

City Square Shopping Center Hendersonville, Tennessee



Commissioned on May 21, 2010, the 87 kW of solar PV atop City Square is one of the largest solar installations in Tennessee. This project received three State grants!

The Arrays

LightWave Solar Electric LLC designed and installed 87.23 kW of photovoltaic solar electric power for the City Square Shopping Center in Hendersonville, TN. The three arrays consist of 286 SunPower 305 watt mono-crystalline silicone photovoltaic panels as well as six Fronius IG Plus 8 kW inverters and three Fronius IG Plus 12 kW inverters. The panels carry a 25-year limited warranty with a life-expectancy of 40-50 years, and the inverters carry a 10-year warranty with a life-expectancy of 15-20 years. The system performance is monitored in real-time via the Fronius online monitoring system.

With 4,860 square-feet of high capacity solar panels, the arrays produce 87.23 kW of peak power, generating approximately 108,750 kWh per year. This production will offset the energy costs of City Square by at least \$22,850 annually, based on current utility rates. In addition, City Square was granted three TN Clean Energy Technology (TN-CET) grants and a Federal Energy Investment Tax Credit (ITC), which combined, covered 70% of the total cost. The project was also eligible for federal accelerated depreciation benefits.

LightWave Solar Electric LLC

Founded and based in Nashville, TN, LightWave Solar Electric brings state of the art technology and trusted and experienced services to homes, businesses, schools, and industrial and government facilities across the state.

LightWave Solar is a leader in TN's solar industry with the most NABCEP-certified Solar PV Installers™ (North American Board of Certified Energy Practitioners) and an unlimited State electrical license. LightWave Solar's award winning photovoltaic systems qualify for state and federal incentive programs and are making a difference in our communities every day.



Specifications

System Size:	87.23 kW peak
Location:	Hendersonville, TN
Solar Module:	SunPower 305
Inverters:	Fronius IG Plus 12 & 8 kW
Mounting System:	SunPower T-10
Est. Annual kWh:	108,750 kWh
Electric Utility:	Nashville Electric Service

Economic Incentives

- TVA's Generation Partners Energy Credit (21 cents per kWh)
- Three TN-CET State Grants - three meters (40% Total Cost)
- Federal Tax Credit (30% Total Cost)
- Federal Accelerated Depreciation (MACRS)

Environmental Impact

Over the 25-year warranted panel life, system will offset emissions of:

- Carbon Dioxide (CO₂): 3,918,808 lbs
- Nitrous Oxide (NO_x): 5,888 lbs
- Sulfur Dioxide (SO₂): 18,100 lbs

Equivalent to planting 545 acres of trees!