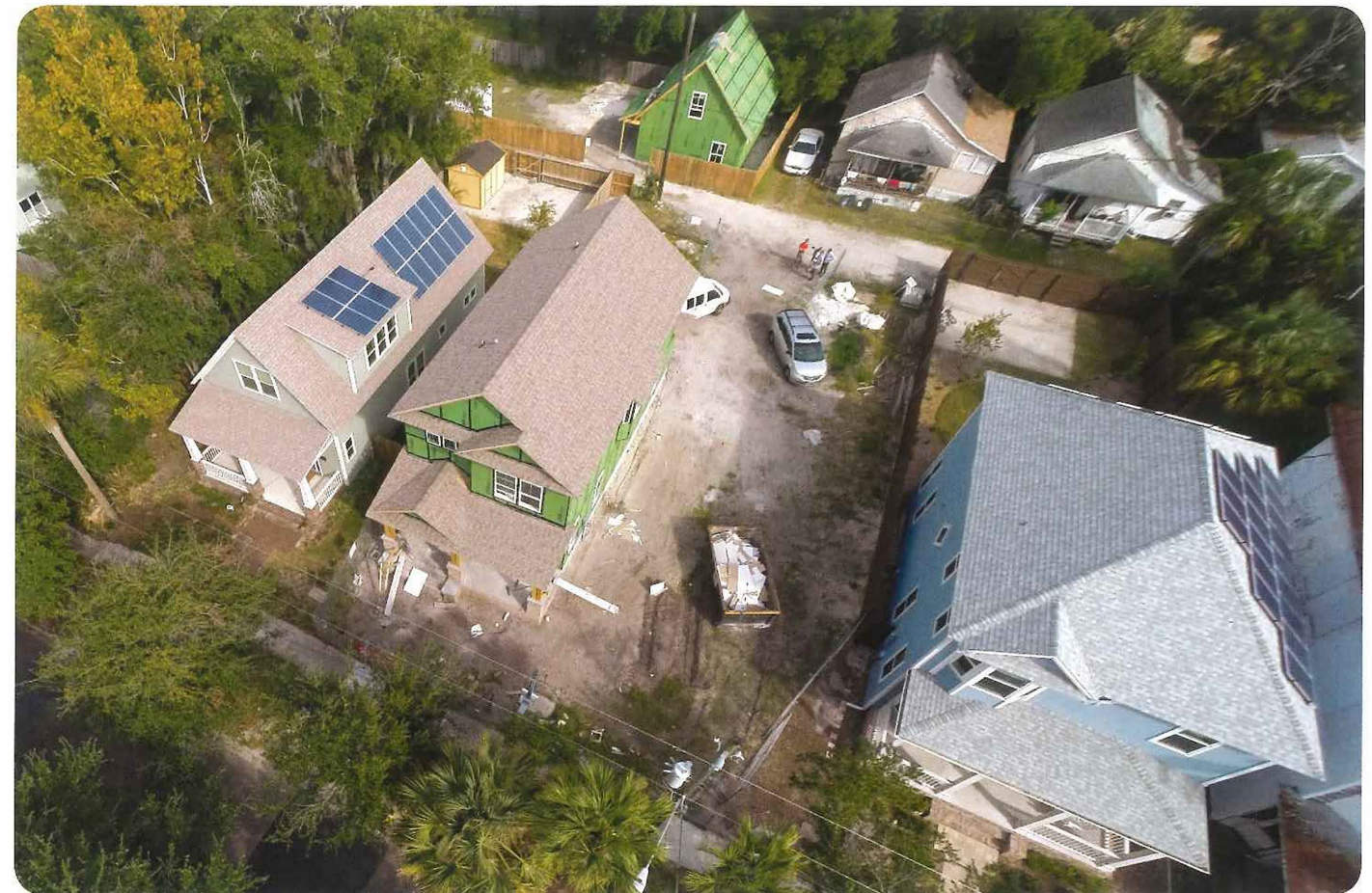


LET THE Sunshine IN



The sun shines bright on this new eco-friendly Springfield home.

