclable.

ACRE is a pleasure to work with on the job site. It's lightweight and easy to carry, yet strong, rigid, and straight. ACRE works with ordinary woodworking

tools-requiring no special equipment, training, or experience-and waste is minimal. It can be cut, curved, shaped, and molded to fit countless applications, both exterior and interior.

ACRE takes paint and stains just like real wood. It's easy to care for and guaranteed to last. Once your project is complete, you can be confident ACRE will stand up to water, weather, and pests for years to come, backed by an industry-leading materials guarantee. *<*



NAVEX

WHAT THE JUDGES SAID ...

Appreciate the focus on the business as a whole that this tool supports. ESG alongside Ethics & Compliance and support and soutions for supply chain, conflict minerals, sustainability management and ESG frameworks is a great single technology solution."

NAVEX ESG plays a critical role in helping users formalize their program and achieve transparent disclosure. It does so by automatically collecting data, managing cross-functional workflows, visualizing performance, and simplifying reporting aligned with multiple leading ESG guidance providers.

Specifically, NAVEX ESG:

- · Collects utility bill data across water, electricity, waste and natural gas
- Calculates GHG Scopes 1, 2, and 3 emissions footprints automatically, per IEA and EPAGrid standards
- Issues and manages assignments related to collecting and tracking energy, water, waste, audit inquiries, and Scope 1, Scope 2, and Scope 3 greenhouse gasses (GHG)
- Reports all ESG key performance indicators from one place, sharing an organization's environmental footprint across locations around the world
- Helps teams manage ESG tasks, accommodating reporting frameworks such as SASB, GRI, CDP and TCFD
- Helps organizations establish dynamic goals, including net zero and science-based targets, and see progress over time, including site-level factors to give users the clearest view of areas for optimization *I*





One Motion

WHAT THE JUDGES SAID ...

Looking at the global footprit of motors, and the need to reduce Scope 1 and Scope 2 emissions, this could be high impacting project. From both the cost and GHG emissions perspective."

The mag-drive by One Motion offers an energy efficient method of achieving rotary motion. By using magnetic direct drive technology, it is 55% more energy efficient than conventional motor/gearbox systems. In conventional motor/gearbox systems, energy is lost as it passes through each rotating component. Mag-drives use just one transfer of energy, as it is used for direct mechanical rotation (watts to torque). No energy is lost passing through gears. This results in approximately 1,000 tons of carbon saved annually over conventional motor/gearbox systems. This new technology has quickly grown in popularity with companies looking for innovative ways to increase energy efficiency and reduce carbon emissions. The world's largest poultry manufacturer installed 342 mag-drives for conveyors in their new facility located in Humboldt, Tennessee. By standardizing on the mag-drive, the plant will save approximately 342,000lbs of carbon annually. *e*





Plug Power

WHAT THE JUDGES SAID ...

Plug Power has developed a new supply chain and ecosystem supporting hydrogen and fuel cells. Beyond the technology innovation, only a robust supply chain and ecosystem will guarantee adoption at scale."

Plug is building an end-to-end green hydrogen ecosystem, from production to storage and delivery, to help its customers meet their business goals and decarbonize the economy. In creating the first commercially viable market for hydrogen fuel cell technology, the company has deployed more than 50,000 fuel cell systems and over 165 fueling stationsmore than anyone else in the world-and is the largest buyer of liquid hydrogen. With plans to build and operate a green hydrogen highway across North America and Europe, Plug is building a state-of-the-



art Gigafactory to produce electrolyzers and fuel cells and multiple green hydrogen production plants that will yield 500 tons of liquid green hydrogen daily by 2025. Plug will deliver its green hydrogen solutions directly to its customers, and through joint venture partners into multiple environments, including material handling, e-mobility, power generation, and industrial applications. *(*



Rodan Energy Solutions

WHAT THE JUDGES SAID ...

66

It could become the example every responsible school district and university becomes familiar with as they consider the possible and important good they could do in the world - cost favorably."

Rodan Energy Solutions participated in Canada's first carbon-neutral school project, working alongside leading cleantech integrator Ameresco. The John Paul II Secondary School microgrid project included 2,700



solar panels on covered carports connected to a Tesla energy storage system. Rodan's Energent Energy Optimizer serves as a key enabling technology for this microgrid project, optimizing how electricity is provided to the school. As experts in energy markets and ISO energy programs, Rodan-built algorithms were used in Ameresco's Energy-as-a-Service financial model to maximize the school's economic potential through continuous and real-time optimization of the solar panels and battery energy storage system. 🥏



Sphera

WHAT THE JUDGES SAID ...

Focusing on customer's ESG Management needs, Sphera has invested in automated, higher-interval and higher-granular data aggregation to help large organizations."

SpheraCloud Corporate Sustainability software provides a solution-at-scale for large organizations to automate data collection and management of all sustainability data company-wide, including Scope 1, 2, and 3 GHG emissions, water and waste emissions and other ESG-related data. Businesses can establish transparent audit-proof sustainability management and efficient reporting processes to reduce the risk of non-compliance and related financial consequences.

SpheraCloud Corporate Sustainability software simplifies reporting to all relevant standards (CRI,



CDP, SASB, etc.), ratings (MSCI, DJSI, etc.) and existing and emerging regulations. Advanced performance analytics help understand gaps between targets and actual performance, how to improve sustainability performance, and reduce operational expenses. Sustainability information can be provided transparently to complement financial reporting, delivering a single source of truth for sustainability, finance, operations and other stakeholders to have real-time, reliable, and audit-proof data for better business decisions.

By introducing the latest big-data processing techniques, high volumes of datasets that traditional data-processing software cannot process can be managed. Additional features like calendarization of utility bills, meter data and rule-based gap filling make SpheraCloud Corporate Sustainability a leading sustainability software solution. The insights provided by SpheraCloud Corporate Sustainability software help improve corporate sustainability performance as a foundation for a sound net-zero strategy. *(*



SUEZ WTS - E.C.O.Film

WHAT THE JUDGES SAID ...

There were excellent examples of technology use cases and results. Its clear the application of E.C.O.Film technology adds value and provides a vehicle to reduce environmental impact."



SUEZ Water Technologies & Solutions' E.C.O.Film (Engineered Carboxylate Oxide Film) is an innovative patented corrosion inhibitor and deposit control technology used to eliminate phosphorus from industrial cooling water systems. As E.C.O.Film does not contribute phosphorus, stricter phosphorus discharge regulations can be achieved, helping to mitigate the growth of harmful toxic algae blooms in water bodies. Eliminating phosphate-based deposition can also have a positive impact on heat transfer and energy consumption, and higher cycles and pH operations are attainable, leading to water conservation, reduced acid usage, and reduced specialty chemistry usage as there is less blowdown water to treat. E.C.O.Film doesn't contain zinc, an EPA priority pollutant, or tin, which suffers from solubility, halogen stability, and galvanic corrosion challenges. The technology is halogen stable, has a favorable aquatic toxicity profile, and is easy to feed and control with corrosion and deposit control accomplished with just one or two drum programs, making for a simplified, streamlined and cost-effective treatment process to achieve discharge limits. Ø



SUEZ WTS – ZeeLung

WHAT THE JUDGES SAID ...

This product demonstrates direct usefulness to wastewater treatment plants which sit at an intersectional point of water use."



Population growth and urbanization are putting pressure on water and wastewater treatment plants to increase their treatment capacity to meet the growing demand. Conventional solutions for expanding wastewater treatment capacity often require the construction of new bioreactor tanks, which increases overall energy consumption and operating costs. SUEZ - Water Technologies & Solutions' ZeeLung Membrane Aerated Biofilm Reactor (MABR), on the other hand, maximizes the treatment capacity of existing plant assets, while also reducing energy consumption. The ZeeLung cassettes are installed into existing bioreactor tanks to augment the conventional activated sludge process by increasing the biological inventory without increasing mixed liquor, suspended solids, or reactor volume. This allows for fast implementation and creates minimal disruption to operations, making it a more cost-effective and versatile option than other solutions. ZeeLung technology is also much more energy efficient. In conventional wastewater treatment, 60% of the energy is used by blowers tasked with delivering oxygen necessary for biological processes. With ZeeLung technology, oxygen is delivered without bubbles through molecular diffusion, which reduces the energy required for oxygen transfer by a multiple of four.



Turntide Technologies

WHAT THE JUDGES SAID

Turntide's promise of integrating software to measure, manage and drive optimization towards greater energy productivity in buildings, transportation and segments is needed and impressive."

