

# Case Studies

All Industries



## Table of Contents

### **Agriculture**

Bringing Form and Function to Wolf Creek Ranch with Smartflower	4
---	---

### **Architecture & Construction**

Renewable Energy with a Lot of Heart and a Smartflower	6
--	---

### **Cities and Municipalities**

Texas Business Park Recruits Innovative Companies Using SmartFlower	8
---	---

First Ward Park Combines Air and Sun with Smartflower	10
---	----

88 Black Falcon Pier Makes Waves with Smartflower	12
---	----

Denmark's First Publicly Owned Smartflower Blooms on 100% Renewable Samsø Island	14
--	----

#### *Testimonials*

City of LaGrange – LaGrange Housing Authority	16
---	----

### **Corporate Campuses**

Nestlé Supports Renewable Energy Initiatives: Antigua Guatemala Becomes Home to the Innovative “SMARTFLOWERS”	17
---	----

Fujikin Brings SmartFlower Technology to Tsukuba Advanced Research Center	19
---	----

Gomunoinaki Invests in Sustainable Development with Innovative SmartFlower Solar Solution	21
---	----

Enerjisa Üretim Brings SmartFlower to the Sabancı Holding Headquarters in Turkey	23
--	----

Flower Power Comes to Marietta With Cobb EMC's New Solar Flower Garden	25
--	----

SmartFlower Spends its Fourth Year with Enel Chile	27
--	----

The Palm Beach Pickle Company Makes Green Pickles Truly 'Green' with SmartFlower	29
--	----

#### *Testimonials*

Merlin ERD Perth Headquarters – Merlin ERD	31
--	----

Enel Chile	32
------------	----

The Renaissance Collective – Mohawk Group & Groundswell	33
---	----

Oak Star Bank	34
---------------	----

### **Education**

Lake Oswego District Advances Career and Technical Education Through Sustainability	35
---	----

Smartflower Offers Sunny Welcome to Elon University's Founders Hall, Innovation Hall	36
--	----

## Table of Contents

Humber College And Siemens Canada Open the Sustainable Microgrid and Renewable Technology Lab (SMART Lab)	38
Benjamin Franklin Institute of Technology Makes an Investment in Knowledge with Two Smartflowers	40
Halcyon Arts Lab Shows Their Community What a Clean Energy Future Looks Like with SmartFlower	42
The King Juan Carlos University in Madrid Commits to Sustainability and Cost Savings with SmartFlower Events & Entertainment	44
Trinity High School Uses SmartFlowers to Support Students and Community	46
FeelAMPowered Wims First Place with SmartFlower Solution at 2021 MIT Energy Hack	48
<i>Testimonials</i>	
Mary Baldwin University	50
Innovation Montessori Ocoee	51
Virginia Wesleyan University	52
Rockingham County Schools – Mohawk Group & Groundswell	53
<b>Events &amp; Entertainment</b>	
EWE Drives the Energy Revolution Forward with SmartFlower at Tante Mia Tanzt	54
<i>Testimonials</i>	
Roskilde Festival – Carlsberg & Tuborg	56
<b>Industrial &amp; Manufacturing</b>	
How SmartFlower is Shaping Sustainable Wastewater Treatment in Spain	57
Multiutility Iren Group Embraces Renewable Energy with SmartFlower in Turin, Italy	59
The Taiwan Cement Company Gives Back to Their Community with the First SmartFlower Installation in Taiwan	61
<i>Testimonials</i>	
Taini DAKA Open Ecological Recycling Factory –Taiwan Cement Company	63
<b>Museums &amp; Cultural Centers</b>	
Turing Solar Innovation into a Living Exhibit at Children’s Discovery Museum	64
An Iconic Platform for Sustainability Leadership in Oman with SmartFlower	66
Anaheim’s Commitment to Sustainable Progress Featuring SmartFlower	68
SmartFlowers Come into Bloom at Franklin Park Zoo	69
Can a Smartflower Installed at a Kansas Zoo Help Primates in Madagascar?	71

## Table of Contents

<i>Testimonials</i>	
Detroit Zoological Society	73
<b>Residential</b>	
Inspiring and Educating Future Generations, One Smartflower at a Time	74
<b>Tourism &amp; Hospitality</b>	
Gozo Leads as a Sustainable, Eco-Tourism Destination with SmartFlowers	76
Valverbe Shines Bright in Varaita Valley with Smartflower	78
Maglebo Vineyard Embraces Both Nature and Technology with Two New Smartflowers	80
Smartflower Brings Power to Tivoli Friheden in Denmark	82
2 SmartFlowers and 900 Solar Panels: Alden Court Puts Renewable Energy Front and Center	84
<b>Transportation &amp; Mobility</b>	
Turning EV Charging into a Premium Experience with SmartFlower at Chuck Hutton Toyota	86
Solar Power Continues to Bloom at Toyota West Virginia	88
Smartflower Helps Customers Drive Clean at the Green Clean Auto Spa	90
<i>Testimonials</i>	
Kings Lynn Depot - Vision Logistics	92

## Bringing Form and Function to Wolf Creek Ranch with Smartflower

With its large aspen groves, roaming wildlife, and vast winding rivers, the Wolf Creek Ranch in Heber, Utah is a welcome reminder of how majestic Mother Nature can be. But being a natural retreat from the modern world does not mean that it cannot have modern solutions. Two Smartflowers were recently installed at one of the residences at Wolf Creek Ranch, combining innovative renewable energy with rustic beauty to make a green and energy-efficient home.



Sustainability and ecological responsibility are not foreign concepts for Wolf Creek Ranch. These concepts are deeply rooted in their philosophy and approach. It is no wonder why the Smartflower stood out to Doug Anderson, CEO of Pacific Group (the developer behind Wolf Creek Ranch), when he first saw the Smartflower back in 2017. “Wolf Creek Ranch has one of the largest private conservation easements in the United States. The Smartflower is representative of the ideals and care that went into developing this special place,” said Doug.

Vinyl-wrapped with natural-looking Barnwood designs, the two Smartflowers blend seamlessly with the architecture of the modern-rustic house they power. They provide supplemental power for the residence and bring it close to net-zero energy consumption. Utilizing additional features such as extreme insulation, LED lights, and in-floor radiant heating, the architects behind the house seamlessly blend modern technologies and traditional aesthetics. All these elements combined result in a beautiful home without sacrificing form for function. When asked about his thoughts on rooftop solar, Doug had this to say: “We chose Smartflower over rooftop solar because of its increased efficiency, self-cleaning, and storm-shutdown capabilities. It ended up being a better option for the cold, snowy climate of the Ranch, and they look beautiful with the house and the landscape.”



Residents and other community members at the Wolf Creek Ranch have welcomed the Smartflowers with open arms. Intrigued and excited by the innovative technology, many conversations about sustainability and energy have started due to the new additions.

“We’re glad that the two Smartflowers have helped reinvigorate conversations about sustainability and environmentally friendly technology and architecture among the Wolf Creek Ranch property owners. We care about sustainability and firmly believe that sustainability can be beautiful. Our work has always focused on efficiency, quality, and superior functionality, and the Smartflower is a poignant symbol of those principles,” said Doug.

## Renewable Energy with a Lot of Heart and a Smartflower

When people think of Doctors Mark and Barbara Galantowicz, they think of well-respected medical professionals who are passionate about children's healthcare, who have saved countless lives, and who continue to inspire many more. What people may not know, though, is that Mark and Barbara are also strong advocates for sustainable living. They installed a Smartflower in early 2019 for their sustainable home in Wilmington, Vermont.

Mark and Barbara first fell in love with Vermont in college and ended up returning to Wilmington, Vermont many years later to build their new home. It was important to them that their new home be sustainable, low maintenance, and speak to the land. That is why they ended up working with [Blue Sky Architecture](#), a Canadian architecture firm that specialized in designing modern residential projects with an organic and environmental twist.



Of course, no sustainable house is complete without renewable energy. Mark and Barbara originally considered traditional flat solar arrays for the roof, but the curved shape of the roof meant that rooftop solar was not the right design fit. They started researching ground-mounted solar arrays instead but were concerned about the aesthetics and large required footprint. Through their internet research, they discovered the Smartflower, whose dual-axis tracking, self-cleaning capabilities, and aesthetics was the perfect performance and design solution for their needs.

The Smartflower was first revealed to family members during a Labor Day celebration and was met with great excitement from everyone. "They were struck by the functional art that the Smartflower really is, and how it all ties to the setting. It speaks

to the land, speaks to renewable energy, and speaks to the concept of the house,” said Dr. Mark Galantowicz.



Smartflower aside, the house has other sustainable features that keep the Galantowicz family’s carbon footprint low. The house has a living roof, environmentally friendly insulation, and the house itself is even angled to optimize the path of the sun! Mark and Barbara’s penchant for innovative renewable energy does not stop at the Smartflower— they are currently searching for an innovative residential wind turbine to install on the opposite end of their Smartflower, creating a renewable energy garden for their home.

When asked about what message he wanted to convey to his community with the Smartflower, Dr. Mark Galantowicz had this to say: “The Smartflower is a unique and easily adoptable solar option for residential houses. The footprint it requires is small, it is truly functional art, it is easy to install and very efficient. If more people use it, it will have an even stronger impact on reducing our reliance on fossil fuels.”



## Texas Business Park Recruits Innovative Companies Using SmartFlowers



*Henderson Innovation Park, Henderson, Texas*

From its inception, Henderson Texas Economic Development (EDC) envisioned Henderson Innovation Park as a visible, working symbol of innovation. It chose SmartFlower to strengthen its reputation as a sustainable brand in the community and attract businesses that embrace sustainability.

With five SmartFlowers, the park is an iconic landmark and supportive ecosystem for new businesses to innovate and expand. The SmartFlowers “anchor the park’s identity as a clean-tech, future ready space and help us recruit tenants who value sustainability,” stated Henderson Texas EDC’s Executive Director Bret Gardella. He continued saying, “The SmartFlowers immediately signal that Henderson is serious about next generation infrastructure and is a partner for companies building sustainable operations.”

The SmartFlowers embody its commitment to clean energy, innovation and economic development to potential businesses:

- Sustainability in Action: The SmartFlowers generate clean energy onsite, supporting Henderson's broader effort to reduce emissions and operating costs.
- Community Engagement: SmartFlower is a living demonstration of advanced solar technology with features which the park can leverage for tours, STEM partnerships, and new projects.
- Economic Development: The SmartFlowers helps recruit innovative companies that share the park's sustainability vision.



For Henderson Innovation Park, SmartFlower represents more than solar power. It's a bold expression of innovation, education, and environmental leadership for attracting partners and businesses to the park. By integrating SmartFlower into its park, Henderson has created an iconic gateway to a more sustainable and innovative future.

## First Ward Park Combines Air and Sun with Smartflower

Mecklenburg County in North Carolina believes in leading by example when it comes to environmental sustainability. Its Environmental Leadership Policy, passed in 2004, states that they will “conserve and protect our air, water and land resources, become a model of environmental stewardship for local governments, business and industry in our region, and use and apply the County's existing and future resources wisely for the benefit of its citizens.” That is exactly why a Smartflower was installed at First Ward Park, a public 4-acre park operated in Charlotte, NC by Mecklenburg County. The Smartflower is connected to First Ward Park’s general electrical system, meaning that the energy it produces will offset park lighting, restrooms, its upcoming Air Quality Learning Station (AQLS), and all other electrical uses.



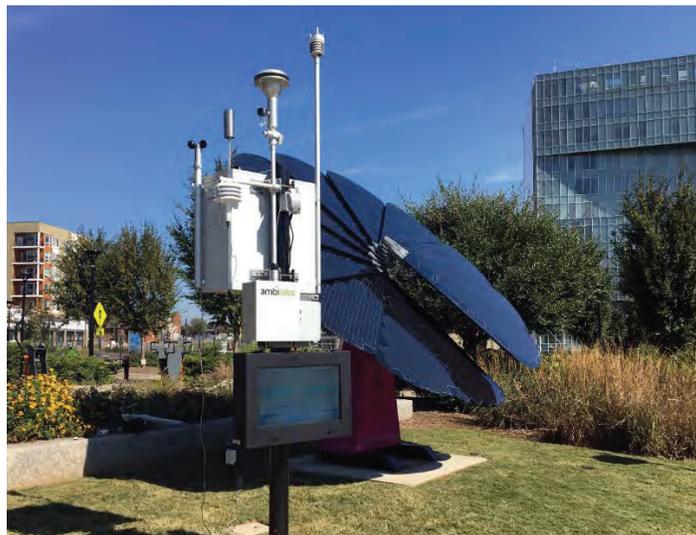
Smartflower was first introduced to Mecklenburg County Air Quality (MCAQ) by a vendor at the beginning stages of designing their Air Quality Learning Station, a public air quality outreach and education piece that is now installed at First Ward Park. The solar flower turned out to be a great complement to both the Air Quality Learning Station and the goals of the County, so how could they say no?