By Christi Elflein | Photography by Michael LeGrand



The housing market on the First Coast is once again on an upswing, and Springfield in particular is back on track. Along every street, homeowners are busy renovating magnificent historic homes and new homes made to look turn-of-the-century are under construction on vacant lots. Among the neighborhood's newest homeowners are Eric and Laura Anderson.

Springfield is an upcoming neighborhood in our urban core, with a community of people dedicated to sustainable living. The Springfield Preservation and Revitalization organization recommended TerraWise Homes to the Andersons.

"We walked the streets [of Springfield]. Everyone we met was so nice. People were sitting on their front porch. They were friendly. It was just what we were looking for."

— Eric Anderson

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he Andersons moved to Jacksonville from Portland, Oregon, five years ago. Eric is a regional planner and

Laura is a social worker. They first rented in San Marco, then Murray Hill. Like many young couples, after a couple of years of renting, they wanted to start a family and buy their first home. They longed to live in an active neighborhood where the neighbors all knew each other and one that they could afford. When they learned about Springfield, they began to investigate and slowly fell in love with it.

"We walked the streets. Everyone we met was so nice. People were sitting on their front porch. They were friendly. It was just what we were looking for," Eric says.

The Andersons then reached out to Springfield Preservation and Revitalization (SPAR) which is how they learned of David Shacter with TerraWise Homes. When the Andersons first met Shacter, they knew immediately that he was the perfect person to build their first home. His passion for



Above: David Shacter, President of TerraWise Homes, builds net-zero homes, meaning homes that create as much energy as they consume.

Left: The Anderson family sit on the steps of their sustainable, energy efficient home in Springfield.

building sustainably and building in Springfield was what they wanted.

TerraWise Homes specializes in building net-zero homes. That is, they build homes with a goal of generating as much energy as they consume annually.

Shacter says, "We are chasing watts." This goal is reached in two ways, minimizing usage and maximizing production of kilowatts of electricity.

The Andersons' home features all the energy saving elements seen in many green homes – Energy Star appliances, LED light bulbs, spray foam insulation, six-inch-thick walls, high performance double pane windows with argon gas, and more. These elements are all key to minimizing the amount of electricity that their home uses.

The cool thing about their house is the second way it chases watts; it actually generates electricity with photovoltaic solar panels located on the roof.

"The Andersons have 16 solar panels that produce an average of 4,400 watts of electricity, producing an estimated \$75 per month in electricity," says Shacter. This electricity is sold to the utility company offsetting their electric costs.

Consumption and production of electricity is monitored using net metering. The Andersons have two meters. One meter reads the amount of power usage and the other meter reads the amount of power produced.

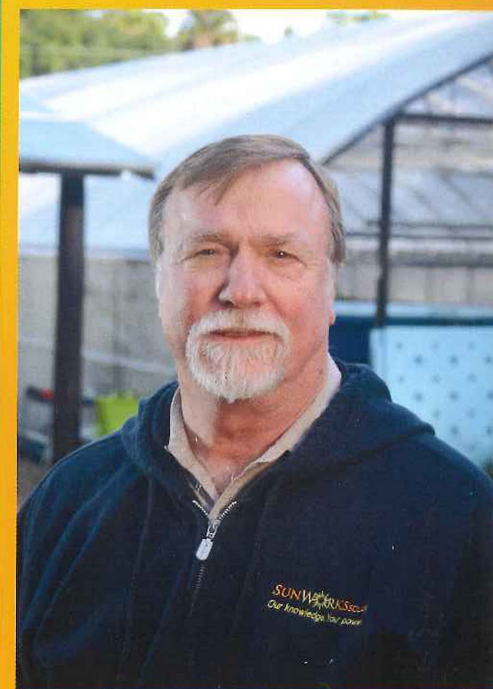
When in the planning stages of building their house, Shacter presented the idea of the solar panels to the Andersons and to them it was a "no brainer." The solar package cost \$27,000. A 30 percent federal tax credit of \$8,100 made their net investment \$18,900, which they were able to roll into their mortgage at a cost of \$60 per month. The expected \$75 per month in savings on their electric bill combined with the expected \$60 increase in mortgage payment made this an easy decision.

