



Our Lady of Guadalupe: Moving Forward by Cutting Back



Our Lady of Guadalupe's New Gymnasium

Located in Seattle, Washington, Our Lady of Guadalupe Parish (OLG) is a Roman Catholic congregation founded in 1962 that serves as the center of faith for 750 families. Over time, OLG has transformed itself into an energy efficient organization with several green facilities. Their goal was simple: lower costs while improving sustainability. This was achieved both through investment in new buildings as well as upgrades to existing buildings. OLG also cut back on waste generation and committed to the practice of basic recycling principles throughout their parish. OLG has benchmarked their buildings in ENERGY STAR's Portfolio Manager® and several qualify for the ENERGY STAR. In addition to the ENERGY STAR, OLG is also seeking LEED Certification for their efforts.

Energy-efficient Facilities

Our Lady of Guadalupe's total campus includes four buildings totaling 66,168 square feet and is supported by a staff of 32 full and part-time employees. The buildings include a church, a K-8 school, a gymnasium and a pastoral center/administration building. The pastoral and administration building and the gymnasium are newly completed (2009 and 2012, respectively). These buildings were designed not only to meet congregational needs, but also to meet modern standards in environmental sustainability. Some features of the newly constructed buildings include:

- The Pastoral and Administration building has a hydronic floor system that provides heat to the entire building via an ENERGY STAR qualified boiler. The building is passively cooled using stacked ventilation and extensive operable windows.
- The parish originally rented gym space, but thanks to the help of a successful capital campaign, the multi-use gymnasium was built in 2012 and includes a gym, kitchen, and theatrical stage. This building utilizes synchronized day-lighting controls, LED lighting and green building materials such as warm colored interior architectural panels made from 100% recycled paper bound together within a resin system. In addition, two rain gardens collect water from the roof and channel the excess water into an underground storm water surge tank. ENERGY STAR qualified washing machines and convection ovens were also installed.

Upgrades to OLG's school, built in 1962, yielded an ENERGY STAR score in Portfolio Manager of 96! The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity. This high score is the result of a collection of upgrades to this building funded in part by incentive programs offered by Seattle City Light and Puget Sound Energy. In 2010, the OLG school had its interior and exterior lighting system upgraded and replaced with energy efficient bulbs and ballasts. The following year, the school's 49-year-old boiler was replaced with an energy efficient condensing boiler and the school's gas bills dropped dramatically. This boiler is rated by the Air Conditioning, Heating & Refrigeration Institute (AHRI) to have 92% thermal efficiency. Before the boiler replacement, gas bills for the school averaged around \$14,000 per year. After the boiler replacement, that figure dropped significantly: for 2012, the gas bill for the school was 55% lower, and comparing averages from 2009-2011 to 2012-2013, OLG's school had a total gas savings of 48%.





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On top of these exciting improvements in Parish infrastructure, in June the congregation plans to install two solar arrays thanks to a grant from the Bonneville Power Foundation. This grant also provides for a building kiosk that shows real time energy generation, and can be used as an instructional center for students and local community visitors on green energy use. OLG also hopes to replace the single-paned windows in the school.

Reduce, Reuse, Recycle

In addition to their energy-efficiency efforts, Our Lady of Guadalupe, in response to their Catholic Call to be Stewards of the earth, implemented a Sustainability Policy to lessen the impact of waste (especially plastic waste) on the environment. These policies apply to any group using parish and school facilities. OLG utilized a city grant to create an award-winning "Green Initiative" that assists schools in practicing sustainability policies. What do OLG's sustainable policies boil down to? Reduce, Reuse, and Recycle. The Parish focuses on practicing these concepts in order to cut waste and minimize costs. In order to reduce, the parish has adopted a "plastic free" policy that eliminates the use of plastic water bottles, soda containers, and miscellaneous plastics wherever possible. To ensure that plastics are phased out, the congregation invested in glass plates, metal silverware, and other glassware that can be reused so that no excess waste is generated. When use of the above is not an option, recycled materials are strictly required.