“We needed a visually appealing and engaging solar energy source to accompany the educational side of the Air Quality Learning Station. The Smartflower’s bright color and eye-catching aesthetics provide just what we needed to attract the public’s attention and get them interested,” said PJ McKenzie, Air Quality Specialist at Mecklenburg County Air Quality.

Attention is definitely what the First Ward Park Smartflower attracts. Passersby and members of the community are drawn to the Smartflower, often approaching Mecklenburg County Air Quality staff (including PJ himself!) to learn more about the solar system and the Air Quality equipment. Interest in the Smartflower is sure to skyrocket when the Air Quality Learning Station is officially unveiled in the next few months, and staff are eager to include it in all future education and outreach events at the park. “It’s exciting and rewarding to know that our citizens are so interested in air quality and environmental issues,” said PJ.

Combining the Air Quality Learning Station with the Smartflower makes Mecklenburg County’s air quality project unique, elevating it from beyond a sensor station to something completely iconic. It connects the importance of good air quality to the need for renewable energy and encourages visitors to think about how they can contribute to mitigating climate change.

According to PJ, “We at Mecklenburg County Air Quality are committed to reducing air pollution through multiple avenues that engage public and private entities. This includes the County’s policy to reduce its carbon emissions. We believe that the Smartflower is a great way to communicate the importance of green, sustainable energy sources and the importance of reducing air pollution through cleaner energy production. The Smartflower synchronizes perfectly with the County’s goals to reduce our environmental impact.”



## 88 Black Falcon Pier Makes Waves with Smartflower

With its ocean sunsets, rich maritime history and unique blend of longstanding waterfront-dependent industrial users, next-generation lab, life science, and office spaces, 88 Black Falcon Pier provides a unique working environment for both marine industrial and leading innovation economy tenants in Boston, Massachusetts. Located in Boston's bustling Seaport District, the building is a fascinating mix of history, art, and innovation— it is surrounded by the hottest new restaurants, residential and retail destinations, and unique art installations throughout the neighborhood. Is it really a surprise, then, that 88 Black Falcon Pier has chosen to make waves by installing its very own Smartflower?



A Smartflower sits at the very top of 88 Black Falcon Pier, framed by the ocean waves of the Boston Harbor. Jonathan Davis, the CEO & Founder of The Davis Companies (the real estate developer behind the building), was intentional in the positioning of the Smartflower, the world's first integrated dual-axis tracking solar system. The Smartflower's maximum energy production and carbon reduction were important factors to him, but he also wanted its iconic design and function to inspire his tenants,

visitors, and the many cruise ship passengers that sail by the building. The Smartflower would greet the cruise ship passengers as they left and entered Boston, showcasing an optimal solar energy solution for urban environments.

Davis expanded on his motivations for installing the Smartflower, saying that “Boston is a low-lying coastal community that is at significant risk from the impacts of climate change. The Davis Companies has a responsibility to do all we can to join in the urgent fight to mitigate climate change. We employ best practices to reduce our consumption of fossil fuels and carbon emissions to meet the requirements set by the communities in which we operate. Many of our sustainability measures are difficult to see on top of a building’s roof, in the basement, or a mechanical room. The Smartflower is a sustainability measure that we can proudly display to inspire, educate, and start a conversation on how we can all chip in and transition to a more sustainable future.”

As the recipient of the Boston Preservation Alliance’s *President’s Award for Excellence*, Jonathan Davis understands the importance of preserving Boston’s historic resources, using history as a foundation to build upon with innovation. Now, 88 Black Falcon Pier has chosen to showcase the building’s commitment to sustainability with its very own Smartflower, signaling to tenants, staff, and even traveling passengers that it truly welcomes the new wave towards a better energy and environmental future.



## Denmark's First Publicly Owned Smartflower Blooms on 100% Renewable Samsø Island



*Samsø Island, Denmark*

Denmark's first publicly owned Smartflower was installed on Samsø Island earlier this year in May and has been blooming ever since. The Smartflower was installed right in front of the office of the Mayor of Samsø Island, Marcel Meijer, and provides power to the island. Given Samsø Island's reputation as a model renewable energy island, Smartflower is proud to help the island in achieving its goal of creating a greater sustainable future for its inhabitants.

A local innovative electrician was the one who introduced the Smartflower to Samsø Island. It was a great hit with the Samsø Municipality, who wanted to experiment with implementing tracking solar panels in an area with plenty of space on their island. Given the Smartflower's dual-axis tracking capabilities, as well as its aesthetic appeal as a work of solar art, it is no wonder that the project was a success!

While Samsø Island used to be entirely dependent on oil, everything changed when it won a government competition in 1997 to become a model renewable energy community. The island became 100% powered by renewable energy ten years later in 2007 and has now set its sights on becoming 100% fossil fuel-free by 2030. The Smartflower is but one piece of a bigger puzzle to make sure that the island achieves its goal. "The municipality has an obligation to 'walk the talk' and demonstrate sustainable transition in action," said Mayor Marcel Meijer when asked why they chose



Smartflower. Wind turbines and solar panels aside, the island has also implemented other initiatives such as energy-optimized lighting, electric vehicle charging stations, sustainable golf courses, and even hosts an annual sustainability festival (which has unfortunately been canceled this year).

While not many have had a chance to spot the Smartflower at Samsø Island due to the current pandemic, we expect that the solar flower will be received positively by the Samsø community as they have been at other Smartflower installations. We look forward to watching the island expand its sustainable initiatives and wish them the best of luck with becoming completely fossil-fuel free by 2030.

## City of LaGrange – LaGrange Housing Authority



*LaGrange Housing Authority, USA*

### **“It sparks innovation.”**

“The reason why I like [the Smartflower] is it sparks innovation. We talk about what it can give as far as kilowatts and saving money. I am looking beyond that. I want these children to wake up every morning and see innovation, so they know that crazy idea that is rolling around in their head, that idea that they think can't work – I want them to know that it can work.”

– Nathan Gaskin, LaGrange City Council Member

## Nestlé Supports Renewable Energy Initiatives: Antigua Guatemala Becomes Home to the Innovative "SMARTFLOWERS"

Nestlé's Antigua Guatemala facility becomes home to a unique solar power source that uses a sculptural design and smart solution to produce clean, sustainable energy.

The three newly installed solar panels provide 2.5 kilowatt hours of energy each, covering 40% of the total consumption needs of the new and soon to be inaugurated Nestlé Cultural Center, located in the vicinity of the company's factory.



The Nestlé factory, located in Antigua Guatemala, is known for its high standards and clean, sustainable operation. Today, the factory's facilities are equipped with new and innovative integrated solar technology that will power the new Nestlé Cultural Center.

These panels are known as Smartflowers because they work automatically and have a peculiar shape of petals that make them look like a giant flower. Using biomimicry, they open in the morning, face the sunlight during the day and at night the petals fold back. Even during the course of the year - as the seasons change - they modify their axis to maintain alignment. By following the path of the sun, they achieve 95.6% efficiency, higher than conventional panels that have an efficiency of 90%.

"We are very proud to have installed Smartflowers at our facilities in Antigua Guatemala, as this is undoubtedly an efficient, automatic and innovative solution. Solar energy has been reinvented and today we are pioneers in Guatemala in implementing this technology, as this



type of panels are Nestlé's first in Central America," said Oscar Sulecio, manager of the Nestlé Antigua Guatemala factory.

Environmental sustainability is a fundamental pillar in the Creation of Shared Value with which Nestlé develops its business. "Through initiatives like this, Nestlé fulfills its commitment to protect the planet's natural resources and, in this opportunity, with a double objective, since these panels will be part of the Nestlé Cultural Center, soon to be inaugurated. They will power 40% of the site's energy source and, at the same time, will be an attraction for visitors thanks to their eye-catching design," added Patricio Astolfi, General Manager of Nestlé Guatemala.

These avant-garde solar panels inspired by sunflowers, unlike other options, are self-sufficient and self-cleaning: between each petal there is a brush with fine bristles that, when opened and closed, performs the brushing process. Each Smartflower has a structure of 12 petals and when fully open they reach a radius of 16 feet.

Since 2019, the Nestlé factory in Antigua Guatemala acquires 100% of its electricity from renewable sources. It also has a system of 64 solar panels that generate enough energy to heat the water needed in its manufacturing processes.

Solar energy is currently a cost-effective and accessible alternative, so maintaining and increasing the use of this resource is part of the company's vision of sustainability. Each Smartflower can produce up to 4,000 kilowatt hours per year, with a consumption of around 90% of what is produced, achieving 80% efficiency after 25 years of life.

Nestlé aims to achieve net zero emissions by 2050. "As a company, we have to work with different sources to meet our ambitious goals for the planet. We have chosen to help pave the way to a sustainable future and we will continue to work towards this," concluded Astolfi.

The Smartflowers solar panels are not only an energy and renewable resource, but also a suitable alternative to share the message of social responsibility that the company has in each community where it operates, ensuring that natural resources are used in the best way and always thinking of future generations.

With this new initiative, Nestlé reaffirms the company's commitment to care for the environment as a fundamental and unavoidable premise to operate, promoting a healthier lifestyle for people and their families and contributing to the development of prosperous and self-sufficient communities through the responsible use of the planet's resources.

Read the original press release in Spanish [here](#).

## Fujikin Brings Smartflower Technology to Tsukuba Advanced Research Center

The first Smartflowers in Japan stand tall at Fujikin's Tsukuba Advanced Research Center in Tsukuba, Japan, as part of its goal to develop the most environmentally-friendly factory in the city and to highlight its goal of advancing technology. Four of the five Smartflowers can be found at the entrance of the research center, while the fifth is located by the back gate. The Smartflowers were procured and installed in partnership with Kurita Marketing & Management Corporation and Blue Wave Capital Partners (BWCP) in Q3 of 2021.



Founded in 1930, Fujikin has always equated progress with the advancement and evolution of technology. Its corporate policy states that it aims to “[continuously take on extreme challenges to surpass the farthest bounds of technology](#)”. The company boasts numerous commendations and awards, as well as a diverse variety of projects ranging from ultra-precision flow (fluid) control equipment and systems to even space exploration.

Fujikin has developed and championed numerous technologies and projects to create a more environmentally-friendly world, with the Smartflowers at the Tsukuba Advanced Research Center playing their part in its [sustainable initiatives](#). The company manufactures valves and other industrial products that produce less cleaning waste, operates an environmentally-



friendly sturgeon aquaculture facility, and continues to invest considerably into the production, transportation, and storage of hydrogen to support Japan's push for fuel cell electric vehicles.

"It was our great honor to introduce the Smartflower to Japan and to Fujikin. Visitors at the Tsukuba Advanced Research Center have found the new Smartflowers very fascinating and have praised the solar systems for their beautiful design and shape. As the centerpiece of the research center, the Smartflowers have become symbols of Fujikin, representing the company's mission to promote renewable energy," said a representative of Kurita Marketing & Management Corporation.

Jim Gordon, CEO of SmartFlower Solar, remarked, "We are honored that Fujikin installed the first Smartflowers in Japan to showcase their commitment to sustainability and a better energy future. Their leadership will inspire others to follow their path."

## Gomunoinaki Invests in Sustainable Development with Innovative Smartflower Solar Solution

*A leading-edge solution to provide clean energy for the community and to bring sustainability to their larger society.*

**NAGOYA, JAPAN.** (July 21, 2022) – Gomunoinaki, a Japanese global trading company with R&D functions that specializes in supplying rubber/plastic goods to automotive, housing, home appliances, office infrastructure, and medical industries, installed a Smartflower at their headquarters in Nagoya, Japan in March 2022. The Smartflower, an aesthetically beautiful yet efficient and innovative solar product, was chosen by Gomunoinaki to act as a symbol of their support for the [United Nations' Sustainable Development Goals](#), and with the hopes that more companies across Japan will see the need to adopt sustainable energy solutions.

As a respected company with over a century of history and experience, Gomunoinaki believes in being an innovator and holds its community and environment in high regard. Part of its corporate motto reads, [“By respecting innovation and change, we face the challenges of tomorrow”](#). The investment Gomunoinaki has made in its first Smartflower displays its willingness to tackle the myriad of environmental and sustainable challenges that our society face and is a bold contribution to the [United Nations' 2030 Agenda for Sustainable Development](#).

“We are very happy to have the Smartflower installed at our site,” said Kimiyasu Kimura, Senior Director of Gomunoinaki Co., Ltd., adding, “This charming and appealing Smartflower will act as a symbol of our commitment toward energy conservation and incorporation of reusable energy source to reach carbon neutrality by 2025.”

“It is our great pleasure to serve Gomunoinaki with SmartFlower Solar, a very iconic symbol for SDGs. I am quite confident that the Smartflower at Gomunoinaki will tell surrounding communities the great value of zero-carbon society as well as self-sustainable renewable energy,” said Kaoru Usami, Representing Director of BWCP.