Turntide Technologies (Turntide) invents and scales breakthrough technologies to accelerate electrification and sustainable operations for energy-intensive industries. Turntide's full-stack, integrated, open systems support commercial and industrial electric vehicles, building operations, and agriculture to optimize how the world uses energy. Turntide enables companies to lead their industries by attacking energy waste at every level and operating smarter for accelerated growth. *e*




Uplight

WHAT THE JUDGES SAID...

While the customer interface fills a much needed gap for utilities, the service greatly reduces the friction between regulated utilities and customers, offering a better service to customers and simple path to adoptin DR and clean energy. The service helps customers bundle bill savings while becoming greener and accelerating the transition to clean energy."

COMPARE TO

Budget Bill with True-Up

Automatic monthly bill payments with a clean energy offsets option and a true-up at the end of your contract, all in the Plus app



\$114.00/month

+ \$1.95 processing fee and optional Green Power fee (\$3 per 1,000 kwH at true-up)

See details

Plus is a subscription energy bundle embedded in a simple, easy to use interface. This solution enables utilities to separate energy usage and customer payments by bundling fixed bills without surprise true-ups, with energy optimization through their smart thermostat. Plus leverages automatic cost signals to devices, rather than relying on price signals to customers to change their behaviors. Uplight's solution provides the grid benefits of load shift, while freeing customers to enjoy convenient and predictable bills. To add additional value to both utilities and customers, other programs like green energy can be included within the Plus subscription bundle to make it easy for customers to transition to clean energy. Uplight is currently piloting Plus at three large US utilities, including AES Indiana. Two of the pilots include green energy offsets as part of the subscription bundle offered to customers. 🥖





VelocityEHS

WHAT THE JUDGES SAID ...

A very useful and needed solution for environmental data collection, analysis, and reporting – company should be very successful as this is a much-needed product for any corporation."

VelocityEHS ESG Software is an all-in-one system that supports organizations in their ESG journeys. Starting with materiality assessments, then streamlining data collection and reporting, VelocityEHS ESG helps organizations effectively plan, build, and optimize their ESG programs and develop more successful and sustainable business strategies. A 360-degree environmental data hub centralizes critical metrics to make it easier to measure and monitor performance and reduction targets, and share data across GHG, energy, air, water, and waste usage to ensure compliance and adherence to respective ESG and environmental standards and frameworks. Advanced calculation technologies enable users to hit reduction targets with greater ease and confidence. A partnership with Urjanet allows VelocityEHS to automatically port in utility data across all user utility accounts—without the need for manual data

entry-that streamlines disclosure reporting. Other disclosure reporting capabilities include prebuilt automatic data exports that align with major global reporting standards, including Sustainability Accounting Standards Board (SASB), and Global Reporting Initiative (GRI). *e*





Voltus, Inc.

WHAT THE JUDGES SAID ...

This product provides a critical missing link in the electricity market to better connect customers with more opportunities to engage in the wholesale electricity market."

VoltApp, Voltus's software platform, monetizes and connects distributed energy resources (DERs) to every wholesale electricity market in the US and Canada. Voltus customers generate revenue by allowing their DERs to be dispatched to support the grid when needed. Today, VoltApp manages nearly 2,600 megawatts of DERs across the US and Canada, offering an intuitive, centralized platform where DER asset owners can manage their participation across multiple locations. VoltApp delivers real-time energy data, enabling customers to easily manage their performance during DER dispatches. VoltApp also offers full



visibility into financial performance, so customers can understand how much they've earned, and how much they can expect to earn in the future. VoltApp allows grid operators and DER asset owners to take advantage of the critical grid-balancing benefits that DERs provide. By connecting these resources to electricity markets, VoltApp is helping build a more resilient, affordable, and cleaner electric grid. 🥖



Wärtsilä

WHAT THE JUDGES SAID ...

The Island Grid+ Solution is a comprehensive software suite that empowers customers to transition to the grid of the future and facilitates reliable, sustainable, and efficient power to islanded grids."

Wärtsilä's GEMS Island Grid+ Solution is a comprehensive software suite that solves ubiquitous challenges on islanded grids such as high costs of baseload power, grid instability, and timing imbalances between peak demand and renewable energy production. The **GEMS Island Grid+ Solution** platform uses artificial intelligence to accurately predict energy generation and optimize multiple energy assets under a single



portfolio, leading to lower levelised cost of energy and improved grid quality and safety.

Wärtsilä has successfully supported the decarbonization and energy transition of four islanded grids in Roatan, Bonaire, Graciosa, and Mali, with many more in commissioning stage. Wärtsilä's demonstrated power system optimization capabilities increased reliability, decreased energy costs, reduced fossil fuel consumption, and enabled large-scale renewables integration. *(*



Wolters Kluwer Enablon

WHAT THE JUDGES SAID ...

Great idea – and obviously successful through many platforms and use cases."



The Enablon Vision platform helps organizations align corporate and operational goals while remaining responsible, productive, and safe. The platform covers all key enterprise and operational risk processes to be a comprehensive enterprise integrity solution. Wolters Kluwer's Enablon is pushing the boundaries, helping major industry players achieve their full potential by breaking silos. The Enablon Vision platform combines risk & compliance, engineering & operations, and EHSQ & sustainability into a fully integrated, single-screen solution. Globally, hundreds of companies and millions of users utilize Enablon software to refine and act on their ESG strategy – including managing environmental performance, increasing worker safety, streamlining reporting, and achieving regulatory compliance. *I*



World Energy

WHAT THE JUDGES SAID ...

This product provides an ultra low carbon option for the aviation industry – one of the hardest industries to de-carbonize."

Sustainable Aviation Fuel (SAF) is a drop-in solution that requires zero changes in aircraft or engine fuel systems, distribution, or storage facilities, and can reduce aircraft carbon emissions by up to 85 percent. World Energy operates the world's first and North America's only commercial-scale SAF production facility and empowers leaders like Amazon Air, United, JetBlue, Rolls-Royce, and Boeing to transition to low-carbon transport.



World Energy's SAF significantly reduces the net life-cycle carbon dioxide emissions from aviation operations. In addition

to an 85 percent reduction in greenhouse gas emissions as compared to fossil jet fuel, SAF burns cleaner, reducing the amount of particulate matter while emitting no aromatics. Neat SAF is a 100 percent sustainable fuel made entirely of renewable resources and contains no fossil-based feedstock. It is not coprocessed with fossil fuel in traditional oil refineries and its carbon attributes comply with all state and U.S. federal regulations for advanced biofuels. World Energy's SAF is a California Air Resources Board (CARB) certified low-carbon fuel and meets all American Society for Testing and Materials (ASTM) standards.

SAF is currently the most viable carbon reduction solution available for commercial, business, and cargo aviation. When using SAF, airlines have an immediate and positive impact on carbon emissions reductions and make real progress toward their net-zero goals. Today, SAF is used as a blended product. It is currently approved at a 50/50 blend level with conventional jet fuel for commercial use. However, World Energy seeks to push the boundaries on what is possible for low-carbon aviation. The company continues to collaborate with Gulfstream and other industry leaders to gain approval for pure 100 percent renewable SAF use in regular commercial aviation to enable a future of carbon net-zero fossil-free flight. *(*



WSP

WHAT THE JUDGES SAID

Harnessing sophisticated diagnostics, this product can reduce operating costs up to 70%. It also provides forensics to determine contaminant sources while translating complex numerical data sets into easy-to-understand graphics."

WSP's Groundwater Plume Analytics tools take simple or complex numerical data sets and process them into meaningful and easy-to-understand graphical data outputs (i.e., analytics) that provide a holistic look at groundwater sites and how they change over time. These innovative and proprietary methodologies have been used at 100+ sites in the US, and in more than five international markets by governmental agencies and industrial clients to better understand their groundwater plume behavior, develop effective long-term risk management strategies for their site, realize significant cost savings by reducing remediation scope, and improve communication with project stakeholders. Recently, we achieved the permanent shutdown of a soil vapor evaporation system and oxygen injection system at a major groundwater site. Millions of dollars

1.000

750

500

250

100

50

25

15

5



were saved in lifetime operating costs, while introducing an environmentally preferable approach to groundwater management. Our tools all aim to provide the user with value-added, scientifically defensible, easy-tounderstand results, and a clearer picture of what is really going on within a groundwater plume. Some of these tools include the Ricker Plume Stability Method, Remediation System Benefit Analysis, the Spatial Change Indicator, and Well Sufficiency Analysis. Explore the many tools we have available and more on our website.

