

# **SOLAR PANEL INSTALLATION ON SWOPE**

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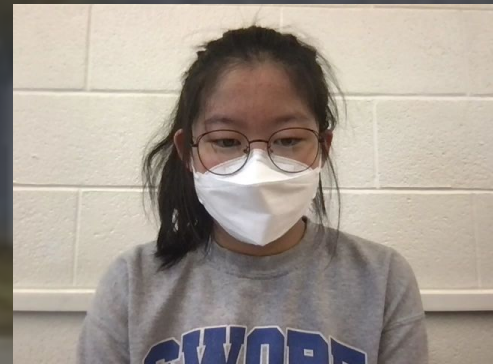
Swope's Construction Class of  
2021-2022



# WHY SWOPE?


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Swope is a middle school in Reno, Nevada. According to McKinstry Dashboard, Swope's star score, or energy efficiency is at a 66/100, which is very low. Because of this reason, we believe that solar panel installation on Swope would be very beneficial to the environment since our energy efficiency is so low. Also, Swope is a great location for solar panels, because our rooftops get sunlight most of the year.





## NV ENERGY COMMUNITY BASED SOLAR RESOURCE PROGRAM (CBSR)

- This school year, we applied to NV Energy's Community Based Solar Resource Program Competition.
- If we won, NV Energy would have installed solar panels on our school for free and would have maintained them. The electricity would have gone to our community power grid.
- We completed the application and made it to public voting.
- Unfortunately, we did not win the competition, so we are looking for other funding for solar panels on our school.



**VOTE FOR SOLAR AT SWOPE!**

NV energy customers can vote for us in the NV Energy Community Based Solar Resource competition. If we win, NV Energy will install solar panels on our school for free!



Scan the QR code or go to the link to vote for our site!

[nvenergy.com/cbsr](https://nvenergy.com/cbsr)

The 7th and 8th graders of Swope's Construction Ed for your support!





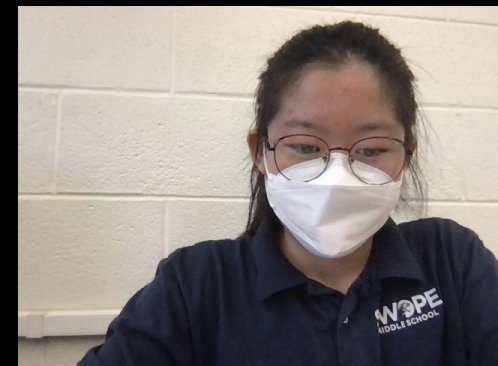
# BENEFITS

- Solar panels help reduce energy costs for our school and they can save lots of money, especially because we have construction.
- Solar panels are better for the environment and cause no pollution because they use pure, clean energy from the sun.
- It would take some time, but the solar panels will eventually pay off and they will keep saving money for us.
- The process of making our solar panels will take up some time, but after they are made, we will hire workers to install them on Swope.



# FUNDS

- Funds will be very helpful towards us since the installation of solar panels on a school will be very expensive if they were to cover much of the school's roof.
- There will be hardships if we don't collect enough funds because solar panels are expensive, and Washoe County School District will most likely pay for something less expensive than others.
- Funding targets are aimed towards anyone that is willing to help or interested in our solar panel project. Some specific funding platforms are companies and supporters of Swope: some programs that we have been working with are Envirolution and Project ReCharge.



# COST

- The cost of solar panels to power your house is \$4 - \$10 per square foot. However, most installers estimate solar costs by the amount of energy needed, at \$2.53 to \$3.15 per watt before any tax credits or incentives.
- It costs around \$108,000 to install solar panels on a larger type of school. Swope is quite small, so it will cost less than it would on a large school.
- Since Swope can't support this project fully financially, we will be asking for funds.



# RENO SOLAR

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Reno Solar is a locally owned solar panel business that we can purchase solar panels from. They design the solar panels to perfectly fit our building and they have a 25-year warranty on equipment and workmanship. The initial cost for homes is around \$10k to \$15k and sometimes less. But with our school, we can expect more than that. We will only have to pay for the solar panels once but that does not include maintenance after purchase; so, we might have to spend some money after the purchase.



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# SALA FAMILY DENTISTRY

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Sala Family Dentistry has been a proud sponsor for Swope Middle School for many years. They might be interested in sponsoring us again to help pay for the costs to install solar panels. If they help it might incline other businesses to sponsor us as well.





# RENO TATTOO REMOVAL

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Reno Tattoo Removal has also been a proud sponsor of Swope for many years. With donating for our Panther Prowl fundraiser and donating for our other events, they are very set on helping us. With multiple businesses helping us, we will be able to raise enough money to get our school solar panels!



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# FUNDRAISERS

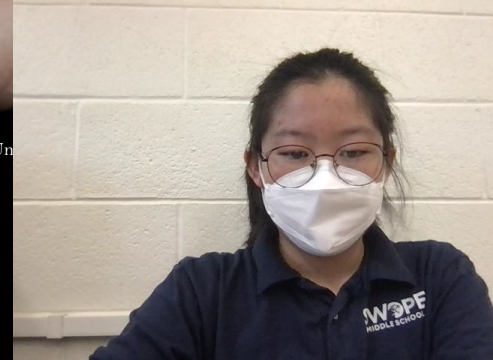
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If we don't get enough money from sponsors, we will have to hold fundraisers, like our Panther Prowl events. They may include things like:

- Renting out our gym to local sports teams.
- Silent auctions using our student's art pieces.
- Door to door fundraising.



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# O'BRIEN MS VS. BILLINGHURST MS ENERGY COSTS/SAVINGS IN THE LAST YEAR

- O'brien purchased 620,000 KWh, spent \$53,844.48. Using their solar panels, they produced 261,366 KWh saving \$42,592.
- O'Brien using Solar panels has saved triple the amount of most middle schools that don't use solar panels.
- This is another example of how schools with solar panels are saving more money than schools without solar panels, and how much schools can save.





# SWOPE MS VS DILWORTH MS ENERGY COSTS/SAVINGS IN THE LAST YEAR

- Dillworth is a middle school in the Reno/Sparks area that has solar panels installed on their school; this is very beneficial for Dilworth. According to Mckinstry Dashboard, Dilworth produced about 205,600 kWh using solar panels, which caused them to save about \$36,000. Dilworth also only purchases about 295,000 kWh and they spent about \$40,000
- According to Mckinstry Dashboard, Swope purchased 471,205 kilowatts-hour (KWh) and spent \$56,722.20. We produced 0 kWh and saved \$17,600. This means that Swope has had to purchase all their energy in the last year because Swope doesn't have solar panels to produce their own energy.
- Dillworth has produced 205,563 KWh using solar panels causing them to save \$22,104.50.
- Swope has saved nothing using solar panels, because we don't have any solar panels.



# ENERGY CONCLUSION

Schools using solar panels are saving 15-30 thousand more dollars than schools that aren't using solar panels. In our case, Swope could save around \$20,000 more dollars than they currently are if we had solar panels. Solar panels would be very beneficial for Swope and the community around Swope; it would allow Swope to save money and produce clean energy. So, in the end when comparing schools with solar panels to schools without, solar panels will always prove to be very useful with saving money, which is why it is imperative to buy solar panels.