Manufactured and produced by Boston-based company SmartFlower Solar, the Smartflower is a cutting-edge solar product that employs a multitude of intelligent features to combine efficiency and beauty into one sustainable product. The core brilliance of the Smartflower is in its dual-axis tracking system. At sunrise, Smartflower opens its panels to the optimal 90° angle to the sun and follows the sun's path across the sky, producing up to 40% more energy than stationary solar panels. SmartFlower Solar has installed thousands of Smartflowers worldwide, with notable clients like Adidas, Nike, Siemens, Carlsberg, and Vodafone.

“We are honored to add Gomunolnaki to our global roster of blue-chip corporations. Their decision to install the Smartflower in front of their corporate headquarters is one of their visible commitments to sustainability and will also inspire and educate their customers, suppliers, and employees to incorporate sustainability initiatives in their operations and daily lives,” said Jim Gordon, CEO of SmartFlower Solar.

### **About Gomunolnaki**

Gomunolnaki made its debut in 1919 as Inaki-Shoten, a distributor of industrial rubber products, in Japan and have strived through for over a century supplying automotive and other industries with rubber/plastic products. Being traditional and respecting long built relationship with customers, suppliers and the community, while maintaining flexibility and meeting the fast-changing society's needs, the company has grown into a global trading company with R&D functions and now has 18 subsidiaries in 10 countries around the world. Learn more at <https://www.inaki.co.jp/>.

### **About SmartFlower Solar**

SmartFlower Solar is based in Boston, Massachusetts, and manufactures and markets the revolutionary and patented Smartflower solar energy system. Its product platform consists of the Smartflower, Smartflower +Plus – which has an integrated battery storage component – and the Smartflower EV which is a solar powered electric vehicle charger. The company sells its products globally to a wide range of residential, commercial, and institutional energy users searching for iconic design and optimal solar and energy storage solutions. Learn more at [www.smartflower.com](http://www.smartflower.com).

### **About Blue Wave Capital Partners**

Blue Wave Capital Partners (“BWCP”), representing Smartflower Solar in Japan, has been in the power and energy industry over the past decades. BWCP has a wide variety of network relationships with many industry leaders in Japan as well as in the US, being involved in project development, construction management, operation and maintenance as well as project finance arrangement for many different kinds of a power generating facility. BWCP's mission is to contribute to a sustainable growth society with zero-carbon and environmentally friendly best available technology.

## Enerjisa Üretim Brings Smartflower to the Sabancı Holding Headquarters in Turkey

Enerjisa Üretim is the leading electricity generation and trade company in Turkey. They generate energy from a variety of sources at 21 different power plants across the country and firmly believe that clean energy is the best way to invest in the future. With their sustainability goals and renewable energy portfolio in mind, it's no surprise that Enerjisa Üretim and E.ON (a European electric utility company) chose to represent the importance of sustainable energy and innovation with their new Smartflower.



The Smartflower was installed in the garden of Sabancı Holding Headquarters in Istanbul, Turkey in February 2021. All energy generated will go to powering the Head Office Building, and the flower will serve as a visual reminder of the importance of climate change and sustainable energy for all who see it.

İhsan Erbil Bayçöl, the CEO of Enerjisa Üretim had this to say about the new Smartflower: “With our investment in 21 power plants, 56% of which use domestic and renewable resources, we continue to generate an uninterrupted supply of energy for our customers and community. Our mission at Enerjisa Üretim is to generate energy for a better future by respecting life, which is why ‘Sustainable Energy Generation and

Trade' is our top priority when it comes to business strategy. It is the very core of our operations.

Many of the environmental and social responsibility projects we work on and have worked on will also contribute to the United Nations' Sustainable Development Goals. We aim to develop and manage these projects with our sustainability approach and principles in mind. We will continue to work on projects that promote the widespread use of smart and high-tech products such as the Smartflower, which generates eco-friendly and sustainable energy for our customers.”



## Flower Power Comes to Marietta With Cobb EMC's New Solar Flower Garden

A new and innovative Solar Flower Garden was unveiled on the Cobb EMC Corporate Campus in Marietta, Georgia back in June 2020. The garden contains three Smartflowers and is part of Cobb EMC's ongoing campus microgrid and sustainability project, Project Solarbe.

Peter Heintzelman, the CEO of Cobb EMC, was the catalyst who brought Smartflower to the member-owned electric co-op's attention. He had heard about the Smartflower last year and asked his team to do more research into the award-winning product. Months later, Cobb EMC has now installed three Smartflowers in their Solar Flower Garden, owns a mobile fourth Smartflower that can easily be transported to local events, and is also a distributor for Smartflower.



“Our Smartflowers are always a conversation piece,” said Michael Codichini, the Public Relations Director of Cobb EMC, citing its sleek design and its prime location along Highway 41 in Marietta as the main reasons. Visitors are encouraged to stop by the garden to see the Smartflowers in action, all while learning about sustainable energy and Cobb EMC's renewable energy efforts. “To look at a time-lapse video is impressive, but to actually go out there and stand next to a 17 feet tall solar flower... it is visually substantial. When our visitors see it, they are blown away by the technology... their imagination is peaked,” said Christine Mullinax, the Commercial Industrial Account Manager at Cobb EMC.

The Smartflowers are even getting attention through social media, with many online users sending the co-op messages like “What an impressive solar design”, “The garden looks amazing”, and “These are a great testament to Cobb EMC's commitment to sustainability!”

The Solar Flower Garden is open not just to Cobb EMC members, but to the larger community as well. The garden is open to the public from dawn to dusk, and tours of the garden are available for members, schools, and the community to learn about the co-op's sustainability efforts. Larger groups are also encouraged to plan corporate functions or lunch-and-learns in the garden. "The Smartflowers not only educate our community about solar energy, but also allows for our team to observe and research how this innovative technology works for future projects," said Tim Jarrell, the VP of Power Supply & Planning at Cobb EMC.



When it comes to building a sustainable future, Cobb EMC already has a plan. The three Smartflowers in the garden work together with the rooftop solar found on most of Cobb EMC's campus buildings to feed their battery storage project and microgrid, all with the goal of reducing their campus carbon footprint. "The Smartflowers are one part of the blueprint to achieve a better and more sustainable future," said Michael. Future goals on this blueprint include additional utility-based solar, creating a campus microgrid, as well as creating a residential battery program.

"When we look at our Smartflowers, we feel it represents ingenuity and sustainability coming together to better our community and planet," said Tim. When asked about how the Smartflowers are bringing the co-op and their community together, Christine had this to say: "We hold an immense pride in our Smartflowers... we traditionally put all our energy into reliable electricity and keeping rates low, but now we can also use this investment into new solar technology to make our community stronger."

## Smartflower Spends its Fourth Year with Enel Chile



*Enel Chile, Chile*

The Smartflower at Enel Chile was installed back in 2015 and is still blooming brightly. During the 4 years it has been installed, the Smartflower has been lauded as an architectural icon that acts as a visual representation of Enel Chile's sustainable initiatives, and as a first step towards their larger sustainability journey.

Enel Chile first heard about the Smartflower from Solarix, Smartflower's dealer in Chile, and decided to install the innovative new solar system after some research due to its efficient dual-axis tracking system, energy savings, and its aesthetic appeal. "The Smartflower has a beautiful structure and generates a powerful visual impact that produces a completely green atmosphere within the company," said Sebastián García Gallardo, the Engineering Leader at Enel X, "and since the Smartflower is installed in our garden, no roof was needed."

Photo taking is the most common response people have after seeing the Smartflower at Enel Chile. Many guests and clients always end up asking questions about the solar system's functions, solar generation, and benefits, with some clients even wanting to install a Smartflower in their own buildings! Parking for electric vehicles is also available nearby, further emphasizing Enel Chile's dedication to creating a green environment. "The Smartflower is a symbol of our sustainability initiatives... it declares



the new vision of the company and shows that we are one hundred percent committed to environmental and technological progress,” said Sebastián.

The Smartflower also played an active role in Enel Chile’s 2017 Christmas plans, illuminating the country’s first 100% renewable energy-powered Christmas tree. The Smartflower charged a system of batteries throughout the day, which was then used to power the 72,000 LED lights that adorned the Christmas tree. Over 700 people attended the event, including Enel employees, members of the neighborhood boards, as well as government officials like Andrés Rebolledo, the Minister of Energy, Felipe Alessandri, the Mayor of Santiago, and Marco Ricci, the ambassador of Italy.

When asked about Enel Chile’s plans for the future, Sebastián had this to say: “Our dream is to become a Smart City, with smart buildings, smart public infrastructure, smart houses, and smart neighborhoods. The Smartflower is one of our first steps towards fulfilling this journey... This is only just the beginning.”

## The Palm Beach Pickle Company Makes Green Pickles Truly 'Green' with Smartflower



*Jon Drettmann, owner of the Palm Beach Pickle Factory and his Smartflower*

Jon Drettmann's life changed three years ago when he won a bid for a Smartflower at the Leonardo DiCaprio Foundation Gala Auction. Today, he's using his Smartflower to power his company in Florida, the Palm Beach Pickle Company, and make green pickles that are truly 'green'.

"In this day and age, it'd be almost silly not to go solar," said Jon, when asked about his decision to integrate the Smartflower into his sustainability initiatives. The Palm Beach Pickle Company was created with the goal of making the best pickles in the world and being environmentally conscious. The factory that Jon owns has LED lights, uses



recycled materials where possible, and a Smartflower that helps power operations while producing significant cost savings. “The Smartflower is located on a second floor flat roof and is the flagship of the whole factory... the stars aligned for me [at the Leonardo DiCaprio Foundation Gala Auction] and it fit nicely into the puzzle, like everything else in this project,” said Jon.

Clean solar energy isn't the only thing Jon gets from his Smartflower, though. The Palm Beach Pickle Company resides in an artisanal industrial zone, near glass art factories and schools. Many of the people who pass by end up asking about the Smartflower, and Jon is happy to engage them in conversation. “The beauty is that we're in a small town in Florida... word gets around. It gives me more to talk about than just pickles,” said Jon.

“Everything here is grown locally,” said Jon, “We're fortunate to be able to put our own food on our tables.” Green pickles both grown under the Florida sun *and* powered by solar energy truly puts a new meaning to the words 'locally grown'. It's great to see a small local business such as the Palm Beach Pickle Company thrive, especially after such a fateful encounter with the Smartflower. Here's hoping that the stars keep aligning for Jon Drettmann and the Palm Beach Pickle Company!

## Merlin ERD Perth Headquarters – Merlin ERD



*Merlin founder and Executive Chairman Iain Hutchison harnesses "flower power" to drive the Perth headquarters at Merlin House, Australia*

### **“The latest testament to our commitment to sustainable energy.”**

“All of us have a part to play in the move towards sustainable energy, and we are pleased to play our part reducing our carbon footprint here in Perth. With no CO2 output, [the Smartflower] plays a large part in power generation for Merlin and helps us improve our green credentials... It's great to be able to focus on -and invest in- technological advances in sustainable energy which have value both in monetary terms to the investor and in environmental terms to the country. The Merlin Smartflower is the latest testament to our commitment to sustainable energy generation and environmental engagement.”

– Iain Hutchinson, Founder and Executive Chairman of Merlin ERD

## Enel Chile



*The Smartflower at Enel Chile, Chile*

### **“An architectural icon.”**

“We are happy with our Smartflower. It works really well and our visitors find it attractive. We have a lot of electric vehicles parked around the Smartflower, so it looks like a green efficient zone. I think Smartflower is a good option for companies, not just for energy production, but for the aesthetic impact and external benefits it brings. Our flower was installed around 4 years ago and is still an architectural icon for us.”

– Sebastián García Gallardo, Engineering Leader at Enel X

## The Renaissance Collective – Mohawk Group & Groundswell



*The Renaissance Collaborative, Chicago, USA*

**“A beautiful way to demonstrate a sustainable energy future.”**

“Deploying solar and storage installation at schools and community centers is a beautiful way to demonstrate how a sustainable energy future connects with educational and economic empowerment for everyone.”

– Michelle Moore, CEO of Groundswell

## Oak Star Bank



*Oak Star Bank Headquarters, USA*

**“A perfect fit for our focus.”**

“At OakStar we continually focus on progress that is beneficial to our organization and beneficial to our communities. [The SmartFlower] was a perfect fit for that focus.”

– Randy Johnson, President & CEO of OakStar Bank

## Lake Oswego District Advances Career and Technical Education Through Sustainability



*Lake Oswego High School, OR*

Two SmartFlowers were installed at Lakeridge High School and Lake Oswego High School in the Lake Oswego District of Oregon. These innovative projects not only showcase the beauty and efficiency of solar energy but also serve as integral components of outdoor classrooms designed to enhance learning. Students will have the opportunity to observe the SmartFlowers in action, tracking their electricity production and collecting valuable data on renewable energy generation. This hands-on experience aims to inspire a new generation of environmentally conscious leaders and innovators.