OP PROJEC,

Environment + Energy LEADER

AWARDS 2022





FuelCell Energy

WHAT THE JUDGES SAID

This Tri-Gen project is expected to generate 2.3MW of electricity and 1.2 tons of hydrogen per day to support Toyota Logistics Services operations at the port. The uniqueness of this project is that the plant will be powered by renewable biogas."

FuelCell Energy manufactures and deploys low-to-zero carbon fuel cells for power generation, carbon capture and hydrogen supply. The company's FCE Trigeneration Platform, with renewable gas supply, will enable an onsite, industrial scale, zero-carbon solution for the Toyota Logistics Services facility in the Port of Long Beach, California. The co-location of the hydrogen generation and hydrogen fueling



at the facility is the first of its kind. The FCE Trigeneration Platform is unique in its efficient usage of gas input, which is renewable gas. The platform will help create a zero emissions hydrogen truck and car fueling depot, along with a zero-emissions Toyota facility. An additional benefit of the project is that the platform will enable recovered water that will be used for car washing operations, furthering its environmental sustainability in an arid region. 🥖



ADM

WHAT THE JUDGES SAID

ADM's project is fantastic. The world truly needs pure storage CCS projects in order to overcome climate change, and it is therefore incredible to learn that this has been the first successful completion of such a project."

The Illinois Basin -Decatur Project (IBDP), a partnership between ADM and the Illinois State Geological Survey, is a carbon sequestration system with the capacity to permanently sequester CO2 from industrial processes. Led by the University of Illinois and funded by the US Department of Energy, the project aimed to confirm the ability of Mt. Simon Sandstone



to safely store CO2 generated as a byproduct from ADM's production of ethanol. On May 19, 2021, the University of Illinois and ADM announced IBDP as the world's first successful completion of a pure storage carbon capture and storage (CCS) project. IBDP met its goal to sequester one million metric tons of CO2 over a period of three years, the equivalent of annual emissions from about 200,000 passenger cars, according to the US EPA calculator. The project set a new milestone for the world's understanding and ability to implement industrial CCS systems. *<*



Agilent

WHAT THE JUDGES SAID ...

This project promotes circularity: it keeps scientific instruments (chromatography, spectroscopy) out of landfill, extends useful life. Taps into possibilities for repair, refurbishment, resale, reuse--and, if that's not possible, more-sustainable disposal."

Agilent is a life science company and leading provider of analytical instruments, software and services to 265,000 labs across the world. To promote sustainability of its products, Agilent's Certified Pre-Owned

Instrument program gives scientists the option to trade in their used instrument for cash or toward the purchase of a new one; or they can return decommissioned instruments to Agilent for recycling. Agilent refurbishes used systems to new instrument standards, and then resells them to customers who might not otherwise have access to high-quality instruments due to budget constraints. For systems that cannot be refurbished to Agilent's high standards, the company reuses parts in good condition and recycles as much as possible. In 2021, Agilent bought back over 900 used instruments from customers, sold over 3,500 certified pre-owned instruments, and took back 2,000 instruments through its return program. The attached photo shows an Agilent pre-owned instrument before and after its refurbishment. Learn more about the program at https://bit.ly/3wTOM6Z. *(*





Ameresco and Bank of America

WHAT THE JUDGES SAID ...

This project is providing Bank of America with the renewable energy they are committed to using. This is a very large project. It will have the added benefit of reducing solar gains on the parking lot and reduce heat island in the Phoenix area."

In November 2020, Bank of America began its partnership with Ameresco – a leading cleantech integrator and renewable energy asset developer – to implement a comprehensive, 3,787.2 KW-dc solar photovoltaic (PV) system at its corporate campus in Chandler, Arizona, which acts as the main office for approximately 3,400 employees. Through this partnership, Ameresco installed about 10,000 solar modules, offsetting roughly 60% of the campus' annual electricity demand. Upon the project's completion in August 2021, Bank of America was able to reduce its emissions by nearly 5,000 metric tons annually, which is equivalent to the planting of 5,000 acres of forests. The collaboration with Ameresco has become one of the largest 'behind the meter' solar projects in the Southwest. As part of the campus'



energy-saving overhaul, Ameresco strategically installed a solar-powered ATM and solar-powered benches to allow for convenient charging of personal devices, EV charging stations, and a solar carport over the campus parking lot, providing shade for faculty and visitor vehicles. With Bank of America's ultimate goal of reaching net zero before 2050, the newly built solar PV system helps accelerate the financial services company's carbon reduction efforts and provides clean energy advancements for the greater community. *e*



Armstrong International

WHAT THE JUDGES SAID ...

This is an innovative smart technology tool that definitely offers timeliness and relevance in the marketplace. What I like about it is real time data at discreet points in steam systems, and access to information 24 hours a day by providing regular updates, precise documentation, custom-filtered reports."

Sage Smart Thermal Utility System Management by Armstrong is a powerful software tool, designed to ensure top efficiency, performance, and safety in steam and domestic hot water systems. The state-of-the-art software calculates steam loss data as well as CO2 emissions and reports them using Armstrong's advanced steam system efficiency methodology relating to steam traps, which has been approved by the United Nations Framework Convention on Climate Change (UNFCCC). Sage gives convenient access



to vital, real-time data from multiple areas and provides a totalized summary of selected data in any of the following categories: monetary loss, fuel used, repair cost, payback period, and CO2 emissions. It is a unique product that works seamlessly as an integrated part of steam trap management programs in a multitude of industries, including food, pharmaceutical, consumer goods and light industry, hydrocarbon and chemical processing, healthcare, higher education, and hospitality. In addition to maximizing steam system efficiency, reliability and safety, Sage also provides leading-edge domestic hot water system management that includes Legionella mitigation, reduced scalding risks, hot water notifications and documentation, and ensures full compliance with ASHRAE, CDC, and World Health Organization hot water system safety guidelines. *#*



Chemours

WHAT THE JUDGES SAID...

Gem City Market is an exceptional collaboration that will yield both energy that will yield both energy and environmental benefits for years to come."

The Gem City Market (GCM) project exemplifies the make by collaborating to low-income communities. Hussmann integrated our to support the elimination of Dayton, Ohio, in ways that operation and the planet. of GCM's 8,000 sq.ft. retail and low-temperature system became a focal environmental responsibility, low operating costs and ease donated its Opteon XP10 GWP refrigerant to serve as for the Copeland scroll designed and donated



Community Food Co-Op impact companies can help address issues affecting Chemours, Emerson, and individual areas of expertise a food desert in downtown are sustainable for its With a significant portion space requiring medium refrigeration, the refrigeration point for supporting GCM's long-term energy savings, of maintenance. Chemours (R-513A) low-pressure, lowthe single-refrigerant solution booster architecture customby Emerson. Hussmann

provided an assembled refrigeration system. Because Opteon XP10 can serve as the single refrigerant for GCM's needs storewide, it helps maintain a simple, more cost-effective system over its lifetime that will drive lower energy consumption and fewer carbon emissions—keeping GCM compliant with evolving mandates in commercial refrigeration. The reduced energy usage will pay dividends for decades in the form of lower energy bills, potentially representing a large percentage of overall operating costs. Today, the recently opened GCM makes healthy, affordable food accessible to thousands of residents. *#*



Cirba Solutions

WHAT THE JUDGES SAID ...

"Li-Ion recycling that uses "hydrometallurgy" to increase the components/elements that can be recycled from these used batteries. The method of hydrometallurgy recycling is less water intensive so it is more sustainable."



Cirba Solutions, the combined entity representing Retriev Technologies, Battery Solutions, and Heritage Battery Recycling, is the most experienced and comprehensive battery management and materials platform.

Cirba Solutions brings together circularity and the battery supply chain. As part of the efforts to create a domestic supply chain, the team extracts critical materials from recycled batteries, such as lithium-ion, and reintroduces them back into the supply chain. With their advanced hydrometallurgical plus technology through partnership with 6K, will recover additional materials, creating more value and

ensuring these materials get back into the value chain. Expansions are planned for the creation of new cathodes from the recycled materials, further enhancing the security of the battery supply chain.

The combination of Cirba Solutions' plus 6K will create a domestic source of new battery cathodes made from recycled batteries. This innovative technology is energy efficient, reduces the use of water, while creating a new source of raw materials changing how batteries are made. Recycling the batteries of today while making the batteries for tomorrow.





Clean Earth

WHAT THE JUDGES SAID ...

Thanks to Clean Earth, recovered materials are no longer considered hazardous waste, thus helping companies by removing the burden of being counted toward their hazardous waste generator status. This has been a huge boon in the post Covid days."

