

# Hallelujah! Let the Sun Shine In!

## Solar Panels for the Village Day Care Building

According to the **Now & Tomorrow** designers, the Village Church Child & Family Development Center (Day Care Building) at 9900 Mission Road in Overland Park was electrically and structurally designed to accommodate an expandable array of 270 solar panels, capable of supplying 2/3 of the building's electrical demand. In November 2016, 45 solar panels with microinverters were installed as part of its initial construction (Phase 1). These panels were paid for by funds raised by the Environmental Action Committee (EAC).

During the next 4 years, EAC raised funds for Phases 2, 3, and 4, resulting in the retrofitting of 36, 21, and 105 panels, respectively, for a **total of 207**. For the record:

1. Phase 1 in 2016 installed 45 285-watt panels.
2. Phase 2 in 2017 retrofitting 36 300-watt panels.
3. Phase 3 in 2018 retrofitting 21 335-watt panels.
4. Phase 4 in 2020 retrofitting 105 330-watt panels.

**On September 21, 2020, the 105 Phase 4 panels went online!** With 207 total panels, the Day Care Building's electrical system is now maxed out! It is now capable of generating **64.575 kilowatts** of solar power! See photos below. According to Bob Solger of Solar Design Studio (the solar contractor), the entire system will generate **92.364 megawatt-hours** of energy annually, offsetting **70.33 tons** of carbon (equivalent to **1624 trees**).



An explanation for fewer than the 270 panels originally projected is that the newer panels that were installed have more photovoltaic capacity than the assumed capacity per panel when the building was designed in 2015.

**EAC would like to thank the 30 plus people who donated—some several times—to the cause during the last 4 years.** A total exceeding **\$145,000** was donated (an average of approximately \$700 per panel). Phase 4—the final push that doubled the number of panels—raised **\$68,690**. This total included a \$20K donation from the Village Church Trustees and a \$20K donation from the Frey Foundation.

As an investment projected to pay for itself in dollars in 12 years, these solar panels will reduce the annual operating costs of the Day Care during the 25-year life of the panels, resulting in **savings that will support its mission and ministry** with children and their families. Not included in the calculation of dollar savings is the **significant reduction of so-called indirect costs** associated with the consumption of electricity generated by coal-fired power plants. These involve **extraction, transportation, and the aftereffects** of a variety of harmful emissions that contribute to health problems and climate change. These emissions include **carbon dioxide, nitrogen oxides, sulfur oxides, methyl mercury, particulate matter, fly ash, and radioactive trace elements**.

Ultimately, the installation of these solar panels is about **faith, hope, and love**. They will contribute to the health and wellbeing of future generations of God's people and God's creation. They are an immediate and tangible investment in clean, renewable, inexhaustible energy. **During the 50+ year life of this building, these solar panels will constitute a legacy for the Day Care children and their children.**

Consider the thought:

**When there's a huge solar energy spill, it's just called a "nice day!"**

Again, EAC thanks you for your interest and support.