The Lake Oswego District continues its commitment to outdoor career and technical education, positioning the SmartFlower as a key and iconic element in its educational approach. By integrating advanced technology with practical learning, the district is fostering a deeper understanding of renewable energy and its benefits. These installations reflect a forward-thinking vision that encourages students to engage in sustainable practices, preparing them for future careers in green technologies and beyond.

## Smartflower Offers Sunny Welcome to Founders Hall, Innovation Hall

*"Part-art installation, part-solar energy technology and part-educational tool" – University Architect Brad Moore answers questions on the newly installed SmartFlower.*



*The Smartflower solar device in front of Founders Hall, April 18, 2023.*

Installed this spring outside of the newly-dedicated Innovation Hall and Founders Hall, the new dynamic photovoltaic array Smartflower serves as the “[showpiece](#)” for the university.

The Smartflower unfolds each morning, follows the sun’s light at the perfect angle and retracts once the sun sets. The fully-integrated system is inspired by nature and will provide clean energy to the two newest buildings in Elon’s Innovation Quad.

University Architect and Director of Planning, Design and Construction Management Brad Moore answered a few questions about the newly installed Smartflower, its purpose and what it will add to the university.

---

### **What does the addition of the Smartflower mean for campus?**

As a display that is part-art installation, part-solar energy technology and part-educational tool, the SmartFlower reduces Elon University’s carbon footprint by producing renewable energy for Founders Hall and Innovation Hall.

### **How does the Smartflower operate?**

The Smartflower is designed to mimic how sunflowers naturally absorb solar energy by moving with the sun. The device uses its internal programming and location data to track the sun from east to west and north and south to maximize renewable energy production. The

Smartflower innovative design will allow it to produce 40% more energy than a similarly sized fixed solar panel.

### **What is the purpose of the flower?**

The Smartflower is a visible demonstration of sustainability, creativity and engineering at work. It will generate 2.5 kilowatts hours of renewable energy annually and will help supply clean energy to Founders Hall and Innovation Hall.

### **What was the decision behind putting a SmartFlower on campus, specifically outside of Innovation Hall and Founders Hall?**

As a display of technology made possible by investment and advancement of STEM-related education, the Smartflower is the perfect centerpiece to anchor the plaza outside of Founders Hall and Innovation Hall. The hope is that its presence will inspire Elon's students to go out to change the world with their ideas.

### **How will the energy harvested by the flower be used to assist facilities on campus?**

The Smartflower will provide clean, renewable energy that will supplant a portion of the fossil fuel-generated electrical energy required to power lighting, equipment and building systems within Founders Hall and Innovation Hall.



### **How unique is the Smartflower on college campuses?**

By installing a Smartflower on campus, Elon University has joined a distinct and global group of colleges and universities that have committed to renewable energy production on campus, while encouraging and empowering students to learn about transforming the world with innovative technology.

### **How will the flower be a “showpiece” for the university?**

When students, faculty, staff and other members of the community walk by the Smartflower, they will see a tangible example of our campus investment in STEM. Our Smartflower will serve as a symbol for the university's commitment to sustainability while demonstrating our role as a leader in education and innovation. The Smartflower will be a powerful showpiece because it will spark interest and conversation about renewable energy and the importance of STEM-related education in our future.

Read the original article [here](#).

## Humber College And Siemens Canada Open the Sustainable Microgrid and Renewable Technology Lab (SMART Lab)

*Lab addresses the energy industry skills gap by providing hands-on learning.*



TORONTO, ONTARIO – Humber College is partnering with Siemens Canada to develop a Sustainable Microgrid and Renewable Technology Lab (SMART Lab) at its North Campus. The SMART Lab is an educational and experimental environment designed to train students and professionals in the use of a microgrid system and to conduct research with industry partners.

Although traditional power grids offer reliable power, natural disasters or security breaches can threaten or disturb the grid's supply. The resulting blackouts can have catastrophic and costly consequences for businesses and society at large. Microgrids are decentralized localized energy systems that can operate independently of the public system or in conjunction with the main power grid using energy sources like wind and solar photovoltaics (PV) to reduce carbon emissions. They can adapt to virtually any local requirement and can withstand harsh environments. This resilient, on-site energy production ensures generation, while efficient storage solutions enable reliability of the energy supply. Microgrids can be “islanded” or disconnected from the traditional grid during a natural disaster or cyber threat. The islanding function for microgrids provides several benefits including the ability to maintain power during outages, improved reliability and resilience, increased renewable energy integration, and protection from cyber threats.

### **Sustainable Technology of the Future**

With the support of the Ontario Government, Humber's investment in the SMART Lab features sustainable digital technology including a microgrid monitoring and controller system, battery energy storage capability, distribution infrastructure, as well as generation and load simulation equipment. Devices such as the solar Smartflower, electric vehicle charging stations, and battery energy storage systems, will be used as part of the microgrid control system to generate and distribute energy locally, allowing for more efficient and sustainable use and consumption of electrical power.



The Smartflower is equipped with solar panels that open up and follow the sun throughout the day, maximizing the amount of electricity that is generated. The Smartflower's solar panels can generate 40 per cent more electricity compared to a stationary panel. These small-scale power grids can operate on their own, or as part of a larger grid.

As the economy becomes more reliant on electricity, continued focus on developing technologies such as smart grids and microgrids is important. Humber College is partnering with industry stakeholders, utilities, technology companies, municipalities, and community planners, to conduct research and offer practical training for individuals who may operate these complex systems in the future.

### **Hands-on Learning**

The SMART Lab will equip Humber learners with knowledge and skills related to the design, operation, and maintenance of microgrids. The lab will be used for applied research projects and allow the college to offer micro-credentials in the field of microgrids and renewable energy, and new curriculum in Electrical and Computer Engineering and Sustainable Energy and Building Technology programs. The SMART lab will also be a key element in Humber taking advantage of its own energy assets to achieve its sustainability goals.

The SMART Lab's benefits extend beyond the campus. With its training, research, and innovation in sustainable technology and microgrids, Siemens and Humber will help fill the current skills gaps in electrical power and utilities, residential development, and manufacturing power management industries and provide current and future professionals with the hands-on technical education required to further expand and adopt microgrid technology into our society.

### **QUOTES:**

“Our energy transition to address climate change and a greener planet requires all hands-on deck. This partnership with Siemens Canada will allow our students to learn about and research the latest in microgrid technology. Humber is a national leader in infusing sustainability not only in our administration and building practices but also in our teaching and learning. Working with Siemens will enable us to train the next generation of professionals in the field of green technology and the SMART Lab will bring Humber another step closer to achieving its own sustainability goals.” – Dr. Ann Marie Vaughan, president & CEO, Humber College

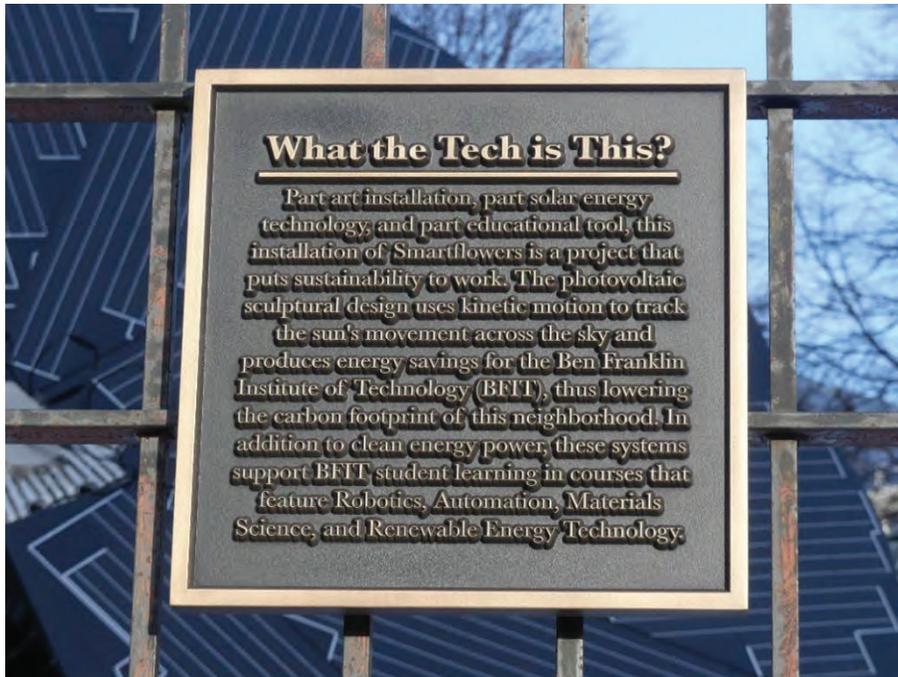
“An effective energy transition to enable decarbonization is a complex effort, and it requires a growing system of partners to tackle this enormous challenge. Siemens is proud to support Humber in offering students training on technologies that prepare them for careers vital to our climate change response and energy economy.” – Faisal Kazi, President and CEO, Siemens Canada

“It is essential that post-secondary institutions have the latest learning tools and equipment so students can develop the skills they need to succeed in the workforce. That's why our government is proud to support this new SMART lab and the collaborative partnership between Humber and Siemens, which will provide students with the hands-on education and training they need for the in-demand jobs of today and tomorrow. It is projects like this that help find sustainable solutions within industries, prepare students for the workforce, and help drive our economy forward.” – Jill Dunlop, Ontario Minister of Colleges and Universities

Read the original press release [here](#).

## Benjamin Franklin Institute of Technology Makes an Investment in Knowledge with Two Smartflowers

Benjamin Franklin once wrote that “An investment in knowledge pays the best interest,” and what is a more appropriate investment for our future than training students for a career in green energy? The Benjamin Franklin Institute of Technology (BFIT) installed two Smartflowers on their campus courtyard in the Fall of 2020. The courtyard, located in Boston’s historic South End district, is also home to a plaque that explains the significance and function of the Smartflowers to passers-by and members of the community.



Benjamin Franklin Institute learned about the Smartflower through a board member who recognized the connection between the product and the college's core value to integrate sustainability into all curricula offerings. The President of BFIT, Dr. Aisha Francis, connected with several organizations on this issue area, including Smartflower, and worked with the company to bring its innovative technology to campus to expand BFIT’s program concentrations in renewable energy technology. “Benjamin Franklin Institute of Technology seeks to build upon established and emerging aspects of the solar industry through our programs, curricula, and related projects. Solar innovations are a key element of responsible development and having Smartflowers on-site dovetails nicely with the sustainable programming we deliver at BFIT,” said Dr. Aisha Francis, President and CEO of BFIT.

Bringing sustainability to the BFIT curriculum is a journey that the institute has embarked on enthusiastically, with 90% of all their programs having some form of sustainability integrated into them. The introduction of the Smartflowers have also played a large role in shaping programs like the Energy Technology program and the Mechatronics program, which involve close study of the two units.

Students were even able to watch and participate in the Smartflower installations! As part of the Renewable Energy Technology concentration, students can learn more about solar energy, what makes the Smartflower tick, and how to provide maintenance for these unique systems. “The Smartflower’s advanced robotics and increased efficiency gives our students a unique opportunity to learn about solar innovations. We don’t want to only lecture at our students, but give them a real-world, hands-on experience to become leaders in the renewable energy and design workforce,” said Dr. Marvin Loiseau, Dean of Academic Affairs at BFIT.



As to how the residents of the South End have reacted to the new solar system in their community? It’s been sparking up conversations left and right! The two Smartflowers are in a high-traffic area of the community that sees buses, cars, and pedestrians pass by every day. “Everyone is looking at the Smartflower... it’s so important for the community to understand what it is and for them to think about how Smartflower and solar energy can work for them,” said Dr. Loiseau.

The twin Smartflowers have also introduced another big talking point for the South End community: how innovative technology can and must intersect with historic preservation. Founded in 1908, the history of the BFIT campus building is clear to all who see it. However, just because the history of a building should be maintained and preserved does not mean that it cannot adopt new technologies. The installation has set an example to the rest of the South End district that there are ways to make historic buildings renewable and modern without intruding on the architecture of the building.

“This is a win-win for everyone. We’ve created an opportunity for students to get real-world experience from new technology while showing our community how to reduce energy costs, carbon emissions, and contribute to a sustainable future,” said Dr. Loiseau.

## Halcyon Arts Lab Shows Their Community What a Clean Energy Future Looks Like with Smartflower

A Smartflower was installed at the Halcyon Arts Lab in Washington DC earlier this year. The unit provides power to the Halcyon Arts Lab, which is located on the site of the historic Fillmore School that was built in 1893 and demonstrates their commitment to being on the forefront of clean, renewable energy.



The culture at Halcyon revolves around celebrating exploration and creativity, bringing together change-makers in art, science, and social enterprise, and providing them with the environment to flourish. Given the non-profit organization's enthusiasm in advocating for innovation in business and the arts, the Smartflower fits right in, acting to inspire others and to demonstrate how art, business and science can co-exist. "Our Smartflower conveys a message about how powerful an artistic, aesthetically compelling representation of our commitment to clean, renewable energy can be," said Nicole Dowd, the Director of Arts Programs at Halcyon.