When large volumes of hand sanitizers were produced and purchased in 2020 to combat COVID-19, many companies over-stocked and couldn't manage the excess inventory. In addition, the consumer need for hand sanitizer prompted nontraditional manufacturers to produce and sell hand sanitizer- an otherwise niche market- that often failed to meet FDA standards. Companies stuck with large quantities of off-spec, recalled or expired hand sanitizing products are experiencing an urgent need for disposal. In a world awash in hand sanitizer, Clean Earth had a goal to provide a nationwide alternative reuse solution for this waste stream. The customized solution gives non-viable hand sanitizers a second life as a new usable energy source. A fuel blending process enables alcohol to be recovered from the hand sanitizer, transforming the waste into a gas fuel additive product. To date, the recycling solution has salvaged more than 1 million pounds of nonviable hand sanitizer products.





CPower

WHAT THE JUDGES SAID

With the growing oversight of ESG reporting, there is a need for accurate, replicable quantification of carbon reduction from demand response programs. CPower is a leader in Demand Response and would be a leading candidate to develop this type of modeling."

The data center industry is large enough that reducing its energy consumption can drive a meaningful impact, and demand response participation offers a simple way for data centers to increase their emissions savings. In August 2021, energy solutions provider CPower worked in partnership with WattTime, an environmental tech nonprofit that empowers all people, companies, policymakers, and countries to slash emissions and choose cleaner energy, to analyze factors relating to Digihost's CO2 impact, with the goal of understanding the crypto mining company's demand response performance. The analysis included the type of fuel mix, time of day, weather, and utility zone during 29 hours of demand reduction tests and events from the May 2019 – June 2021 participation seasons. Through its partnership with CPower, blockchain technology company Digihost achieved nearly 150 metric tons of marginal CO2 reduction with just 29 hours of demand response participation. The company's participating site reduced marginal carbon emissions by 5.1 tons per hour of demand response participation – the equivalent of 5,637 tons of coal burned per hour. This is equivalent to mitigating 164 lbs of coal burning avoidance or sequestering 182 acres of US forests for one year. *e*





CyrusOne

WHAT THE JUDGES SAID ...

The project takes into account not only on-site water withdrawals, but also the embodied water use in the electricity supply chain – this is an innovative/holistic way to create a water budget, and one not commonly applied by corporations in their facilities planning."

Over the past two years, we pioneered a comprehensive approach for reducing the total water impact of our flagship data center in Carrollton, TX, a high water-stress region. In addition to reducing onsite water use, we employed new methods to estimate and reduce the water embodied in our electricity and collaborated to restore water to local waterways. This three-part approach reduced total water impact by 75% in an industry known for intensive water use.

The conventional wisdom states that evaporating water onsite for cooling saves water in the electricity supply chain, reducing total water use. We tested this assumption using new region-specific methods to



calculate the facility's total water consumption - including both water used on-site and that consumed in the electrical supply chain. After upgrading to water-free cooling in 2020, the total water consumption at Carrollton decreased ~5 million gallons per year, proving that evaporative cooling doesn't always save water. *e*



DSD Renewables

WHAT THE JUDGES SAID ...

A shining star in the world-wide move to carbon free energy. The integration of solar with on-site storage and existing advanced agricultural practices holds enormous promise for a world transformed towards great sustainability."

Mauna Loa, the world's largest macadamia nut brand, strived to reduce its carbon footprint through the installation of solar and energy storage systems, and ultimately become 100% self-sustainable. To make the vision a reality, Mauna Loa and parent company Hawaiian Host Group, enlisted DSD Renewables (DSD). DSD designed and installed a 1.2 MW solar farm and 500 kW battery storage system to directly power 85% of Mauna Loa's processing plant in Kea'au, Hawai'i, avoiding over 1,000

tons of carbon dioxide equivalent each year. As the largest operating PV project dedicated to a private company in Hawai'i, the system, completed in partnership with No Ka Oi Energy, is comprised of 2,916 solar panels spread across three acres, and is expected to generate 1.55 million kWh of solar energy annually. The installation reduced Mauna Loa's energy costs and, in combination with their existing sustainable practices and on-site water and wastewater system, enabled them to be 100% self-sustainable. DSD owns and manages the assets, allowing Mauna Loa to focus on what they do best - growing macadamia nuts. 🕖





EcoEnergy Insights

WHAT THE JUDGES SAID...

This Al/IoT product is useful for large manufacturing facilities to conserve and preserve energy through auto-correcting for any mistakes when creating large aerodynamic technologies. The technology drives down energy consumption and operation costs."

An American aerospace manufacturer engaged EcoEnergy Insights, an AI and IoT solutions provider for building operations, to improve energy efficiency and optimize equipment operations across 12 manufacturing and office buildings on a single campus.

EcoEnergy Insights implemented a solution that included its CORTIX AI and IoT platform and its BluEdge Command Center – comprised of data scientists and domain experts. The team converted insights from the platform into action plans and ensured timely implementation. This made the facility operations more proactive and efficient, achieving these results with a less than 12-month payback on the investment into the program:

- Energy savings: 2 million kilowatt-hours (kWh) units of electricity savings, and 241,000 therms units of gas savings
- Facility operations: 0.96 million kWh optimized through schedule corrections, and 129,000 kWh optimized through temperature setback during unoccupied hours
- Greenhouse gas (GHG) reduced by over 4,000 metric tons of carbon dioxide equivalent

Notes:

- Case study results captured over 12 months
- GHG is an estimate calculated using the EPA Greenhouse Gas Equivalencies Calculator tool *^e*

ECUENERGY INSIGHTS



Enel X North America

WHAT THE JUDGES SAID ...

This microgrid project delivers clear financial and environmental value to support the electrification of transportation."

In May 2021, Enel X and Martha's Vineyard Transit Authority (VTA), with help from Borrego Solar, began operating a solar-plus-storage microgrid that powers an all-electric public transportation bus fleet. The microgrid combines a state-of-the-art solar carport that charges the VTA's fleet with a 1.5 MWh battery storage system, delivering backup power with always-on dependability, which is important for coastal communities with higher risks of extreme weather. This project's 20-year power purchase agreement (PPA) secured 30% savings for power produced over the next two decades. Also, using the battery as a behind-the-meter resource enabled the VTA to sell energy back to the grid. The public-private partnership approach minimized financial risks by splitting funding between multiple parties, with half of the \$4 million project funded through the partnership between Enel X and VTA and the other half funded by the Federal Transit Administration, the Massachusetts Department of Transportation, and the Massachusetts Clean Energy Center. Over its lifetime, this project is estimated to generate \$1 million, and serve as a model for other coastal communities. With the goal to fully electrify its fleet by 2027, VTA continues to work closely with Enel X and currently operates 16 electric buses. *#*

enelx



FLEX

WHAT THE JUDGES SAID ...

A specific use case was provided regarding how a floorcare customer leveraged the software to make better decisions. The use case appeared to be very successful and resulted in improved business practices with lower environmental impact that was estimated in terms of CO2 reduction."

Flex is the manufacturing partner of choice that helps a diverse customer base design and build products that improve the world. Providing end-to-end circular economy solutions, Flex develops proprietary CO2 measurement, lifecycle assessment, and analytical tools and is focused on repair, refurbishment, harvesting, freight, supply chain, packaging, end-of-life, and forward activities that help customers tap into invaluable data to make informed decisions in reducing their environmental impact and maximizing value. Flex ECO2 empowers customers to achieve a more sustainable product lifecycle by measuring and curbing emissions, waste, and resource use through different circular economy practices. The tool also helps customers open new revenue streams and scale the right repair, refurbish, and recycling solutions for their environmental and business needs. The calculator offers an alternative to costly, time intensive lifecycle assessment tools that typically don't gauge circular activities. Based on product and transport data, the tool compares circular economy scenarios via dashboards that help inform a customer's sustainable supply chain design and decisions. *«*





ForeFront Power

WHAT THE JUDGES SAID ...

The solution provides strong results with additionally, considering that this was implemented at schools, a visual management system that is educating the youth in the importance of responsible energy management."

Los Altos School District (LASD) in California partnered with ForeFront Power to develop a 1.4MW solar energy portfolio across nine district campuses. The portfolio was completed in 2017 with minimal impact on school activities. In the first year of operation, a third-party vendor managed the District's solar energy assets. Recognizing inefficiencies in system performance, ForeFront Power's in-house asset management team took over asset management duties in 2020, utilizing their diagnostic, monitoring, and operational expertise to optimize performance and maximize electricity savings.



