

St Teresa Renewable Energy Report¹

February 2019

St Teresa's priory and church building are supplied by 100% renewable electricity. This is an important part of our commitment to care for God's creation. The 2015 Papal Encyclical, *Laudato Si'*, specifically recommends renewable energy as a way of reducing contributions to global climate change. It avoids emissions of greenhouse gases and air pollutants that would otherwise come from fossil fueled power plants. Renewable electricity is affordable and it has virtually zero emissions.

Where do we get our renewable energy?

Rooftop Solar. The priory at 390 Missouri St has a rooftop solar system that generates all the electricity needed there. Our solar system has 25 photovoltaic panels with a combined total capacity of 7.8 kW. It is visible from the corner of 19th St and Texas St. It is connected to and fully backed up by the PG&E grid. The grid takes all surplus power during the day, and provides whatever power we need at night. We are compensated annually for the net surplus we provide.

CleanPowerSF. For the church building, we buy 100% renewable SuperGreen electricity from the non-profit program CleanPowerSF. It is generated remotely at wind farms in California. We made this change in July 2018. This is a contractual change only, and there were no physical changes to the church building or its grid connection.

What does it cost to use renewable energy?

Rooftop Solar. We paid \$24,800 for the solar system on the priory roof. The system has saved us about \$5,500 as of December 31, 2018. Over time, we expect to recoup the entire cost and to gain a positive return on this investment. The solar system provides a hedge against the rising cost of energy, which is reflected in our annual savings.

CleanPowerSF. We pay an extra 1 cent per kWh for 100% renewable power for the church; this averaged only about \$8 per month for the last six months of 2018, well within our budget for it.

How are we doing?

Rooftop Solar. In its first two years, our system has generated about 12,500 kWh per year, exceeding expectations by about 8%, as systems often do when they are new. Of this, we used about 10,500 kWh per year at the priory, and exported the remaining ~2,000 kWh per year to the grid. Our rooftop solar power avoids over 5,000 pounds of CO₂ emissions per year that would otherwise come from the production of conventional electricity.

GreenPowerSF. We avoided about 2,000 pounds of CO₂ emissions in 2018 by switching to SuperGreen power in July. In 2019, the savings will be close to 4,000 pounds of CO₂ because we will avoid emissions from conventional electricity for the full year.

What next? From 2019 on, the remaining greenhouse gas emissions from St Teresa of Avila Parish will be only those due to our use of natural gas. We are not able at this time to find a practical renewable substitute for natural gas.

¹ For the total picture on energy at St Teresa's, see St Teresa Energy Report 2019