

New Columbia Solar Puts ~\$30K/Year on Scoreboard for D.C. United's Audi Field

SolarEdge Rooftop and Canopy PV System Saves 30% in Annual Utility Costs

"The thrill of the Audi Field experience truly embodies the spirit and values of Washingtonians, so we couldn't be prouder of upholding those same values in powering the stadium with clean, solar energy for the next 25-plus years! In partnership with Audi Field, we decisively turned to SolarEdge technology for developing one of the most innovative solar systems ever seen, paving the way for every rooftop across our city, and every stadium across our country."

Mike Healy, CEO, New Columbia Solar

Background

Sports Stadiums Are Growing Smarter

To save money, and operate sustainably while doing so, a growing number of stadiums around the world are turning to solar to power their massive banks of floodlights, sound systems, luxury boxes and flashing video screens. In fact, according to a [report](#) from SEIA, in the U.S. alone, solar has supplied sports facilities with 46 megawatts of power – enough for nearly 8,000 homes. Included in this trend is Washington D.C.'s Audi Field, home to one of the most decorated clubs in Major League Soccer: D.C. United.

Challenge

Meeting 'Greener Goals'

As the famed club moved from its historic RFK Stadium to a new home in Southwest, D.C., it became D.C. United's mission to build an environmentally-friendly venue, one that could combat high-energy consumption and rising utility costs. In keeping with D.C. United's rating as a LEED (Leadership in Energy and Environmental Design) city, Audi Field's design and construction included a solar energy system and the district guaranteed D.C. United a \$25M PACE (property assessed clean energy) loan from EagleBank.

Solution

Giving SolarEdge the Ball

After a competitive bidding process, D.C. United chose leading local installer, New Columbia Solar, to design, build, own and operate a 627.8 kW-sized canopy and rooftop PV system from SolarEdge – which is projected to improve stadium sustainability and public health in the surrounding communities.



The SolarEdge solution with three phase inverters and P800 power optimizers was chosen for its safety, design flexibility, and ability to maximize energy yield.

New Columbia Solar sells 100% of the energy generated to D.C. United at a fixed price for 25 years. This scenario lets the club buy renewable energy from New Columbia Solar at a lower price than the utility, without requiring any up-front capital costs.

Customer Benefits

A Healthier Bottom Line for Audi Field and The Fans

The new SolarEdge PV system can potentially reduce the stadium's grid dependency by approximately 30% annually, while helping to save ~\$30,000/year on utility bills.

As the second largest solar installation at a soccer-specific Major League Soccer stadium in the US, it will generate over 787,000 kilowatt hours of renewable energy on-site, and nearly 20 million kilowatt hours over its expected 25 years of operation. It will also reduce CO2 emissions by 556 metric tons annually – the same amount of electricity required to power 95 homes for a year – creating a healthier environment for stadium visitors and locals. By being environmentally responsible, D.C. United hopes to have a positive social impact and influence its fans across the country to choose more sustainable behaviors.



Installer Insight

A Winning Team with SolarEdge

With the task of installing a canopy system at more than 100 feet off the ground, New Columbia Solar swiftly turned to SolarEdge solutions for its engineering and design flexibility. The capacity for longer strings and strings of different lengths allowed engineers to optimize roof space, reduce cables, combiner boxes and achieve lower balance of system (BoS) costs.

With MPPT technology embedded in module-level power optimizers, SolarEdge can eliminate mismatch losses by up to 3% in year one – a benefit unattainable with traditional string inverters. Power optimizers also allow maximum energy generation from every individual module on the same string – even when located on different roof facets.

MPPT technology also facilitates remote monitoring and problem-solving, making it easy to pinpoint any under performing modules and reduce onsite maintenance visits and costs.

SolarEdge solutions inspire customer confidence with long-term, industry-leading warranties and by exceeding NEC 2017 safety code and grid requirements. The system's built-in SafeDC™ feature is designed to automatically reduce DC voltage to touch-safe levels during grid failures, providing maximum protection for the installation crew and maintenance personnel.



"When we opened Audi Field in 2018, we made a commitment to reduce our environmental impact and mitigate climate change. New Columbia Solar's best-in-class installation using SolarEdge products strengthens our position as one of the most environmentally-friendly entertainment destinations in Washington, D.C. We are excited to get smarter about our energy and lead the way for other soccer clubs around the globe."

Zachary Abaie, Head of Communications, D.C. United



Installation Details:

- Washington, DC
- 627.8kW PV system
- 5 x SE100K, 2 x SE33K SolarEdge three phase inverters with Synergy technology
- 875 x P800 SolarEdge power optimizers
- 1700 x 360W SunPower modules
- Module-level monitoring via SolarEdge monitoring platform
- Estimated Energy Production: 787,000 kWh/Year

Bottom Line

Sporting events and organizations around the world, including the IOC and FIFA, recognize the importance of sustainability to their fans and partners as solar become a star player at stadiums, raceways and arenas.

With this SolarEdge install and its other green initiatives, Audi Field is leading the way towards an environmentally-friendly future, and their efforts can be a model to other sports venues and stadiums across the world hoping to lessen their environmental impact. By installing solar, a popular and influential stadium like Audi Field has not only set an example to its teams and fans on how reliable and inexpensive clean energy can be, but is also shining a light on the complex and critical issue of climate change.

Environmental Savings:

This PV system produces energy equivalent to:



120 cars driven for 1 year



95 homes electricity use for 1 year



727 acres of US forests in 1 year



613,121 pounds of coal burned

(1) [US Energy Information Administration](#)

(2) Environmental Savings source: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

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

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