For Halcyon, their Smartflower also acts as another way for them to interact with their visitors and passers-by, starting conversations about the intersections between renewable energy, innovation, and art. "One thing that's great about the Smartflower is that even people who haven't seen one before immediately recognize the solar panels – they know what this is for as soon as they see it. The Smartflower makes them smile, gives them a chance to learn about renewable energy, and shows them that

there are more and more innovative ways to make solar power work for your building,” said Josh Mandell, the COO of Halcyon.

The Smartflower was originally introduced to Halcyon by Campion Hruby Landscape Architects, an architectural firm dedicated to forging meaningful connections between people and nature through modern, sustainable design. Halcyon initially looked at roof-mounted panels but could not find options that provided power, was easy to install, and complimented the historic estate the Arts Lab calls home. “For a beautiful, historic building like ours, a rooftop system wasn’t an option. We were really happy to find an option that adds to the aesthetic of our property and provides lots of power without the complications of cranes or roof-mounted systems,” said Josh.

However, the Smartflower is only one part of Halcyon’s investments into creating a clean energy future. A handful of thoughtful sustainability updates have been added to the Halcyon Arts Lab during the past few years, as well as to Halcyon’s other main facility. The Halcyon Arts Lab uses geothermal heat beneath the facility, and the outdoor area around the Smartflower is mindfully landscaped with native plants to reduce runoff and erosion.

When asked about what the most inspiring part of the Smartflower was, Nicole had this to say: “The Halcyon Arts Lab provides housing and studio space to emerging civic-minded artists. Their work deals with everything from criminal justice issues, to disability rights, to immigration and refugees, to questions of race and gender equity. For them to walk into our building every day and pass the Smartflower – such a beautiful, artistic symbol of what the future can look like for clean energy – it reminds them of the many ways art can impact society.”



## The King Juan Carlos University in Madrid Commits to Sustainability and Cost Savings with Smartflower



*King Juan Carlos University (URJC), Spain*

The King Juan Carlos University (URJC), located in Madrid, Spain, is making huge strides to showcase its commitment to sustainability. Their commitment comes not only in the form of conventional renewable energy production and energy-efficient classrooms, but also in the form of Spain's first Smartflower installed in a public university.

On December 2<sup>nd</sup>, Javier Ramos, the Rector of URJC, hosted a ceremonial opening for the installation of a Smartflower at their Fuenlabrada campus. The opening ceremony took place at the same time as the kick-off for the COP25 Climate Summit, a climate change-focused conference held by the United Nations in Madrid, Spain. Ramos applauded the coincidence, and stated that the URJC wants to make their Fuenlabrada campus “a space where we approach the challenges of the United Nations’ 2030 Agenda for Sustainable Development.”

When speaking about the Smartflower, Ramos highlighted the symbolism of the newly installed all-in-one solar system. “This installation is meant to make the Fuenlabrada campus an area where we can reach the goals in the 2030 Agenda for Sustainable

Development... Just as sunflowers seek the light, the university's spirit will constantly seek the light of knowledge," said Ramos.

Several town hall authorities and members of the URJC community attended the opening ceremony. It is estimated that the university will save approximately €5,400 from its sustainable infrastructural changes in the first year. Being the university with the second-highest number of students (over 46,000 enrolled) in the Madrid region, it is no wonder that the URJC is taking such large strides to demonstrate their commitment to sustainability. Here's to hoping that other universities in Spain follow suit!



*Javier Ramos, the Rector of URJC, speaks at the opening ceremony*

## Trinity High School Uses Smartflowers to Support Students and Community



*Trinity High School, USA*

Trinity High School believes in using technology to address and solve real-world problems, which is why they installed three Smartflowers on their campus in Washington, Pennsylvania in the spring of 2019. The Trinity Area School District received funding from the Local Share Account (LSA) grant that provided a way to purchase their very own Smartflowers as well as their wind turbine project.

While Trinity High School's Administration researched other options for solar, such as traditional rooftop static solar panel systems, the Smartflower was ultimately chosen. "We decided to pursue the dynamic Smartflower to incorporate more technology and expand the curricular basis as well as career options for students," said Donald Snoke, Assistant Superintendent of the Trinity Area School District.

Trinity High School's Smartflowers aren't just used as a clean energy power source—they're used as an educational tool for students. The Smartflowers have been integrated into the school's curriculum in order to benefit AP students, college prep students, and students who plan on attending tech and trade schools or are entering directly into the vocational arena. Courses such as AP Environmental Science, Physics, Industrial Technology, and Vocational Agriculture will utilize Smartflower technology as part of their curricular focus. "The rigor and relevance of the secondary curriculum have expanded greatly. The bar has been raised and our students, staff and community members have been the beneficiaries," said Snoke.

The three Smartflowers are also used to give back to their community, producing energy to supplant the energy consumption in the Trinity High School Freight Farm.



The Freight Farm produces 1200 heads of lettuce per week, all of which is donated to the greater Washington County Food Bank. “The belief that we are utilizing technology to solve problems, much like an engineer does, is intriguing,” said Snoke, “We are being viewed as the innovators in our county and state.”

Reactions from the students, faculty, staff, and community have been highly positive. Local businesses have been exploring the possible applications of the Smartflower in different industries, while David Volkman, the Assistant Secretary from the Pennsylvania Department of Education, was highly impressed by the integration of Smartflowers into Trinity High School’s curriculum during his visit and stated that the Trinity High School model should be applied throughout the state of Pennsylvania.

“Our Smartflowers are extremely important for the Trinity Area School District,” said Snoke, “Our students, faculty, and staff are stunned and excited, and the community has taken notice of the innovative direction the Trinity Area School District is taking... Our Smartflowers are a definite source of pride and accomplishment for the members of the Trinity Area School District.”

## ***Feel AMPowered* Wins First Place with Smartflower Solution at 2021 MIT EnergyHack**

At this year's 2021 MIT EnergyHack, over 300 engineers and MBA students from around the world gathered virtually and in person to develop innovative solutions for pressing needs relating to the energy industry and climate change. As a Sustainability Circle sponsor, Smartflower CEO Jim Gordon gave a rousing keynote speech and presented a challenge statement for the hackathon: **How can we integrate the Smartflower into the distributed generation plans of utilities across the United States and the world?** After 36 hours of hard work, team *Feel AMPowered* from Northwestern University came in first place with their innovative answer to Smartflower's challenge statement.



The winning solution? *Smartbouquet*, a Virtual Power Plant (VPP) model that consists of multiple Smartflowers connected in a true distributed generation and software control plan to meet the needs of utilities and their customers. The team also went into detail about scaling options, shaving peak demand, energy/climate security, potential market opportunities, and how their model would benefit both Smartflower and utilities worldwide.

Claire Miller, Yuan Cheng Chua, Oliver Booth, and Maria Keane met through Northwestern's [Master of Science in Energy and Sustainability \(MSES\) program](#) and were one of three teams

from their university that participated in the hackathon. When taking note of the different challenge statements, they knew that Smartflower was their first choice. “We thought that Smartflower’s challenge statement was something achievable for the time frame we had. We also had prior knowledge from our Master’s program that we could draw on to come up with an interesting, effective, and deployable solution,” said Oliver.

Surprisingly, the team came up with their solution early into the hackathon. They started brainstorming ideas after the Opening Ceremony on Friday night and came up with their solution by lunchtime on Saturday! They then focused on the best way to package and communicate their ideas in a way that would make sense to their audience, with their solution evolving as they went through the process. “We did a full storyboard of our presentation, and it helped make our point clear given the short amount of time we had,” said Claire.

The team attributed their success to their Master of Science in Energy and Sustainability (MSES) program at Northwestern University, which taught them about the ins and outs of the energy and sustainability industry. Guest speakers from different utilities, as well as detailed lessons on sustainability economics and policy, allowed them to understand the challenge question through a sustainability lens. All this led to their winning *Smartbouquet* model. “This was a great opportunity to apply what we’ve been learning in our program and do something practical with it. It was such a rewarding experience, and I’m so proud of the work we did over such a short period of time,” said Claire.

“This was my first time taking part in a Hackathon,” said Yuan Cheng, “It tested our mental endurance, but it was very fulfilling, and I appreciated the support my teammates gave me.” Indeed, the team had a fruitful time at the 2021 MIT EnergyHack, and they highly recommend it to anyone interested in renewable energy. “It was interesting seeing the different ways of thinking the other teams had, and how they came up with their solutions. We’re so glad to have been part of this event,” said Maria.

## Mary Baldwin University



*Mary Baldwin University, USA*

### **“An innovative, tangible example.”**

“When students and other members of the community walk by, they’ll see that we have an innovative, tangible example of our campus commitment to sustainable energy sources.”

– Sam Stoner, Sustainability Coordinator at Mary Baldwin University

## Innovation Montessori Ocoee



*Students with Smartflower at Innovation Montessori Ocoee, USA*

### **“The impact these make is really important.”**

“The flower, using that as a teaching tool, saving the planet, of course is a goal, but showing the students [in] real time the impact these things can make is really, really important. In having Innovation in our name, we try to inspire these kids any way we can.”

– Sherilyn Moore, President of the Innovation Montessori Ocoee Board of Directors

## Virginia Wesleyan University



*Ribbon Cutting Ceremony at Virginia Wesleyan University, USA*

### **“A symbol for the University’s commitment.”**

“Our Smartflower will serve as a symbol for the University's commitment to the environment while demonstrating our role as a leader in bringing the latest in solar technology to the region.”

– Scott D. Miller, President of Virginia Wesleyan University

## Rockingham County Schools – Mohawk Group & Groundswell



*Rockingham County Schools, USA*

**“Truly a gift that will keep on giving for years to come.”**

“The future of our planet lies in the hands of our young people. The ability to put those hands-on renewable energy tools and education to learn firsthand about the importance of preserving and properly utilizing our natural resources is truly a gift that will keep on giving for years to come for members of our community.”

– Karen Hyler, Public Information Officer at the Rockingham County Schools

## EWE Drives the Energy Revolution Forward with Smartflower at Tante Mia Tanzt

Amongst a sea of festival-goers dancing to the best electro music Germany can offer stands a Smartflower, its petals open and facing the sun, generating clean solar energy at one of the country's larger electro festivals. One of the sponsors of the 2022 Tante Mia Tanzt festival in Vechta, Germany, utility and telecommunications company EWE brought its Smartflower to the festival to power a free Wi-Fi hotspot for festival attendees. EWE, a strong advocate of renewable energy, hopes the Smartflower will symbolize its goal to be carbon neutral by 2035 and for a cleaner, greener future.



EWE first discovered Smartflower in its search for a renewable alternative to the diesel generators that festivals usually use to power its facilities. Initially, the EWE team had considered setting up solar panels on the festival grounds, but they soon realized it would take up too much space. Instead, they opted to mount a Smartflower on a trailer, transforming it into a mobile solution that would be easy to set up for the many festivals, expos, and other events that EWE sponsors.

Local Smartflower dealer, Faboro deutschland GmbH, was an integral part of the process, providing EWE support with the installation and connection of the Smartflower, advising on the technical aspects and design of the customized trailer, as well as providing the eye-catching wrap for the base of the unit. "We wanted to inspire our customer EWE with a unique renewable product, and we converted the Smartflower into a complete standalone solution

for them. In our opinion, the Smartflower was the best choice for EWE as it makes for a ideal ‘multi-tool’ that combines solar energy, innovative design, and aesthetic beauty into one iconic product,” said Egon Faiss, CEO of Faboro deutschland GmbH. As a result of EWE and Faboro deutschland GmbH’s hard work, the Smartflower was ready to shine in time for Tante Mia Tanzt, allowing EWE to self-sufficiently provide a climate-friendly Wi-Fi break for festival attendees.

“The Smartflower is an absolute eye-catcher. When we set it up for the festival, everyone stopped to stare at it. Some even asked if they could buy it from us,” said Frauke Bitterer, the Sponsoring & Events Project Manager at EWE. Indeed, the Smartflower was a complete *Hingucker* (eye-catcher) at Tante Mia Tanzt, so much so that EWE has continued to bring the unique solar flower to its other sponsored events. As of October 2022, up to 150,000 people have seen EWE’s Smartflower and have been inspired by its message.

For EWE, climate protection is not a trend—it’s an obligation. Since 2022, EWE has been offering exclusively green electricity for private customers. The company is also investing in the erection of new wind turbines, the expansion of fiber-optic infrastructure, climate-neutral heating solutions, and an integrated hydrogen economy.

“Attaining climate neutrality and going green is something that many companies are starting to act on. When these companies see our Smartflower, we hope they see a clever solution to an urgent problem. We are proud to be part of the Smartflower family, and we can’t wait to bring the Smartflower out for our next festival,” said Ms. Bitterer.