By 2021, ForeFront Power's asset management team had decreased the LASD solar portfolio's maintenance events by 90% in just 2 years. The portfolio exceeded the 95% contracted performance guarantee with an average performance ratio of 100% across the portfolio. It's expected to offset the equivalent of 1,754 tons of CO2 or 336 cars taken off the road each year. ForeFront Power's ongoing asset management has helped the LASD solar portfolio save the District over \$986,000 to date with an expected \$2.7 million within the first 10 years of operation. By significantly reducing Los Altos School District's energy costs, the solar portfolio is redirecting school funds to classrooms, teachers, and educational programs for students. *e*



GreenStruxure

WHAT THE JUDGES SAID ...

Very effective, scalable projects, backed by strong partners providing performance transparency."

In March 2022, bakery industry leader Bimbo Bakeries USA became one of the first companies to announce concrete actions to directly reduce the environmental impact of its energy supply. The company announced a multi-site partnership with GreenStruxure to bring on-site, zero carbon, digital energy to six of its bakeries to help meet the company's sustainability objectives. GreenStruxure, backed by its partners Schneider Electric and ClearGen, a Blackstone company, will design, build, own, operate and maintain the modular, highly digital renewable energy microgrids at all sites. Bimbo receives the outcomes from the system's performance – zero carbon energy, peak demand management and optimized use of energy from the grid and its on-site system. The microgrids will deliver about 25% carbon reduction and 25% of the electricity



needs for the sites. "Grupo Bimbo and Bimbo Bakeries USA are committed to Net Zero Carbon by 2050," said Chris Wolfe, Bimbo Bakeries USA's Senior Director of Environmental Sustainability. "These on-site microgrids represent a key component to our diversified strategy." *e*





Honeywell Solstice Portfolio

WHAT THE JUDGES SAID...

The Solstice portfolio of products has been designed to use a chemical bond that dissipates quickly rather than hydrofluorocarbons that trap heat in the atmosphere. Considered low-GWP (global warming potential) they're the next generation to combat climate change."

Hydrofluorocarbons (HFCs) have attracted much attention given their wide variety of applications in everyday life from supermarket refrigerators and air conditioning to insulation and personal care products. However, with new legislation demanding the phase-down of HFCs and the environment being top of mind for governments, businesses, and consumers, the time to transition to lower global warming potential (GWP) technologies is now. To meet the need for next-generation technologies, Honeywell developed its Solstice portfolio of products, which provides a powerful market solution for replacing HFCs – Honeywell's breakthrough hydrofluoroolefin (HFO) technology helps reduce greenhouse gas emissions. Unlike today's industrial gases, including CO2 and ammonia, HFOs are not toxic and unlike HFCs, they have a unique chemical bond that allows them to break down in the atmosphere in days instead of years, which means they don't linger in the atmosphere once they're released, and therefore don't contribute meaningfully to global warming. In addition to its low GWP, Solstice products can help customers combat climate change by improving energy efficiency and performance with a range of applications. Overall, the worldwide adoption of Solstice products has resulted in the reduction of more than 260 million metric tons of greenhouse gases, equivalent to eliminating emissions from more than 56 million cars for one year. *#*

Honeywell



Honeywell UpCycle Process Technology

WHAT THE JUDGES SAID ...

Using this technology would allow zero waste goals to be achievable and set the new standard/expectation for waste management across nearly every industry and company."

Imagine if recycling technology was capable of recycling the vast majority of global plastic waste. Honeywell's UpCycle Process Technology could help the world toward this goal - achieving greater circularity. The UNEP reports that currently only 9 percent of plastic waste is recycled, with 12 percent being incinerated, and 79 percent contributing to landfills. Honeywell's UpCycle Process Technology aims to combat the plastics pollution crisis by expanding the types of plastics that can be recycled and providing a Recycled Polymer Feedstock (RPF) that can be used to create new plastics. This is a scalable solution designed for straightforward installation, which can help accelerate industry adoption and reduce the need for new plastics production as well as plastic waste. Honeywell has been collaborating with waste management companies that capture and sort consumer, commercial, and industrial waste plastic goods to



both install UpCycle Process Technology and to enable direct access to plastic waste. 🕖



Neste

WHAT THE JUDGES SAID ...

Sustainable Aviation Fuel is a key solution to significantly reduce our Scope 3 GHG emissions. This project leverages existing infrastructure to enable the adoption of such fuel, at a lower cost."

Hailed as a "Climate Quantum Leap," Neste - a producer of renewable diesel and sustainable aviation fuel (SAF) - offered a first-of-its-kind breakthrough in the supply chain at San Francisco International Airport (SFO). For years, SFO sought to expand SAF use, but found the infrastructure and supply chain logistics to be a significant barrier. Neste's innovation allowed for the delivery of SAF via pipeline, serving as a drop-in fuel for major aircrafts. Once Neste's SAF enters SFO's fuel consortium storage, it is available



to all commercial, cargo. or business aviation entities that operate at the airport. The seamless introduction of SAF into SFO's existing jet fuel supply chain demonstrates SAF's role as a "today" solution that works with existing engines and infrastructure. Today, more than 1 million gallons of SAF have entered the airport - having a direct effect on reducing GHG emissions and helping fight climate change. 🥏



PNM

WHAT THE JUDGES SAID ...

Great example for those wanting to provide services to local government and large businesses."

PNM, New Mexico's largest electricity company, is committed to creating a sustainable energy future. As PNM transitions its resources to carbon-free electricity, it is helping its customers achieve their own robust sustainability goals. PNM Solar Direct illustrates this commitment as a first-of-itskind program bringing low-cost, large-scale solar power to local governments, institutions, and businesses. PNM Solar Direct is a voluntary subscription-based program where subscribers benefit from the cost advantages of a large-scale 50-megawatt solar



plant to serve their energy needs. The program is a cost-effective way for PNM subscribed customers to achieve their sustainability goals, adds more renewable energy in New Mexico, and ensures that no other customers subsidize the program. PNM thanks its customers who partnered to make PNM Solar Direct possible: Bernalillo County, City of Albuquerque, City of Deming, Deming Public Schools, Grant County, Santa Fe County, Town of Silver City, Walmart, and Western New Mexico University. *#*



Resolute Forest Products

WHAT THE JUDGES SAID ...

This project has demonstrable achievements in decarbonization and involves multi-stakeholder financing as well as a diverse suite of green energy and energy efficiency solutions."

Resolute Forest Products' Thunder Bay (Ontario) pulp and paper mill's thermal energy project combines technology, conservation measures and fuel switching to reduce the mill's overall annual greenhouse gas (GHG) emissions. The company made a \$29 million investment – including \$14.7 million to cut GHG emissions by over 20% – to complete implementation.

The investment underscores Resolute's commitment to combating climate change by reducing GHG emissions and using green energy. Using thermal energy technology, the project recovers and recycles lost heat by returning it through the manufacturing process, contributing to an overall reduction of approximately 43,000 mt of CO2 equivalents per year. By reducing the use of natural gas, Resolute has achieved an annual natural gas cost savings of over 35%.

Resolute worked in partnership with Thermal Energy International Inc. to launch the project, collaborating



on the design, development and implementation of the heat recovery and steam conservation components.

In 2021, Resolute achieved a 34% reduction in absolute scope 1 and 2 GHG emissions across company operations compared to 2015 levels. The company's climate change initiatives also include an 86% reduction in scope 1 and 2 emissions at their pulp, paper and tissue mills since 2000. Having surpassed its 2025 GHG emission reduction target ahead of schedule, the company is now in the process of setting new reduction goals in line with the Science Based Targets initiative (SBTi), which will include scope 1, 2 and 3 GHG emission reduction targets. *I*



STACK Infrastructure

WHAT THE JUDGES SAID ...

STACK has established its OnePurpose program to improve its overall ESG performance. It cites identification/use of more sustainable construction materials ('green concrete') and operating processes (use of vegetable oil in diesel generators) to minimize climate impacts of data center build + operation."

OnePurpose is STACK's project aimed at protecting its future by improving Environmental, Social, and Governance (ESG) standards across its entire portfolio. STACK achieved its goal of operating all locations on 100% renewable energy as a first step in its OnePurpose project.

Another two standout initiatives furthering sustainable infrastructure and operation practices include low-carbon concrete and HVO as a fossil-free renewable diesel. Building with low-carbon concrete reduces STACK's Scope 3 emissions or embodied carbon in their facilities. Additionally, alternatives to fossil diesel fuel such as HVO (hydrotreated vegetable oil) decrease Scope 1 carbon emissions from STACK's operations and backup energy needs. These eco-friendly alternatives are just the first steps in STACK's journey to a sustainable future.