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Ways to Harness the Sun's Energy

SunWorks Solar Systems is the First Coast's pioneer in solar energy since 1973. David Smith, President of SunWorks Solar, suggests these ideas to harness the sun's energy:

- 1. Solar Hot Water with Thermal Solar Panels** – One single hot water collector that uses thermal solar technology can heat your home's hot water tank. With current rebates and federal tax income credits, the total cost is under \$4,000. Depending on your family size, this investment pays for itself within 4 to 6 years.
- 2. Solar Hot Water with Photovoltaic (PV) Solar Panels** – New solar water heating technology using PV solar panels was invented right here in Jacksonville and introduced at One Spark last year by Energy Labs, Inc. "Their INTELLEMENT™ allows highly efficient utilization of PV Panels to heat the water using direct current," says Smith. "This significantly improves reliability and reduces operating and maintenance costs of solar panels."
- 3. Solar Pool Heating** – "Sunshine can heat your pool for free!" says Smith. Heating your pool conventionally can be costly in the long run. The cost of using solar panels to heat your pool is comparable to other methods for the first year or two. Once this payback is made, Smith adds "there is no cost for sunshine compared to ever escalating energy or fuel costs."
- 4. Solar Cool Air Conditioning** – A solar thermal collector is integrated with an air conditioning system to create the most energy efficient air conditioner available today. The cost for this system is "comparable to other high efficiency air conditioning systems," says Smith, "and it uses only 25 to 55 percent of the energy of a standard HVAC system."
- 5. PV Electric Generating System** – Convert the sun's energy into electricity to power your home using PV solar panels. "Sunlight makes direct current from the PV cells and converts it to alternating current to use in your home," says Smith. "It's like buying your own energy plant. You save a lot of money over the life of the system." The system pays for itself within 10 to 12 years and is warrantied for 25 years.
- 6. Solar Powered Attic Fans** – Using solar power to ventilate your attic is a simple and effective way to use the sun's energy. "Solar Attic Fans can reduce heat and humidity in the attic, thereby reducing the workload on your HVAC system," says Smith. ☀️



David Smith, President of SunWorks Solar



Solar Facts:

- **Photovoltaic (PV) solar panels** convert sunlight into electricity using photovoltaic cells.
- **Thermal Solar Panels** are flat collector plates that use sunlight to heat water directly. Both are usually installed on rooftops and are most effective with a southerly exposure that provides full sun.



The Andersons have two meters; one that shows them how much energy they have used and the other shows how much their solar panels have produced.

"The Andersons have 16 solar panels that produce an average of 4,400 watts of electricity, producing an estimated \$75 per month in electricity."

— David Shacter

The Andersons describe their house as "the ideal first house." It's a bungalow in a shotgun style and cost them \$225,000. It is 2,000 square feet with 10-foot high ceilings, 6-foot windows and an open floor plan. "It has the amenities of a new eco-friendly house in an historic neighborhood," Eric says. "It doesn't look or feel different, but it feels special."

When they tell people where they live, people immediately say, "You're that

net-zero house." And inevitably their first question is, "What is your JEA bill?"

"We are not off the grid. We are on the grid and the solar panels help offset our costs. We sell our energy back to JEA at the same rate that they sell it to us," Eric says.

The Andersons' most expensive JEA bill to date was \$107 in August. This included electric, water and sewer. In October, their total bill was \$67.

The Andersons can monitor their

Did you know?

Facts about Energy

- The U.S. consumes 26 percent of the world's energy yet represents only 5 percent of the population.
- 85 percent of U.S. power comes from burning fossil fuels.
- The fossil fuels burned to power our homes, offices and factories emit more carbon dioxide (CO₂) than all of our cars combined.
- In the U.S., we use two-thirds of our energy to heat, cool and light our buildings.
- A typical four-person family spends 25 to 30 percent of its power heating water.
- If every U.S. home heated water using solar energy, the CO₂ reduction would equal making all our cars four times more fuel-efficient.
- The sun delivers more energy in one hour than we use worldwide in one year.

Source: sunworksolar.com

energy production through enlighten.enphaseenergy.com and get feedback on their system. The program shows them how many kilowatts of power each solar panel produces each day. And at the end of the month, they get a report that tells them their carbon offset and how many trees they saved. In October, they saved eight trees.

More information about TerraWise homes can be found at terrawisehomes.com.