

# Canon Del Sol Solar Project

Dear Residents,

At the December board meeting, the board approved a project to transition the HOA complex infrastructure electrical consumption to Solar power. The lifetime cost savings are impressive and offer the HOA the ability to significantly reduce our annual PG&E expenditures over the next 25 years.

Some of you may know, but I'm guessing most do not, that your HOA fees pay for 4 separate PG&E Accounts:

- Club House usage (gas + electrical)
- Pool Facilities Usage (gas + electrical)
- and two separate accounts for Street Lights & Irrigation (electrical only)

The combined usage of these 4 accounts is over 32,000 kWh annually with over 85% of that usage consumed **solely** by running Pool and Hot Tub complex infrastructure. In the 2018 calendar year, the pool complex **alone** consumed over 28,256 kWh at a direct cost to the HOA of \$9,410 for electricity paid to PG&E. Once you include the Club House, Street Lights, and other power consumers, the HOA annual PG&E electricity billings are well in excess of \$10,000.

The board authorized CDS resident David O'Rourke to work with local Santa Cruz Solar vendors to design and estimate a Club House rooftop system that would cover CDS's impressively large annual consumption (32,000 kWh annually is a big system by any definition). Analysis of the system's total cost, and historical PG&E billings demonstrate an anticipated payback of 8 years to break even, and as is true of all solar systems lifetime is rated for 25 years of production. After the payback period elapses the Club House mounted solar will continue to produce power for at least another 17 years at no cost to the association. This system will save the HOA substantial costs over its 25 year expected life.

The installation we have authorized is a powerful 55 Panel Solar system where each panel has a capacity to generate 370 watts of renewable power from the sun. (55 \* 370 watts = 20,350 watts = 20.35 kW system). This

system should produce 32,000 kWh (32 megawatts) annually, covering well over 85% of anticipated usage with clean, silent, and renewable AC power. This solar production will reduce our annual PG&E electrical billings to a fraction of historic norms, monthly/annual savings that will go directly to the HOA's bottom line on annual expenditures.



Why not cover 100% of our usage you ask? The board seriously considered this option, but it turns out, a bigger and more powerful solar system would have required extensive modifications to the Club House electrical service panel and PG&E underground service. Large Solar system building code requirements would have mandated a higher capacity electrical service from PG&E, and given underground service and logistics of upgrading our underground service it was decided to go forward with the smaller system and look for other opportunities in the future to increase capacity should we identify other solar sites that can host additional production.

The vendor we have selected is Alterra Solar <https://www.allterasolar.com>. They are a local Santa Cruz business with over 15 years in Solar installation and worked closely with David and HOA Board to exceed our expectations. We we be obtaining 55 370 watt solar panels which are manufactured in the USA. So the HOA's resources are supporting local business and US-based manufacturing to save us money over the next 25 years.

The Solar system will be installed in Q1/Q2 of 2022 and begin producing power to run the clubhouse, pool complex, and street lights early in 2022 (the 4 separate PG&E accounts will be net-metered under PG&E existing "virtual net-metering" facility - so that club-house solar production will count against all 4 meter consumption metrics). Once the system is online CDS residents will be able to monitor daily production via a Solar production portal where the system's daily production statistics will be available for all to see.

The Board is excited by the cost savings of this project and renewable and clean power running our HOA infrastructure is a win win. If you have any questions, please reach out to the board member of your choice, or I know David would be happy to answer any questions you may have.

FAQ:

**Q: Where can I see the Alterra Bid and other Solar documents?**

**A:** We have provided Solar project related documents at the following location on the Canon Del Sol HOA website... <https://canondelsol.com/cdss-hoa-solar-project/>

**Q: I find it hard to believe the 4 PG&E accounts paid by the HOA uses that much power. Can I see the numbers?**

**A:** 2012 - 2021 PG&E usage data was consulted and covered in the following presentation considered and reviewed by the board at the December board meeting. Historical usage is in line with the production capacity of the solar system the board has approved. Please see the attached link if you have any questions: [Solar Presentation for Dec Board Meeting](#)

**Q: Does this mean our Hot Tub and pool will now be heated by clean renewable solar power?**

**A:** No, at this time the Hot Tub and Pool will continue to be heated by super efficient natural gas. It would simply be a 2nd massive solar system to replace natural gas heating, so it is **not** in scope at this time as part of this project.

Both David and the Board were surprised by the size of the Pool's kWh annual consumption, and it turns out that amount of power is simply the cost of doing business in providing **non-heating** pool infrastructure (pumps, filters, chemical systems, etc).

The actual heating of the spa/pool water has always been, and will remain, natural gas based. Both David and the Board are enthusiastic about potential water heating alternatives, but would require new electrical based water heaters, and then enough electrical production on site to offset the water heating consumption. David did some back of the envelope rough math, and our annual gas bill converted to electricity could be in excess of 5,412 kWh/month or 65,000 kWh annually - that sort of system would be well over 90 solar panels alone. Converting the pool and Hot Tub away from Natural gas is a daunting tasks, and one that at this time no one on the board is aware of cost effective solutions in this space given the magnitude of the energy requirements for the complex pool and hot tub. Simply finding the space to host 90 or more solar panels is the first problem and then there are others. The board remains open to opportunities in this space, but water heating and replacing it is a challenging project and **not in scope at this time**.

**Q: Should I get solar on my residence as well?**

**A:** The board also encourages residents to consider solar for their own usage, and the payback period is more favorable for individuals as they can take advantage of 30% tax incentives on the system's total cost reducing payback period from 8 years to far less. Your HOA is a tax exempt organization and therefore cannot take advantage of solar tax credits. Even without the tax credits, the payback and ROI on the solar system make a compelling finance case for the HOA, and residents the finance case is even more compelling once you factor in personal tax advantages.