Focused on reducing its carbon footprint, STACK has found a 20-25% carbon savings from its implementation of low-carbon concrete when compared to what had been traditionally used for development. Furthermore, HVO can actually reduce GHG impact anywhere from 45-85% when compared to fossil diesel. Through initiatives like these, STACK is successfully collaborating with clients and partners to optimize development and operations in joint advancement of shared ESG goals and values. *e*





Sterlite Technologies Limited

WHAT THE JUDGES SAID ...

Excellent demonstration of process, supplier and regulatory collaboration, embracing a circular approach to designing for sustainability, and strong performance metrics."

Landfills are the third-largest source of human-induced methane emissions. Zero Waste to Landfills (ZWL) mitigates this issue by promoting resource usage optimization, proper segregation facilitating recyclability, and circularity.

At Sterlite Technologies Limited, ZWL has been fundamental to how we drive sustainability and our climate action agenda. Initiated in 2018, the journey reached a significant milestone in 2020 with STL becoming the world's first integrated optical fiber and cables manufacturer to receive a ZWL certification for its Indian plants. The 'Reduce-Reuse-Recycle' strategy has helped us prioritize repurposing over recycling, reduce significant GHG emissions, and divert over 135,000 MT of waste from landfills. 3 of STL's Indian plants divert over 99% waste from landfills and another over 95%.

This achievement is a combination of process, supplier and regulatory collaboration, embracing a circular approach to diversion for sustainability, and strong performance metrics. Adopting reusable packaging, co-processing, product reuse, automating processes, and improving several other efficiencies have resulted in enormous environmental gains. Furthermore, these prescribed procedures have also permeated into our value chain where waste purchasers are guided on global benchmarks to ensure complete traceability of waste being purchased for recycling. *e*





TerraCycle

WHAT THE JUDGES SAID

The vision for Loop is that its front and backend design enables a manufacturer to produce reusables sold at any retailer for a consumer to 'buy and return anywhere,' safely and conveniently."

Loop is a global platform for reuse. We collaborate with brands and manufacturers to enable refillable versions of their conventional single-use products, and partner with leading retailers to embed these offerings into their online eCommerce and physical retail stores. We're working with category-leading



brands, retailers, restaurants, and more to activate a circular reuse ecosystem offering thousands of products - from your cup of coffee to your shampoo bottle - with an aim to make reuse as convenient and accessible as single use. Loop operates a global reverse supply chain - collecting used packaging from consumers and retailers, enabling deposit return, sorting and storing, and finally, returning hygienically cleaned packaging to manufacturers for refill. We work hand-in-hand with industry leaders including Ecolab to guarantee the highest standards of safety at every stage. This is all in an effort to build an international ecosystem for the reuse movement that maintains the convenience and affordability that we've come to enjoy with a throw-away lifestyle. With our brand, retail, and operational partners, Loop is on a mission to Eliminate the Idea of Waste in an approachable way that is accessible to all.



Willingboro Municipal Utilities Authority

WHAT THE JUDGES SAID ...

The comprehensive nature of this upgrade (including biogas, CHP, microgrid and advanced meter infrastructure) provides a holistic solution improving the operation of the municipal water/wastewater system."

The Willingboro Municipal Utilities Authority (WMUA) and Schneider Electric implemented a significant infrastructure project to improve sustainability and resilience of WMUA's water and wastewater facilities using New Jersey's first MUA Energy Savings Improvement Plan (ESIP). The WMUA ESIP project updates facilities and community operations through the addition of 13,000 Advanced Metering Infrastructure (AMI) water meters, improved



Pollution Control Plant (PCP) processes, including a Combined Heat and Power (CHP) plant, and traditional infrastructure improvements that will enhance the quality of life for residents.

The ESIP will enhance PCP processes through the inclusion of a CHP plant that will utilize cleaned and filtered methane gas currently produced at the PCP, combined with solar energy and battery storage to supply the MUA's microgrid. The microgrid will reduce energy costs and emissions, provide energy resilience to keep the plant operational during grid outages, and diversify the energy supply. The project will garner over \$7 million of savings over twenty years. *e*

MEET THE JUDGES



Salem Afeworki Energy and Sustainability Manager City of Costa Mesa

Salem Afeworki, LEED GA, ENV SP, EcoDistricts AP is the Energy and Sustainability Services Manager at the City of Costa Mesa. She is passionate about climate action, renewable energy technologies and community empowerment, and is responsible for

developing and implementing all citywide sustainability programs and initiatives that build a safe, resilient, livable and inclusive city for all residents. Her goal is to make Costa Mesa a leader in Sustainability and is committed to working with diverse stakeholders to make that happen.



Glen Anderson President ETC Group, LLC

Glen Anderson, P.E. is a President of ETC Group, LLC, an international engineering firm dedicated to improving energy efficiency in commercial and industrial facilities. He has 25 years of experience with analysis and optimization of chiller plants, building

air and water-side HVAC systems, process cooling and refrigeration. Glen has analyzed and managed the upgrades of central cooling plants for over 50 facilities ranging from resort casinos to hospitals to manufacturing facilities. Glen has particular expertise in on-going commissioning for customers using BuildingFit powered by SkySpark. This entails performance maintenance of mechanical systems following efficiency projects and continuously identifying additional opportunities.



Kisa Adkins Baskin Director of ESG WernerCo International

Kisa Adkins Baskin recently joined WernerCo International as the Director of ESG, where she drives the execution of the ESG Strategy as well as leads the environmental function.

Ms. Baskin's diverse environmental career includes working for the State of Georgia Environmental Protection Division, consultant for CH2M Hill (now Jacobs Engineering Group) and for the last 12 years, leading global environmental programs for Newell Brands and TreeHouse Foods. Each opportunity has provided her with the experience and opportunities to support the development of management systems that are rooted in compliance but focus on continual improvement and sustainable growth. At NWL she has led the development of their Global Compliance Program, including an internal education and training program for manufacturing and distribution environmental coordinators. At

TreeHouse Foods, she served as Director of Environmental Affairs, leading M&A activities for the Risk Management Organization, founded and co-chaired Wastewater Working Group and ESG Transparency subcommittee, and led the Responsible Sourcing audit program.

Ms. Baskin graduated with a B.S. in Environmental Science from Marshall University. She was selected as a 2017 Environmental Leader Honoree and also served on the 2017 Environmental Products and Projects judging panel.



Jim Boyle CEO Sustainability Roundtable, Inc.

Jim Boyle is the CEO & Founder of Sustainability Roundtable, Inc. For more than a dozen years, Jim has led full-time teams of diverse experts to assist nearly 100 Fortune 500 and growth companies in their move to more sustainable highperformance. Specifically, SR Inc has helped world-leading corporations, real estate owners, and federal agencies to set goals, drive progress, and report results in their move to greater Corporate Sustainability. Mr. Boyle led in the creation of SR Inc's Renewable Energy Procurement Services (REPS), which advises and represents Fortune 500 and fast growth companies across the U.S. and internationally in the development of renewable energy strategies and the procurement of both on-site and off-site advanced energy solutions. Before founding SR Inc, Mr. Boyle co-led Trammell Crow Company Corporate Advisory Services in San Francisco and returned to his native Boston and Trammell Crow Company's market leading team in Greater Boston where he received the Commercial Brokers Association's Platinum Award for the highest level of commercial real estate transactions. Earlier,

he advised companies on real estate and environmental matters as an attorney at a large law firm based in Boston. Jim is a graduate of Middlebury College, where he co-captained the football team, and Boston College Law School. Early in his career, he served as a federal law clerk, an aide to John F. Kerry in the U. S. Senate, and on Vice President Al Gore's campaign for President.



Tinika N. Brijlal [MScEng; BScEng] KimberlyClark

My passion lies with anything related to science and technology and the utilization of this to make the world a little better each day.

Taking advantage of a strong background in Operations and Engineering, my current focus is on improvements of Water and Energy impacts and footprint, of operational systems.

We all have the responsibility to lead and drive these sustainable processes, whether at home, in the community or in the work context.

Small steps today, making a sustainable tomorrow. Find me on LinkedIn @ Tinika (Iswalal) Brijlal.



Paul Campbell VP Business Development Navitas Partners

Innovative Executive Leader with 30+ years of diverse experience in strategic business development, account management, program execution, operations, and Six Sigma quality system implementation. Currently Director, Energy & Sustainability Marketing at ICF International. Previously sixteen years at Sears: Trained in disaster response/recovery in Puerto Rico post Hurricanes Irma and Maria. Created and scaled an industry-recognized disaster recovery business model. Collaborative playbook execution led to the installation of 350 solar powered battery back-up energy systems in Puerto Rico, St Thomas, and St. Croix. Developed strategy/facilitated multiple business teams while pursuing leadership in sustainability, governance, and energy efficiency for Sears/ Kmart and their customers. Optimized strategic sustainability partnerships across retailers, trade organizations, consultants, manufacturers, regulators, and EPA/DOE. Trained in Six Sigma at GE. Achieved Master Blackbelt status

while training others and completing 20 manufacturing projects in plastics division and at customer production sites. Lives in Chicago.