## Roskilde Festival – Carlsberg & Tuborg



*Roskilde Festival, Denmark*

### **“A great way to highlight the importance of renewable electricity.”**

“As part of Carlsberg Group’s sustainability programme, Together Towards ZERO, we are targeting 100% use of renewable electricity by 2022 – a target we already meet in Western Europe today. Therefore, Tuborg in Denmark found it relevant to continue that journey with Roskilde Festival, who has been a close partner for many years and who is also committed to sustainability... we thought the Smartflower was a great way to highlight the importance of renewable electricity.”

– Christian Sveigaard, Head of Tuborg in Denmark.

## How SmartFlower is Shaping Sustainable Wastewater Treatment in Spain



*Depuradores d' Osona SL in Barcelona*

At SmartFlower, we're always excited to see our solar energy systems being used in creative ways to help organizations reduce their carbon footprint and boost sustainability. Two wastewater treatment plants in Spain, Punta del Hidalgo in Tenerife and Depuradores d' Osona SL in Barcelona, are perfect examples of how SmartFlower isn't just about energy efficiency. It's also about showcasing sustainability in a way that's both functional and visually striking.

These plants aren't just upgrading their energy systems; they're using SmartFlower to make a clear visual statement about their commitment to green energy. Here's a look at how SmartFlower is supporting their efforts.



### How SmartFlower Supports Wastewater Plants:

- Energy with a message: SmartFlower draws attention to the plant's renewable energy goals, and they get people talking about the importance of green energy.
- Supporting green goals: SmartFlower complements their sustainability initiatives, and it's a symbol of the plant's ongoing commitment to sustainability.
- Raising Awareness: It's a great way for the plant to start conversations with the local community about the importance of renewable energy and sustainable water management.

At SmartFlower, we're thrilled to see our solar systems being used to power wastewater treatment plants in Spain, like Punta del Hidalgo and Depuradores d' Osona SL. These plants aren't just cutting their energy costs, they're also leading the way in making sustainability visible and engaging to the public.

By combining energy efficiency with an eye-catching design, SmartFlower is helping these plants showcase their green initiatives in a way that is both practical and inspiring. Whether it's through clean, renewable energy or raising awareness about sustainable practices, SmartFlower is proud to play a part in building a greener future.

## Multiutility Iren Group Embraces Renewable Energy with Smartflower in Turin, Italy

Iren Group, a multiutility company based in Italy, installed their first Smartflower at their Torino Nord Cogeneration Plant in August 2020. The installation was done by Italian dealer Im-El Osasio, an electric utility company based in Osasio, Italy with 45 years of experience. Iren Group's Smartflower reflects the mission and philosophy of the company, who believes in offering their customers and territories the best integrated energy management, water, and environmental resources through the use of innovative and sustainable solutions. With this installation, they hope to show their customers and community their dedication to embracing sustainability and innovation.



The Smartflower was chosen by Iren Group for its aesthetic design and efficient energy production. Its flower-shaped design helps to broadcast their sustainable message to their customers, and promotes how Iren Group is embracing the world of renewable energy. The installation has even become an educational opportunity for the company, as customer curiosity has been piqued ever since the innovative solar system was introduced. Many of them wish to learn more about how the Smartflower works, as well as how the cogeneration plant provides them with energy. "We are proud to be spreading a new sustainable message and philosophy by installing Smartflowers around Italy," said Gianpiero Pautasso, the owner of Im-El Osasio.

This installation is but one part of Iren Group's ambitious environmental improvement plan. Future projects in this plan include introducing a new area for businesses to thrive, creating a 7-megawatt energy storage system, and installing a reverse osmosis

plant to reduce the use of chemical products in demineralized water production, and are planned to take place sometime from 2020-2022. We look forward to seeing how Iren Group continues to innovate and grow!

#### About Iren Group:

Iren Energia, a subsidiary of the Iren Group, wears many hats. They produce and distribute electricity, provide thermal energy for district heating and technology, and manage integrated water, environmental, and technological services. They aim to provide their customers with high quality, reliable, sustainable and efficient energy in their territories, and believe in reaching new heights through the use of innovation.

Did you know that Iren Energia's cogeneration plants and urban district heating systems produce heat for 550,000 Turinese citizens, making Turin the city with the highest amount of district heating in Italy and all of Europe? There are significant environmental benefits to using district heating, as it is more energy efficient and reduces carbon emissions, which means that Turin is more sustainably heated than cities that use traditional heating systems. To learn more about Iren Group, visit <https://www.gruppoiren.it/>.

#### About Im-El Osasio:

Im-El Osasio aims to provide experience and innovation to all, and to help individuals and companies facilitate their energy autonomy. Established in 1975, the energy utility company is made up of curious experts who constantly seek for new and innovative solutions to their customers' needs. They firmly believe that their passion is what distinguishes them, and hope to pass that passion for renewable energy on to the communities they serve.

The company has installed 365 residential and industrial PV systems in the last 5 years. These systems are mainly located in the Italian provinces of Turin and Cuneo, but have recently started to move into Liguria. They also install energy storage systems so customers can use their clean solar energy at night. To learn more about Im-El Osasio, go to <https://www.imelosasio.it/>.

## The Taiwan Cement Company Gives Back to Their Community with the First Smartflower Installation in Taiwan



*Heping, Taiwan*

Earlier this year, three Smartflowers were installed at the Taiwan Cement Corporation's DAKA Open Ecological Recycling Factory (otherwise known as TCC DAKA) in Hualien, Taiwan, making it the very first Smartflower installation in Taiwan! The three Smartflowers supply clean, renewable electricity to the Vision House and signboard at the main gate of the TCC DAKA facility. This initiative is part of the Taiwan Cement Corporation's mission to build a strong relationship with their stakeholders and give back to their community.

The Taiwan Cement Corporation Group is a green environmental engineering company focused on the complex relationship between man and nature. They have expanded outside of the cement sector and are now also part of the energy, environmental protection, and circular economy fields sectors. The opening of the TCC DAKA Open Ecology Recycling Factory showcases the Taiwan Cement Corporation's belief that a plant should be part of the everyday life of the community, integrating ecology, knowledge, culture, and leisure into their daily operations. "The plant is not just a manufacturing facility, but also a park for leisure, a classroom for knowledge dissemination and a museum for collecting artworks," said the Taiwan Cement Corporation, "We want to redefine what it means to be a 'factory' and to build a long-lasting relationship with society."

Given the striking aesthetic appeal of the Smartflower, it's no wonder that TCC DAKA's three Smartflowers are now one of the photographic hotspots there. However, they aren't just a pretty piece of solar art—they're also as an educational tool. TCC DAKA offers guided tours involving the Smartflowers in order to teach visitors about the circular economy and about their sustainability efforts. "The design and shape of the Smartflower is unique... making it a visual reminder of the application and value of renewable energy," said the Taiwan Cement Corporation.



"TCC has always been a believer and an executor of the circular economy... We are happy to have the first Smartflower installation in TCC DAKA in Taiwan," said the Taiwan Cement Corporation, "With its smart solar panel system and unique flower shapes, the Smartflower is so eye-catching that people not only pay attention to its appearance but are also eager to learn more about it. It's beautiful and educational, and absolutely perfect for our goal."

## Taini DAKA Open Ecological Recycling Factory – Taiwan Cement Company



*Taini DAKA Open Ecological Recycling Factory, Taiwan*

**“A visual reminder of the value of renewable energy.”**

“Smartflower is a visual reminder of the application and value of renewable energy... the visitors’ response to the three Smartflowers are great. They have become one of the photographic hotspots in TCC DAKA.”

– Taiwan Cement Company

## Turning Solar Innovation into a Living Exhibit at Children's Discovery Museum



*Children's Discovery Museum of San Jose, CA*

Innovation often comes from reimagining existing technology – like solar panels. At the Children's Discovery Museum of San Jose, exhibits help children build curiosity, creativity and experimentation skills for future success. The SmartFlower beautifully embodies this, blending photovoltaic technology with robotics and nature-inspired design.

The installation of SmartFlowers, at the museum's outdoor exhibit Exploration Portal, marks a vibrant intersection of sustainability, education, and innovation. Since its unveiling, the SmartFlowers have produced clean, renewable energy directly on site, demonstrating solar power in action for thousands of children, parents, and educators each week. With its kinetic motion and sculptural form, the SmartFlowers capture attention instantly and provide a visible example of biomimicry and sustainability in action. The system's self-cleaning and self-closing features inspire conversations about STEM, energy efficiency, and the future of clean technology.

The SmartFlowers also contribute to the museum's broader sustainability goals, reinforcing its commitment to the community and environmental leadership. As a public, highly visible installation in Silicon Valley, it aligns with regional goals around clean energy innovation and climate action, and serves as a living example for schools, companies, and municipalities exploring ways to integrate sustainability into their spaces.



It's not just a solar system, it's a storytelling platform that merges art, science, and sustainability into one striking display. Ultimately, the SmartFlowers at the Children's Discovery Museum of San Jose stand as a model for how educational institutions can use technology to inspire and inform. It transforms an ordinary visit into a moment of discovery, empowering young minds to imagine a cleaner, brighter future powered by innovation.

## An Iconic Platform for Sustainability Leadership in Oman with SmartFlower



*Global Sustainability Academy in Oman*

Oman Cables Industry unveiled its Global Sustainability Academy featuring Oman's first SmartFlower. The Academy is also the first of its kind in Oman and was built to spark innovation and inspire the next generation of leaders driving the country's future.

The Academy builds on Oman Cables Industry's long-term strategy by providing an iconic platform to exchange ideas, deepen expertise and put sustainable solutions into practice. The initiative also significantly contributes to the country's transition to sustainable energy and economic diversification.

H.E. Dr. Saleh bin Said Masan, Undersecretary of the Ministry of Commerce, Industry and Investment Promotion for Commerce and Industry, said: "The Global Sustainability Academy represents the kind of partnership that translates national vision into practical progress. By embedding sustainability and innovation within industry, it strengthens the foundations of Oman's knowledge-based economy and builds the capabilities our future industries will rely on."



In addition to its SmartFlower educating visitors on solar energy, the Academy also features renewable energy zones and circular design materials – creating a space that reflects Oman's vision for a more sustainable future. These features will complement the Academy's programs, such as She STEMS, Build the Future and Kids in STEM, by providing hands-on learning demonstrations and environments for initiatives like innovation and climate action.

## Anaheim's Commitment to Sustainable Progress Featuring SmartFlower



*Sustainability Education Center, Anaheim, CA*

Anaheim celebrated its newest facility, the Sustainability Education Center (SEC) with a ribbon-cutting ceremony featuring its SmartFlower at the heart of the outdoor educational garden. Elected officials and students from neighboring schools joined the ceremony and each spoke about the importance of building a sustainable future.

The facility provides regional, educational, and workforce development resources to the local community that educates residents on the benefits of renewable energy, electric transportation, and water technologies, and prepares students for sustainability careers in STEM-related fields. In addition to the facility's SmartFlower and other interactive displays, Anaheim SEC will demonstrate new technologies, host seminars, provide job training, and provide educational programming to its visitors.

## Smartflowers Come into Bloom at the Franklin Park Zoo

Zoo New England is an organization dedicated to creating engaging experiences to inspire people to protect and sustain the natural world for future generations. It is no surprise, then, that it installed two Smartflowers at its Franklin Park Zoo location! The flowers are located near the *Butterfly Hollow* and *Giraffe Savannah* exhibits and all generated energy goes back to the grid. With an estimated 10,000 kilowatt hours a year being generated, that's enough to power the zoo's carousel and new golf carts!



The organization received great support from Green Mountain Energy Sun Club, who made the purchase of the Smartflowers and two golf carts with solar charging systems possible. “We really liked the eye-catching look of the Smartflower and how it is self-contained. It is a wonderful opportunity to highlight solar energy and educate guests about its importance,” said Robert Chabot, the Chief Operating Officer at Zoo New England.

As a conservation organization, Zoo New England always makes sustainability one of its priorities when undertaking new projects. Its cell phone recycling and rain garden initiatives are some of the many ways the zoo is committed to preserving the Earth

and educating its guests. The Smartflowers are a welcome addition to the zoo's sustainability initiatives, providing guests with a visual representation of the zoo's dedicated conservation and sustainability work.

"The Smartflowers have become a natural photo opportunity and focal point for our guests. Many guests stop to take photos, and we hope that they are sharing these photos and our commitment to sustainability on their social media," said Robert Chabot. With its beautiful flower-like appearance, innovative sun-tracking technology, and striking green wrap, it is no wonder that guests are stopping to look at the Smartflowers. A sign with further information on how the Smartflowers work sits between the two flowers to educate guests on the importance of renewable energy.

"Conservation is a cornerstone of our mission, and we are committed to having a meaningful impact in the conservation of wildlife and habitats. The Smartflowers align with our mission perfectly and presents us with the opportunity to talk about the importance of sustainable practices with our guests. We hope that their experiences at the Franklin Park Zoo educate and inspire them to take an active role in ensuring a healthy, thriving planet for generations to come."



