

St Teresa Energy Report March 2021

St Teresa's Parish is providing our seventh annual report on energy use, cost, and greenhouse gases (GHG) emissions. Measuring and reducing greenhouse gas (GHG) emissions is an important part of our mission to care for God's creation.

2020 Summary

- During 2020, the church building used about 15% less gas and about 20% less electricity than in 2019, mainly due to closure of the lower level church hall since March 17, 2020.
- Total greenhouse gas emissions from the parish in 2020 were about 12% lower than in 2019, and 25% lower than in 2013 (earliest year for which we have data).
- At the priory, rooftop solar power provided all the electricity used in the building since it went live in December 2016. It has saved us \$10,954 in electricity costs over the last 4 years. Accumulated annual savings will recoup the system cost of \$24,800 by 2026.
- St Teresa's church building was one of only three Catholic churches in the US to be recertified as an Energy Star building through the EPA's Energy Star program in 2020.
- As of July 2018, all of St Teresa's electricity sources are zero emission 100% renewable.

Background to St Teresa's Energy and GHG Emissions Inventory

In his 2015 Encyclical¹, Pope Francis recognized global climate change as "one of the principal challenges facing humanity in our day." Scientists agree that the impacts of global climate change are typically felt "first and worst" among the poor and those least able to adapt, increasing social injustice worldwide. St Teresa's Parish has been working to reduce emissions through renewable energy and energy efficiency, and to report our results annually since 2015.

About St Teresa's voluntary report on Energy, Cost and GHG Emissions

WHO: St. Teresa's Catholic Parish is providing this report in our capacity as the operator of parish facilities owned by the Catholic Archdiocese of San Francisco.

WHAT: The report provides data for energy use (mainly natural gas and electricity), cost, and the resulting emissions of the GHG, Carbon Dioxide (CO₂).

WHEN: The report covers calendar year 2020, and includes data for 2019, and for our baseline comparison year 2013, the earliest year for which we have complete data.

WHERE: The report covers energy use in the church building at 1490 19th Street and the priory at 390 Missouri Street, in San Francisco, California USA.

WHY: Our intention in preparing this report is to try to reduce our emissions of GHGs over time and to encourage others to do likewise.

HOW: This report is prepared using commonly-accepted methods for GHG accounting, and it is based on data from our PG&E / CleanPowerSF energy bills. This report is made voluntarily, and for information only.

¹ Pope Francis' Encyclical, *Laudato Si', Our Common Home*, ¶25 (signed May 24 and published June 18, 2015)

Trends in Use, Cost and Emissions

Energy Use. The parish used less energy in 2020 than in 2019, due to the pandemic. The savings was not as big as might be expected. Although the lower level church hall was closed from March 17, 2020 onward, the main level of the church remained in use. All the regularly-scheduled services were livestreamed from the church, even though it was nominally closed to the public. Higher ventilation rates increased heat losses. Lights were on, cameras running, and staff kept cleaning and making improvements to meet ever-evolving public health guidelines. Thus the savings due to cancelled gatherings were offset somewhat by other energy demands.

Total Energy Cost. Total cost in 2020 was \$6,886, vs a cost of \$8,136 in 2013. Although prices of gas and electricity rose significantly over that period, we are paying less now for 3 reasons: generating our own electricity for the priory; using less electricity at the priory; and pandemic-related energy savings in the church building, saving about \$400 on gas, and \$564 on electricity.

Greenhouse Gas (GHG) Emissions. There are no emissions associated with our use of electricity since the sources are 100% renewable. Our greenhouse gas emissions are due entirely to our use of natural gas for space heating, water heating, cooking and drying. Our annual GHG emissions are about 12% lower than last year, and about 25% lower than in 2013 (earliest year for which we have data). At present, we have no affordable renewable alternative to natural gas.

St Teresa's Energy and Greenhouse Gas Emissions Inventory

Year	2013	2019	2020
Gas – church	1,547 therms	1,761 therms	1,503 therms
Gas – priory	986 therms	1,124 therms	1,135 therms
Total gas cost	\$2,792	\$4,592	\$4,521
Scope 1 emissions²	29,679 lbs CO ₂	33,794 lbs CO ₂	29,881 lbs of CO₂
Electricity – church	8,673 kWh	10,533 kWh All SuperGreen	8,377 kWh
Electricity – priory	15,354 kWh	10,341 kWh	10,526 kWh
Net electricity surplus from priory to grid	-	1,642 kWh	1.756 kWh
Total electricity cost	\$5,344	\$2,831	\$2,365
Scope 2 emissions³	10,259 pounds CO ₂	0	0
Total cost of energy	\$8,136	\$7,423	\$6,886
Total emissions	39,938 lbs CO₂	33,794 lbs of CO₂	29,881 lbs of CO₂

² Scope 1 emissions are those resulting from direct combustion of natural gas and lamp oil on our premises.

³ Scope 2 emissions are those resulting from the production of electricity obtained from the power grid.