Claudia Herbert Colfer Program Manager UN Global Compact Network USA Claudia Herbert Colfer is Program Manager at the United Nations Global Compact Network USA. As Program Manager, Claudia develops mechanisms and manages initiatives that help over 800 American companies do business responsibly and sustainably. She also helps engage the American private sector with the work of the United Nations, particularly with Agenda 2030 and the Sustainable Development Goals.

Claudia is also the Founder and CEO of Wasi. Wasi is an iOS app that provides a platform for people to easily make a positive change in the world. The app allows its users to learn about the most pressing global challenges and gives them recommendations on how to contribute to overcoming them from the comfort of their homes. In addition, Claudia is a Founding Member of the World Economic Forum's Global Shapers Queens Hub and was named to the Environment+Energy Leader 100 in 2021.

In the past, Claudia has worked at Bain & Company, the International Chamber of Commerce (ICC), and the United States Council for International Business (USCIB). Claudia holds a Bachelor of Science (Hons) in Politics and International Relations from the University of Bath, a Master of Arts in Global Governance and International Diplomacy from Columbia University, and a Master of Science in Sustainability, Enterprise and the Environment from the University of Oxford.



Kirby Dipert Field Engineer TRC Companies

As a Field Engineer with TRC, I work primarily on the Commercial and Industrial Energy Efficiency program supporting the local Publicly Owned Utility NIPSCO. In this role we meet with NIPSCO customers regularly to improve their bottom line through embracing energy efficiency upgrades within their facilities.

I am fortunate to have a very broad background in energy efficient endeavors as part of my career in commercial and industrial HVAC sales, management, and marketing. I helped very high-level clients such as GM, Siemens, Bayer, and AM General not only save energy but reduce their carbon footprint via a variety of capital improvement projects within their opera-tion



Aleksandra Dobkowski-Joy Vice President, ESG

The Estée Lauder Companies Inc. Aleksandra Dobkowski-Joy is Vice President, ESG at The Estée Lauder Companies (ELC), where she leads the company's environmental, social, and governance (ESG) transparency strategy. Aleksandra drives the implementation and continuous enhancement of ESG data collection, consolidation, governance, and controls. She is responsible for implementing ESG disclosure approaches to satisfy expectations of key stakeholders, including investors, regulators, consumers, and employees. She spearheads the annual development of the company's Social Impact and Sustainability Report, as aligned to major reporting frameworks including SASB, GRI, TCFD, and the UN Sustainable Development Goals.

Prior to joining ELC, Aleksandra was President and Chief Operating Officer at Framework ESG, where she led the delivery of core services in sustainability strategy and disclosure. Aleksandra started her career at the US Environmental Protection Agency. She holds a Master of Environmental Management degree from Duke University, and a BS in Biology from the University of Connecticut.



Eric Dominguez SVP Engineering & Asset Management

Caesars Entertainment, Inc. Eric joined Caesars Entertainment in 2005 and is currently responsible for corporate facilities & engineering, utility management, offsite commercial laundry operations, environmental compliance, and environmental sustainability strategy. He oversees enterprise facility programs including maintenance capital investment, FCC licensing, energy efficiency and maintenance management. With over 30 years of diverse energy and facility engineering experience, Eric holds a BS in Mechanical Engineering from Cornell University, an MBA from University of Nevada, Las Vegas and is one of few civilians to have completed U.S. Naval Nuclear Power School. He is also a Certified Energy Manager, a U.S. Green Building Council LEED Accredited Professional and a governor-appointed member of the Oversight Panel for Convention Facilities for the State of Nevada.



Harry Etra Chief Executive Officer HXE Partners

As the Chief Executive Officer of HXE Partners, Harry is responsible for leading and developing a team of environmental, social and governance (ESG) professionals focused on delivering best-in-class ESG advisory services to clients across sectors. His focus is on company-wide strategy, client service, professional development of their team and expanding the impact of HXE Partners.

Playing in pick-up basketball games has always been a favorite hobby for Harry. As it relates to work, the team sport component of everyone working together towards a shared goal with a unique role to bring to the team has always resonated with him for how ambitious ESG goals can be achieved at scale.



Monica Ferrer Director, Energy & Sustainability Equity Lifestyle

Experienced Energy & Sustainability Director with a demonstrated history of improving companies' reputations as a thought leader by pioneering the design, implementation, and communication of industry-recognized energy and sustainability programs. Monica has created.

developed & executed large-scale water conservation, energy efficiency and carbon reduction strategies across real estate and retail companies with national footprints.



Angela Gordon Sr. Policy Advisor TRC Companies

Angela Gordon, a senior policy advisor with TRC, has worked in the electric, natural gas and water industries for 35 years. Her areas of expertise include rates and regulatory issues, utility business development, industry reforms, EE/DR program design and implementation and

utility mergers and acquisitions. Ms. Gordon has been addressing utility industry change and realignments since early in her career during the implementation of PURPA and the deregulation of natural gas pipelines. Ms. Gordon specializes in regulatory strategic planning, rate analysis, utility program design and implementation practices.



Jeff King Vice President, Head of ESG Bath and Body Works

Jeff King is the Vice Presedent and Head of ESG for Bath and Body Works, where he recently joined the company to build an ESG function and strategy for the company. He was previously the the Sr. Director for Global Sustainability and Social Impact for the Hershey Company. In this position he was responsible for Hershey's environmental sustainability, human rights policies and practices, farmer livelihoods programming, ESG reporting, philanthropic giving and community programs, as well as leading Hershey's commitment to giving children the best chance to succeed through The Heartwarming Project which focuses on developing youths' ability to connect and form social connections. Additionally, he led building Hershey's Energize Learning program in Ghana, opening a factory that produces the nutritional supplement snack 'ViVi', that supports the health and nutrition of Ghanaian children through a partnership with the Ghana School Feeding Program.

Prior to this position King has held various commercial roles, most recently responsible for the strategic direction and regional execution for the Hershey Company's two biggest franchises, as the Sr. Director Global Hershey and Reese's. He has also been the Director of Disruptive Innovation expanding the company innovation portfolio into new businesses and business models. He has also been Sr. Brand Manager for the U.S. Reese's Franchise, where he was responsible for managing all brand activities for the \$1.2 billion Reese's franchise.

King joined the Hershey Company in 2008 from Procter and Gamble, where he held multiple marketing roles of increasing responsibility across brand management, innovation, and shopper marketing. While at P&G, he was noted for restoring growth to P&G's original brand, Ivory soap, reversing decades of decline.

He has a BBA for the University of Toledo, and a MBA from Indiana University.eInd



Paul Leavoy Regulatory Analyst Thentia

Paul Leavoy has worked as a journalist, analyst, and marketer in and around technology, regulation, and sustainability for over two decades. He currently serves as Director of Content for Thentia, a regulatory technology company, where he also acts as Editor of Ascend Magazine, a publication covering regulatory affairs and digital government. Throughout his career, he has explored the sustainability connection between public policy, private enterprise, and technology.



Charles McEwen GEMS Program Manager Atlanta Veterans Health Care Administration



Trey Menville Senior Analyst, Sustainability and ESG Mastercard



David R. Meyer Principal Consultant BSI Consulting Services

Mr. McEwen has over twenty years of combined professional experience in Industrial Hygiene, Environmental Health and Safety (EH&S) compliance, and Biological Safety. Mr. McEwen currently serves as a GEMS Program Manager for the Atlanta Veterans Health Care Administration. In this role, Mr. McEwen manages a 26-acre main campus and 22 Community Based Outpatient Clinics throughout metro Atlanta. The Green Environmental Management System (GEMS) utilizes ISO 14001 standards to manage the facilities environmental sustainability and environmental programs compliance. Mr. McEwen is the facility Subject Matter Expert (SME) to ensure compliance with all local, State, and Federal Environmental Laws and Regulations are followed. Over the past several years the Atlanta VAHCS GEMS program has received National recognition for winning Environmental and Sustainability Awards from the Environmental Protection Agency (EPA). In addition, establishing industry Best Practices and winning numerous National Environmental and Sustainability awards from various organizations.

