

SolarEdge Helps Toy Wagon Giant Pull \$50K from Rooftop

Radio Flyer Offsets Annual Electricity Bill by Half, Rolls Savings Back into Operations

Background

Getting a Handle on Sustainability

Like many companies in the toy industry, 104-year-old Radio Flyer, the world's leading manufacturer of wagons for kids, is on track to making their manufacturing and materials 100% carbon-free. With corporate headquarters in Chicago, Illinois that constantly tracks energy use and greenhouse gas emissions – Radio Flyer is a member of the global corporate renewable energy initiative, RE100, and is a certified LEED Platinum (Leadership in Energy and Environmental Design), for its efficient design and operations.

The Challenge

Funding a Smarter Workplace

Radio Flyer was looking to add to their sustainability portfolio and make a deeper impact on the surrounding community while lowering their electricity bills through cost-effective rooftop solar. This would, in turn, give Radio Flyer more financial flexibility to improve its operations. Also, management envisioned using this new solar energy system as a selling point for recruiting and retaining talent, believing that staffers care about 'green' designs and seek a workplace that embraces this philosophy. Also, research shows that consumers prefer to buy from sustainable brands.



The Solution

Optimizing Savings and Safety

Sunvest, a leading local installer, successfully proposed a fully-integrated solution spanning four separate rooftop arrays using SolarEdge's 100kW, 66.6kW Three Phase Inverters with Synergy Technology and P860 Power Optimizers. The system was chosen for its design flexibility and the ability to produce more clean energy over the system's lifetime compared to a traditional string inverter solution, while reducing costly grid dependence. Plus, with the especially stringent NEC rapid shutdown requirements for rooftop solar in Chicago, SolarEdge was an obvious choice, as it is one of the few providers in the market with the built-in safety capabilities that comply.

“SolarEdge was the obvious choice because of its design flexibility—longer strings mean we can add more modules at less cost and stay within our margins. Plus, their patented Power Optimizers give us the unique ability to mitigate shading issues through module-level control. Finally and most importantly, SolarEdge's focus on system protection with advanced fire safety features made it easy to comply with Chicago's strict safety guidelines and the latest NEC 2017/2020 requirements.”

Joe Gordon, Sr. Project Developer, Sunvest

Customer Benefits

Hauling an Extra \$50K into the Future

By producing approximately 737,000 kWh of renewable electricity every year, the SolarEdge system is predicted to offset more than half of Radio Flyer headquarters' electricity usage – saving the toy giant approximately \$50,000 in utility bills, annually*. As a result, more funds will be directed towards employee programs and expanding manufacturing lines.

Radio Flyer's management sees this as a strategic investment in the company's future and hopes to inspire every staffer to live and work in an environmentally sustainable way, while setting an example for other companies.



“Our mission is to spread smiles to kids of all ages and create warm memories that last a lifetime. We do that through our innovative products, but also by acting sustainably to improve our world. By working with Sunvest and SolarEdge we took a step closer to achieving our mission.”

Eric Selner, Vice President of Operations & Sustainability



Installer Insight

Customer Confidence Through In-depth Monitoring and Robust Safety

For Sunvest, SolarEdge's module-level monitoring is key to maximizing energy production and reducing O&M costs through remote troubleshooting. It continues to help Radio Flyer's facilities team check the health of the system at a quick glance and pinpoint and remedy individual module issues. With current newsworthy stories on technical issues in the C&I space, having 24/7 viewing access and control of an entire system is vital to keeping today's system owners confident.

Finally, SolarEdge keeps projects safe by complying with the latest NEC 2017 and 2020 requirements for Arc Fault Circuit Protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS). The entire system comes with a built-in SafeDC™ feature which is designed to automatically reduce voltage to a safe level when required, providing protection to the installation crew and maintenance personnel.

Bottom Line

Sustainability has been one of the biggest trends in the toy industry, with manufacturers constantly trying to improve their green credentials. Leading companies like Radio Flyer are turning to solar power to not only reduce electric bills and lower their operational costs, but also to attract talent who care about being part of a sustainable movement through their workplace.

With this SolarEdge install and other green initiatives, Radio Flyer's management hopes to set an example to the other toy manufacturers across the world and inspire them to jump on the sustainable bandwagon.



Installation at a Glance:

- Chicago, Illinois
- 606kW PV system
- 4 x SE100K, 1 x SE66.6K SolarEdge Three Phase Inverters with Synergy Technology
- 808 x P860 SolarEdge Power Optimizers
- 1616 x 375W Canadian solar modules
- Payback Period: ~2.4 years
- Estimated Energy Production: 737,000 kWh/Year

Environmental Savings:

This PV system produces energy equivalent to:



114 cars driven for 1 year



62.9 homes energy use for 1 year



63 million smartphones charged



577,288 pounds of coal burned

About RadioFlyer:

Radio Flyer, Inc., maker of the famous and beloved Little Red Wagon™ is the world's leading producer of wagons, tricycles, pre-school scooters and other ride-ons. Radio Flyer has more than 100 award-winning products available around the globe. Since 1917, the family-owned company has created icons of childhood, building a legacy of high quality, timeless and innovative toys that spark the imagination and inspire outdoor, active play. With over a billion wheels on the road, Radio Flyer wheels have carried, hauled and fueled more kids' play and adventures than any other ride on toy. Radio Flyer has received numerous awards, including "Best Places to Work" by Fortune, "Top Small Workplaces," by The Wall Street Journal and "5000 Fastest Growing Companies in America," by Inc.

For more information visit www.radioflyer.com.

About SolarEdge:

SolarEdge is a global leader in smart energy, delivering innovative commercial and residential solutions that power our lives and drive future progress. Leveraging world-class engineering and worldwide experience, SolarEdge developed a ground-breaking intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. As a result of this and other innovations, today SolarEdge is the world's #1 solar inverter company in revenue with millions of systems installed in 133 countries. SolarEdge addresses a broad range of smart energy market segments through its PV, storage, EV charging, battery, UPS, and grid service solutions

www.solaredge.com

*The system started performing in mid-May of 2020 and achieved 99% of its performance goal in PVWatts