## Can a Smartflower Installed at a Kansas Zoo Help Primates in Madagascar?



A Smartflower can now be spotted at the Lee Richardson Zoo in Garden City, Kansas, and is the very first in the state! The flower, installed earlier this month, is located directly behind the Primate Forest – Lemurs! exhibit in the zoo and provides power to the primate building. Any excess electricity produced is redirected to the nearby Flamingo Habitat. Primate Forest – Lemurs! and the Smartflower are now open to the public and act as a visual representation of the strong relationship between renewable energy and wildlife conservation.

One of Lee Richardson Zoo's main goals is to connect their visitors with wildlife and to inspire an appreciation and understanding of the natural world through conservation, education, and engagement. With [climate change threatening 40% of the world's primate population through extreme weather events](#), the zoo needs to educate its visitors on the links between climate change and habitat loss. That is why they are creating education and conservation programs that feature the Smartflower. One upcoming program, titled 'Story Time', involves reading children's books to families at the zoo by the Smartflower, and will include a take-home activity focused on renewable energy for families to do when they get home.



“We wanted something that would be a central component of our conservation message and could also be easily viewed by our guests. Our goal is to provide our guests with knowledge about renewable energy and wildlife conservation. This way, they can make sound decisions about mitigating climate change,” said Max Lakes, the Deputy Director of the Lee Richardson Zoo.

With the Primate Forest – Lemurs! being a new exhibit and the central hub of the zoo, the Smartflower gets ample visitors every single day. An interpretive graphic and power production meter accompanies the solar system, allowing for visitors to understand how the Smartflower operates and see its energy production statistics in real-time. The zoo is currently designing a survey on the Smartflower to gather more data about its public impact. They also plan to engage its followers on social media with future posts on the impact of the Smartflower and their other new habitats.

“When our visitors learn that our Smartflower follows the sun, they like to look at the unit and come back in a few hours to observe how the position of the panels has changed. It’s an eye-opening experience for them, noticing that difference,” said Keo Bounpaseuth, the Electrical Engineering/SCADA Specialist with the Garden City Public Utilities.

Planting the very first Smartflower in Kansas at Lee Richardson Zoo started with a simple idea: pairing the new zoo habitats with a renewable energy project. The zoo was initially unsure what the direction of the project would be until Mike Muirhead, Director of Public Utilities in Garden City, introduced the Smartflower to them. The rest of the project came together after that.

“As a member of the Association of Zoos and Aquarium, we have a Green Committee that meets to work on making the zoo as sustainable as possible. Renewable energy is central in helping save wild habitat and allow animals a place to live. We hope our Smartflower inspires people to think about the global impacts of climate change on wildlife and act to mitigate it. We are very excited about all the ways we can capitalize on how amazing the Smartflower is and can’t wait to show everyone our new source of solar power,” said Deputy Director Max Lakes.

## Detroit Zoological Society



*Detroit Zoo, USA*

### **“A really powerful tool.”**

“It’s really important because it not only generates electricity, but it also stops a lot of visitors who are going ‘what is that?’ and it gives us a chance to have a conversation about renewable energy. We think both because of what it actually generates and because of the interest and educational value, it’s a really powerful tool.”

– Ron Kagan, CEO of the Detroit Zoological Society

## Inspiring and Educating Future Generations, One Smartflower at a Time

The first residential Smartflower in Massachusetts was installed with future generations in mind. Located in Dover, Massachusetts, Jake and Elizabeth Grossman installed the Smartflower back in the fall of 2017 with the intent to use it as an educational tool for their children. The Smartflower currently powers the house and acts as a visual reminder for the Grossman family about the importance of renewable energy.



When the Grossmans were planning to build their house in Dover, they knew they wanted to incorporate renewable energy somehow. However, they felt that rooftop solar panels were not a good fit for the look of the house and turned to the Smartflower instead. “We were building a very traditional colonial house, and we didn’t think solar panels would look good on the roof. We opted for the Smartflower instead, especially because it looks cool in our garden and is extremely efficient,” said Jake.

Educating their children on climate change is an important goal for Jake and Elizabeth, and their Smartflower plays a large part in that. Their Smartflower is used to demonstrate how solar power works and provides their children with a real-time

## Gozo Leads as a Sustainable, Eco-Tourism Destination with SmartFlowers



### *Gozo Multi Modal Hub, Ta' Xhajma, Malta*

With its terraced landscapes, heritage villages, and dramatic coastlines, the Island of Gozo attracts travelers seeking nature, wellness, authenticity, and local craft. To reinforce its identity as a forward-thinking eco-tourism destination, the Gozo Multi Modal Hub in Ta' Xhajma, Malta launched a grand initiative: the installation of fifteen SmartFlowers.

This represents one of the largest installations in Europe. The clean energy will support lighting and charging needs of the electric bus fleet servicing the hub as well as the Park & Ride facility between Mġarr Harbour and the hub.

Placed strategically at the hub, the SmartFlowers created a unified sustainability narrative across Gozo; visitors see sustainability in action the moment they arrive.

Each SmartFlower serves as:

- A public sustainability beacon
- A photogenic, shareable visual icon for social media and tourism promotion
- A conversation piece that links innovation with Gozo's natural beauty

This installation "demonstrates how modern technology can be applied in a practical way to improve the quality of life and build a greener more resilient economy," stated Minister for Gozo and Planning of Malta Clint Camilleri.

The SmartFlower initiative aligns with Gozo's strategic goals to:

- Attract environmentally conscious travelers
- Reduce the island's carbon footprint
- Promote Gozo as a destination where nature and innovation coexist
- Showcase commitment to Malta's Vision 2050 climate targets
- Differentiate Gozo from mass-market tourist islands competing on price, not values



The SmartFlowers positions Gozo and Malta on the global map as pioneers in renewable energy practices and as models for other countries building a more sustainable future with renewable energy. Camilleri explained, "By installing these [SmartFlowers] in Europe, we show how Gozo can be a model for sustainable innovation." The project has generated significant public attention, demonstrating how symbolic sustainability projects like this can attract positive attention, reinforce one's reputation as a leader in sustainability practices, and inspire others to follow suit.

By visibly integrating the units within public infrastructure, Gozo reinforces its image as a sustainable and innovative destination, as well as enhances its international visibility and appeal to environmentally conscious visitors. For the island of Gozo and for Malta, this project is not just an energy-infrastructure upgrade, but also a bold statement on the future of clean energy, mobility and sustainable development.

## Valverbe Shines Bright in Varaita Valley with Smartflower

Located in the alpine Varaita Valley in Italy, the herbal tea company Valverbe prides itself on balancing ancient herbal traditions with advanced research into new production technologies. Earlier in the spring of 2022, Valverbe welcomed its first Smartflower at its headquarters, installed by Italian dealer Im-El Osasio. The Smartflower provides power to Valverbe's electric vehicles and the industrial processes that are part of their manufacturing process, and has also become a new landmark for both the company and the nearby town of Melle.



Valverbe first learned about the Smartflower through another iconic Smartflower installation in Italy—the [GreenPea Retail Park](#) in Turin. Two Smartflowers, provided by energy industry leader Enel X, welcome customers to the green shopping center and are one of the many ways GreenPea showcases its sustainable efforts. Being a company that produces medicinal herbs and herbal tea products, the staff at Valverbe immediately fell in love with the idea of being able to produce clean energy through their very own giant solar flower.

“The Smartflower serves Valverbe's eco-friendly philosophy and purpose. We have always cared strongly about the energy sources we use, and we make sure to only use renewable energy to produce our products,” said Luca Fasano, the CEO of Valverbe. Aside from the Smartflower, Valverbe has solar panels installed on the roof, and any energy they buy comes from certified renewable sources. Their packaging is sustainable as well: Valverbe's herbal teas are packed in boxes made of cardboard manufactured using renewable energy, their filter bags are compostable, they make sure not to use any plastic in their packaging, and even the sealing thread is made from 100% cotton!

However, it's hard to ensure that customers and visitors at Valverbe understand the full extent of their commitment to sustainability at first glance, especially when these impressive eco-friendly efforts are rarely visible to the public eye. Their new Smartflower was the perfect solution. It would serve as Valverbe's solar centerpiece, and start conversations about clean energy. "At Valverbe, we pride ourselves on our attention to detail. We installed the Smartflower at the center of our facilities to show that when it comes to agricultural production and herb processing, our main aim is to preserve the environment," said Fasano.



[\[Valverbe's New Smartflower Shines on Varaita Valley on YouTube\]](#)

So far, visitors have approached the new Smartflower with curiosity and enthusiasm. Many photos of the solar flower have been taken, and staff members have observed that the large solar 'petals' of the system have had a major impact on visitors. Valverbe is currently working on developing new tourism activities at its headquarters to deliver a truly unforgettable experience for its visitors, and the Smartflower is poised to star as one of its new attractions.

"Sun, soil, water, and passion are the ingredients that make up the Valverbe brand. The Smartflower is our little sun that provides us with energy during any time of the day. We believe that respecting the environment must involve all stages of our processes, which is why we are investing in technology that maximizes our energy savings and ensures carbon neutrality," said Fasano.

## Maglebo Vineyard Embraces Both Nature and Technology with Two New Smartflowers

Two Smartflowers were recently installed at the Maglebo Vineyard & Country House in Helsingør, Denmark. The vineyard is both eco-friendly and self-sustainable and contains not just a Bed and Breakfast, but also a fruit and vegetable garden that grows produce like potatoes, oats, and other vegetables, as well as a 4-hectare forest. The two new solar flower additions will help power the geothermal heating system that keeps the buildings in the vineyard warm despite the cold climate.



The owner of the Maglebo vineyard, Gert Lassen, discovered the Smartflower back in 2016 when he was looking for a sustainable way to power his geothermal heating system. Now, the two Smartflowers are what provides electricity for the vineyard's geothermal system. Any leftover power is stored in the vineyard's Powerbank and can be used to power the lights and appliances in the vineyard.

However, it is not just power production that the Smartflowers bring to the Maglebo Vineyard. One Smartflower is installed right in front of the B&B terrace and works as a 'sunbrella' that provides guests with shade and shelter from the rain. Furthermore, the Smartflower acts as a piece of modern art for the guests to view while enjoying their stay at the country house and showcases the vineyard's commitment to living sustainably. "Everybody who sees the Smartflower falls in love with it," said Gert, "It's a powerful and good-looking piece of solar art."

While the two Smartflowers are the vineyard's main solar showpieces, Gert and his team are hard at work to make sure that they practice what they preach. Guests are served 'farm-to-table' meals that are made with a combination of the vineyard's homegrown vegetables and produce purchased directly from local farms and butchers. A 'living roof' comprised of various species of grass and flowers exists on the roof of the main building to promote biodiversity while also absorbing rainwater during subtropical rainstorms to prevent flooding. 500 pinewood trees and 50 fruit trees were also planted in the 4-hectare forest to offset carbon emissions while providing homes for the native birds, bees and butterflies that reside in Helsingø. The vineyard is even part of the 'Andelsgaard' movement in Denmark, in which old farms are converted into sustainable green farms and become part of a cooperative!

"We focus on being sustainable and living cleanly in all aspects of life—our potatoes come from the ground, our wine from our grapevines, and our power from the sun," said Gert. Indeed, Maglebo Vineyard & Country House has not only chosen to embrace nature traditionally but to also incorporate modern, innovative technology into their business. While many might see the combination of traditional living and modernity as conflicting, the two go hand-in-hand when it comes to fulfilling the vineyard's goal of promoting an authentic green lifestyle. "The Smartflowers have become part of Maglebo Vineyard's identity," said Gert, "People in the community tip their hats in respect when they see us taking responsibility and showing future generations how to live sustainably."



## Smartflower Brings Power to Tivoli Friheden in Denmark



*Tivoli Friheden, Denmark*

Tivoli Friheden is a well-known amusement park located right in the heart of Aarhus, Denmark, which not only added a new amusement called the ‘Hjertekig’, a 65-meter free-fall tower, but also installed the world’s first all-in-one solar flower as part of their sustainability initiatives. The Smartflower powers the fountain in ‘The Green Square’, a newly built area in the park focused on combining sustainable solutions with the classic family-friendly amusement park experience.

Henrik Ragborg Olesen, the CEO of Tivoli Friheden said, “Our vision was to showcase the use of sustainable solar energy, and the Smartflower fit perfectly into our park design and layout... [it is] a fun and attractive way to present the park as a place that focuses on renewable energy and sustainability.”