Trey joined Mastercard in 2018. Before joining the Corporate Sustainability and ESC team, he worked on

Mastercard's Operational Environmental Sustainability Team, supporting the company's progress towards its Net Zero emissions goal. Specifically, the majority of this work centered on Scope 3 emissions and the Supply Chain.

Menville holds a Bachelor of the Arts in Political Economy from Tulane University and is currently pursuing a Master of Science in Sustainability Management from Columbia University in New York City.

Dave Meyer is a Senior Consultant with BSI EHS Services and Solutions, a full service environmental, health, safety (EHS) and sustainability consulting firm. Dave's principal focus is to help organizations achieve environmental sustainability program excellence, leverage regulatory compliance risks, and optimize organizational effectiveness. Dave has over 35 years of progressive experience in environmental sustainability, environmental performance and metrics, responsible sourcing and green supply chain management, corporate responsibility EHS management systems planning and implementation (ISO 14001, OHSAS 18001), permitting and multi-media compliance and environmental liability auditing. Dave's expertise extends across many industry sectors: renewable energy, clean tech, food & beverage, semiconductor, consumer electronics, chemicals/plastics, pharma/biotech, mining, oil/gas, aerospace, forest products, transportation, public works, transportation,

financial, legal and government. Dave is presently an advisory board member for the Sustainable Business Forum and 2Degrees Network Sustainable Supply Chain Working Group and is a co-editor for Sustainable Brands Supply Chain Issues Focus Series. BSI EHS Services and Solutions provides a comprehensive range of strategic, management and technical consulting solutions – assessment, compliance, risk management, reporting, training, communication and more – partnering with clients to achieve their environmental, health, safety and sustainability short-term needs and long-term goals.



Tom Pagliuco Managing Partner TAPco Enterprises

Tom Pagliuco is currently Managing Partner, TAPco Enterprises. TAPco Enterprises is a consultancy focused on advising industrial and commercial clients on how to manage their energy and sustainability programs and reduce their energy usage, cost and GHG emissions.

Before starting TAPco Enterprises, Tom was the Executive Director, Global Energy Engineering at AbbVie (Allergan), where he managed the Energy Management Program across a global portfolio of facilities. He also developed, implemented and managed the Allergan, Merck and Schering-Plough global energy programs. The Allergan, Merck, and S-P energy management programs have been recognized by ENERGY STAR as Partners of the Year. Tom was the recipient of a 2008 S-P Environmental Achievement Award for his advocacy for energy excellence, received the 2014 EnergySMART Energy Innovator Award and was named a 2017 Energy

Manager Today 50 and 2020 Environment+Energy Leader 100. Tom was also responsible for implementing the global sourcing strategy for electricity, natural gas and other fuels. He continues to evaluate the feasibility of using renewable energy technologies across the corporation, and while at S-P he was instrumental in completing one of the largest rooftop mounted solar electric systems in the United States.

Mr. Pagliuco has over 40 years of industry experience with roles of increasing responsibility. He joined AbbVie/Allergan in 2015, coming from Merck/Schering-Plough where he spent nine years. Prior to Merck/S-P he was in the Energy Services business, working for Prenova, Inc. and Enron Energy Services, responsible for energy project development. His career started in chemicals where he held several engineering and technology management roles at Rhodia (Rhone-Poulenc) Inc and Union Carbide Agricultural Products.

Tom received his undergraduate degree from the State University of New York at Buffalo, where he majored in Chemical Engineering.



Sue Pinera Senior National Sustainability Manager SBM

Sue Pinera is a seasoned professional with over 35 years of experience working for major global organizations providing environmental and sustainability support across business lines. Ms. Pinera has developed strategic programs and procedures that meet corporate objectives and goals in the areas of zero waste, energy consumption, employee awareness, recycling, waste management, building certifications, water conservation, Greenhouse Gas inventory, renewable energy and regulatory compliance. Presently, Ms. Pinera is responsible for supporting SBM's customers in the eastern region of the US developing and implementing data driven programs in recycling, composting, waste reduction, communications, and green cleaning with an emphasis on developing innovate waste management solutions in lab, manufacturing and office environments; focusing on creative and sustainable outlets for hard to recycle plastics. Ms. Pinera also supports these organizations in achieving TRUE zero waste, LEED and Fitwel certifications.

Prior to working for SBM, Sue held corporate sustainability roles at The Hertz Corporation and Samsung Electronics of America.

Ms. Pinera holds a Master of Arts in Sustainability Studies, a Master of Science in Environmental and a Bachelor of Science in Environmental Resource Management. Ms. Pinera has also received her Certificate in Sustainable Resource Management (CSRM) and is a certified TRUE Advisor supporting USGBCI's Zero Waste program.



Jigar Shah Director of the Loan Programs Office DOE

Jigar Shah was most recently co-founder and President at Generate Capital. where he focused on helping entrepreneurs accelerate decarbonization solutions through the use of low-cost infrastructure-as-a service financing. Prior to Generate Capital, Shah founded

SunEdison, a company that pioneered "pay as you save" solar financing. After SunEdison, Shah served as the founding CEO of the Carbon War Room, a global non-profit founded by Sir Richard Branson and Virgin Unite to help entrepreneurs address climate change. Originally from Illinois, Shah holds a B.S. from the University of Illinois-UC and an MBA from the University of Maryland College Park.



Travis Solberg has lead Solberg MFG in Itasca, IL sustainability since January 2009. Solberg MFG is a two-time Illinois Governor's Sustainability Award and Real Leaders Impact Awards winner. They have won a number

Chief Sustainability Steward Solberg MFG

Environment and Energy Leader Honoree and B

Corporation Best for the Environment. He is determined to continuously make the world a better place through his family business and their network of professionals in a variety of environmental and community interests.



Geoffrey Stiles Senior Vice President, Facilities and Events

Atlanta Hawks

Geoffrey Stiles joined the Atlanta Hawks Basketball Club in 2018 and is now the Senior Vice President of Facilities and Events for State Farm Arena. He bodes more than 20 years of experience in the hospitality, operations and facilities management industry. In this role, he is responsible for overseeing all events in as well as the operational departments within the Arena. During his tenure, State Farm Arena received the prestigious Venue Excellence Award from the International Association of Venue Managers and was certified LEED Gold by the U.S. Green Buildings Council.

Prior to joining the Hawks, he worked in a variety of roles for Marriott International, Inc. Overseeing Facility operations at San Francisco Airport Marriott Waterfront, San Jose Marriott, The San Ramon Marriott, and the San Francisco Marriott Marquis.

Earlier in his career, he worked as the Site Manager for Mitsubishi Power Systems (2003-07) in Walla Walla, WA. In this role, he was the project manager for the initial construction of Combine Hills Power Plant. Stiles started his career serving in the United States Navy in San Diego, CA (1997-2003) as the Leading Engineering Laboratory Technician and Propulsion Plant Watch Supervisor.

Stiles received his education from Nuclear Power School in Orlando, Florida and Thomas Edison State University in Trenton, New Jersey. He and his wife, Anne, have one son, Chase.



Maud Texier Head of Energy Development Google

Maud Texier is Head of Clean Energy Development at Google. She leads a team responsible for developing and scaling 24/7 carbon-free energy for Google's data centers worldwide with various initiatives including new technologies, clean energy supply and policy efforts. Prior to joining Google, Maud was Head of Industrial Energy Products at Tesla, leading the product management group for large-scale batteries for various applications across US, Europe, and APAC markets. Previously, Maud worked for Electricite De France as part of the Innovation office in charge of new technologies for the group. Maud holds an MS of engineering in Energy and Power systems from Ecole Centrale Paris.



Cyril Toussaint Past Director - Energy Management & Sustainability NYC Health & Hospitals Corporation

Cyril Toussaint led the Energy Management and Sustainability Division in the Office of Facilities Development at NYC Health + Hospitals (NYC H+H) for over 10 years. NYC Health + Hospitals is the largest integrated municipal healthcare system in the United States. NYC H+H is a network of eleven (11) hospitals, trauma centers, neighborhood health centers, nursing homes, and post-acute care centers, totaling over 21 million square feet.

Mr. Toussaint spearheaded the implementation and improvement of energy efficiency and operational processes, aimed at ensuring that the Public Health Care System achieves its Mayoral mandate to reduce Greenhouse Gas (GHG) emissions by 80% by 2050. In 2017, Mr. Toussaint received the Association of Energy Engineer's (AEE) Region I Energy Manager of the Year Award for 2017 and in 2019, he accepted Region I Innovative Energy Project of the year Award on behalf of NYC Health + Hospitals / Kings County.

ABOUT



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