The Smartflower is not just a sustainable energy resource at Tivoli Friheden—it is an interactive and educational resource as well. The power produced by the Smartflower

## 2 Smartflowers and 900 Solar Panels: Alden Court Puts Renewable Energy Front and Center

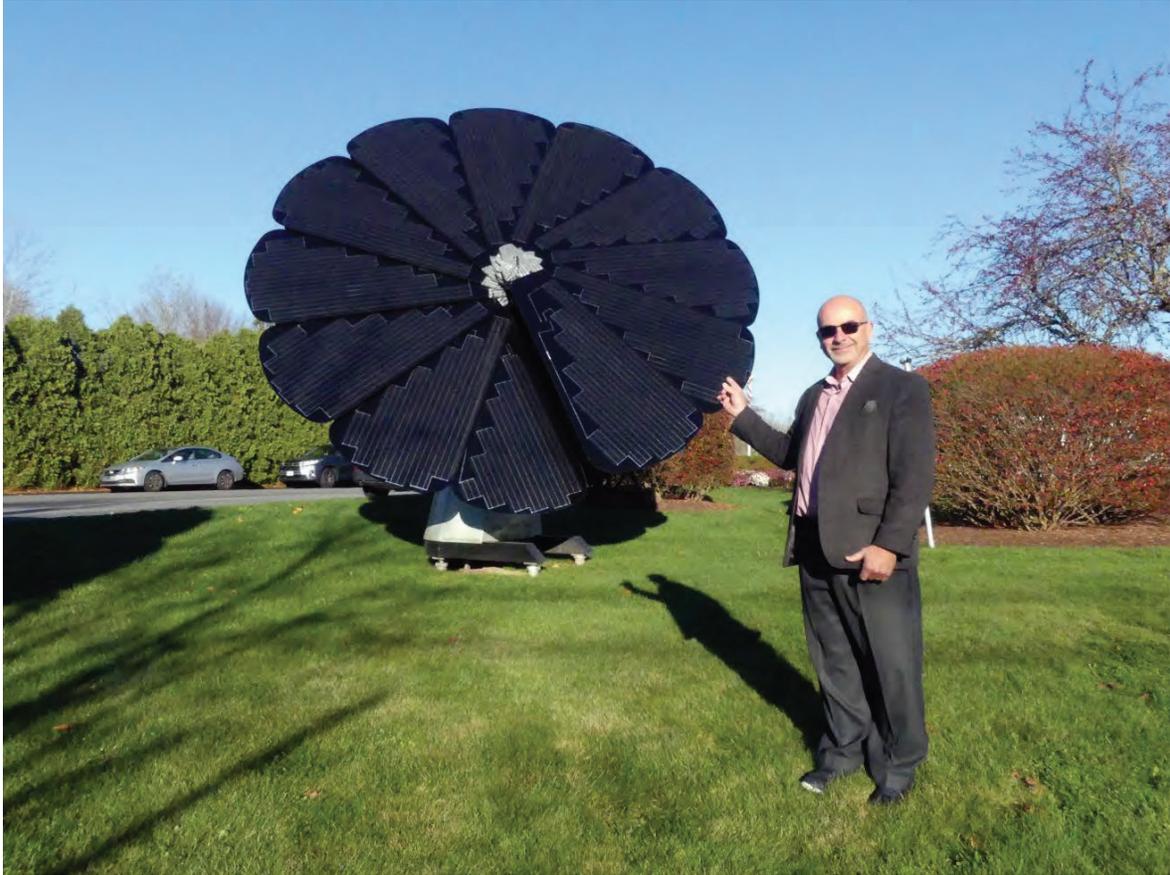
Located in Fairhaven, Massachusetts, the Alden Court Nursing Care & Rehabilitation Center is one of the first nursing homes in Massachusetts to make the switch to sustainable energy. Two Smartflowers bloom at the front of the nursing home, a symbol of Alden Court's active effort to focus on its sustainability initiatives and to pursue a clean energy future. The Smartflowers were installed in early 2020 and are one of the many sources of renewable energy at the nursing home.



*The Smartflowers, rooftop panels, and 'Solar Canopy' at Alden Court*

The Smartflowers are a part of Alden Court's ['Go Green Initiative'](#), an active effort to focus on sustainable energy through the use of solar energy, geothermal energy, and EV charging. Thanks to these efforts, there are a total of 900 solar panels across the nursing home! In fact, the initial Smartflower installation, implemented by local dealer Energy Management, Inc. (EMI), led to EMI obtaining an additional contract to provide Alden Court with rooftop solar panels and a 'Solar Canopy' in the car park. Alongside multiple EV charging stations, the solar power that Alden Court produces manages to offset approximately 73% of its annual power consumption.

Alden Court's Executive Director, Brad Truini, remarked, "The sculptural form and slow kinetic motion of the Smartflowers resulted in a lot of interest and questions from our residents and visitors. Our commitment to environmental care, in addition to best-in-class patient care, instills pride and positive emotions in our staff, patients, and families. Some of our residents even take their grandchildren outside to watch the solar panels of the Smartflower open and track the sun across the sky. Our positive experience with the Smartflower installation prompted us to consult Energy Management, Inc. on other sustainability measures we could take to effect further energy cost savings and emission reductions. Together, we implemented additional solar systems and EV chargers, making us one of the leading sustainable health care facilities in Massachusetts."



*Executive Director Brad Truini with a Smartflower*

An information kiosk detailing Alden Court's renewable energy measures will soon be joining the Smartflowers, making the senior care facility's dedication to enhancing energy security, mitigating climate change, and improving health even clearer to the community.



is displayed on a screen to those in the park, and families and park-goers can compare that power with “the amount of power that a family (joint forces for up to 4 people) can create by turning a wheel”, said Olesen. This allows for them to understand in a physical way how much energy the Smartflower can create. “Our guests love when we do more than just entertainment,” said Olesen, “we work on creating ‘edutainment!’.”

With Denmark’s and Aarhus’ admirable sustainable goals and achievements acting as a backdrop to Tivoli Friheden, it’s no wonder that the park has put in so much thought and effort into incorporating sustainability into their operations and attractions. Denmark aims to reach net-zero emissions by 2050, while Aarhus aims to be carbon-neutral by 2030. Aarhus was even the first large city in Denmark to supply its citizens and local companies with green biomass heating and electricity! Of course, this effort for net-zero emissions in Denmark isn’t just a priority for the public sector, private companies are also seeking fresh ways to help reach the goal. “We -as a country- need to work on different sources to meet [Denmark’s] ambitious goal for 2050,” said Olesen. Smartflower is pleased to be the solar innovation that Tivoli Friheden and Henrik Ragborg Olesen chose to help pave the way of creating a greener future.



visual representation of renewable energy generation. Smartflower aside, the Grossmans also make sure to recycle and compost aggressively, have a vegetable garden, and even owns a honeybee hive through the [Best Bees program!](#)

“The Smartflower serves as a constant reminder that we’re here temporarily. We must do right by future generations and take care of the planet. We want our kids to learn this lesson in lots of different ways. [The Smartflower] is one piece of a larger puzzle of caring for the earth and we hope it has a positive impact on our kids,” said Jake.

Everyone who sees the Smartflower loves it, according to Jake, who often has to answer many questions from visitors about the solar flower and the dual-axis tracking technology behind it. His family members are big fans of the Smartflower as well, and Jake has plans to teach his children more about renewable energy by showing them the unit’s energy production data when they get older.

“It’s such an innovative product,” said Jake, “It’s like what the iPhone was for phones. There are lots of solar arrays out there, but the Smartflower combines aesthetics, innovation, and energy production so effectively. There’s nothing quite like it.”

## Turning EV Charging into a Premium Experience with SmartFlower at Chuck Hutton Toyota



*Electri-CITY Park at Chuck Hutton Toyota, Memphis, TN*

Four SmartFlowers bloomed at the launch of Electri-CITY Park, a first-of-its-kind solar-powered EV charging hub. This hub features custom-branded SmartFlowers at Chuck Hutton Toyota's Whitehaven location in Memphis, Tennessee. This initiative spotlights the dealership's commitment to sustainability and elevating the consumer's experience.

Electri-CITY Park is a state-of-the-art EV charging destination that offers a next-level charging experience, designed to be as convenient as traditional gas stations.

The SmartFlowers power nearly all the dealership's operations, and the on-site power helps to cut energy costs. Also, any excess energy produced can be sold back to the local grid.

Chuck Hutton is meeting growing consumer demand for EVs with the installation of solar-powered EV charging stations. These stations make it convenient for customers and employees to charge their EVs while also encouraging the use of renewable energy.



Electri-CITY Park is more than just charging though; the vision is to be a multi-faceted place where drivers can recharge. The initial phase talks of a dog park, modern facilities, entertainment, relaxation zones, and workspaces. "We aimed to create a comfortable and convenient stopping point," says Chuck Hutton Toyota Dealer Principle Young Kim, "ensuring EV charging is as effortless as gas refueling." [Read the full article here.](#)

## Solar Power Continues to Bloom at Toyota West Virginia



The new “garden” near the main entrance of Toyota West Virginia supercharges the idea of “flower power.”

Five recently installed SmartFlower solar arrays help power the facility's employee services buildings, which are home to popular destinations like the uniform store, footwear store, credit union, clinic and pharmacy. The flowers also help power three EV charging stations.

“This is just one more way Toyota West Virginia is embracing alternative energy and reducing our ecological footprint here in the Mountain State,” said David Rosier, Toyota West Virginia president. “Our environmental team is always working to make our plant more efficient and guiding our efforts to create a more sustainable future.”

Much like a sunflower, SmartFlowers bloom at sunrise and follow the sun's path throughout the day, allowing them to effectively capture the sun's rays. Because they maintain a 90-degree angle to the sun, the power they produce is optimized over that of traditional solar panels. At sunset, the flowers fold back up and await sunrise the following morning. The petals are self-cleaning, lined with tiny brushes that remove dirt and debris when they open and close.

While the flowers are beautiful and highly visible, Toyota West Virginia also has the largest solar array in the state. Located just behind the plant, this array can generate 2.6 megawatts of power. That is enough to power over 400 homes. The solar generation also reduces the Buffalo plant's CO<sub>2</sub> emissions by an estimated 4 million pounds per year.



These initiatives are some of the many projects aimed at helping Toyota West Virginia meet the Toyota Environmental Challenge 2050. Toyota West Virginia was also recently named the winner of the Wildlife Habitat Council's prestigious Ibis Award. This award recognizes a Wildlife Habitat Council certified program that has "demonstrated resiliency of spirit and advancement of conservation despite unforeseen or unique challenges."

The group specifically cited the plant's nature trail, which features forest and wetland habitats, a pollinator garden, an outdoor classroom, bird houses, bat houses and a nesting platform to support avian species in the area.

The nature trail and the outdoor classroom can be utilized by outside groups. They are just another way Toyota West Virginia gives back. Toyota has invested over \$10 million in the community, supporting a wide range of philanthropic initiatives.

For information about the Smartflowers at Toyota West Virginia, please contact [George Gannon](#).

Read the original press release [here](#).

## Smartflower Helps Customers Drive Clean at the Green Clean Auto Spa

Nestled in the city of Jacksonville, North Carolina is the Green Clean Auto Spa, an eco-friendly alternative car wash dedicated to providing superior customer service, community involvement, and environmental stewardship. A Smartflower was installed at the car wash in the Winter of 2020 and generates power for their operations.



John Hunter, the owner of the Green Clean Auto Spa, first saw the Smartflower on Facebook when he spotted another car wash that had installed one. The dual-axis solar system resonated with him, as it was a perfect representation of the car wash's sustainable mission. "One of our core purposes is to provide car washes that have the least impact on the environment. The Smartflower just made sense," said John.

As a business that prides itself on minimizing its carbon footprint, the Smartflower helps showcase its commitment to sustainability, especially because the many elements that make the Green Clean Auto Spa so green are not easily visible to customers. Components like energy-efficient car wash equipment, higher voltage motors, LED lights, biodegradable products, and recycling used water are crucial to making the car wash what it is, but customers tend to overlook such subtler details.

With the Smartflower, customers can immediately recognize that mitigating climate change is a high priority for the Green Clean Auto Spa. It also helps the business save money on electricity and increase its bottom line!

Customers of the car wash are fascinated by the innovative technology, and many find themselves watching it work as they wait in line. “It’s definitely an eyecatcher,” said Robert Jordan, Site Manager of the Green Clean Auto Spa, “We’ve gotten customers that come in just to see how it works. The staff loves it too!”

“The Green Clean Auto Spa is a company of purpose. We are not just here to make money, but to do our part and give back to the community. We want to minimize the impact we are making on the environment, and we believe in putting our money where our mouth is. We hope that when people see our Smartflower, they recognize it for what it is: A powerful statement that strengthens our company values,” said John.



## Kings Lynn Depot – Vision Logistics



*Vision Logistics Kings Lynn Depot, UK*

### **“The Smartflower will spearhead our green vision.”**

“While the basics... make a difference to consumption and ultimately the environment, we decided that more commitment was needed to fulfil our green vision. This is where the Smartflower has come into play... the Smartflower will spearhead our green vision, with plans for additional installations already in motion.”

– Vision Logistics UK