

Mt Rose K-8 Student Project Abstract 2023



MOUNT ROSE K-8

SCHOOL OF LANGUAGES

Solar Power at GSR

Section 1: Mission Statement

We plan to help businesses such as the GSR and different sports stadiums by saving them money. We can do so by adding solar panels to their multiple floodlights. This can lower their power bill and at the same time, still be efficient for their customers' use.

Section 2: Statement of need

Businesses, such as the GSR, will need to replace their floodlights with ones that have solar panels installed on top of them. We realize that this could be expensive, however, it will be worth it because of the end result of spending less money on their power bills.

Section 3: Goals and Objectives

- ~ Show people how much money they spend on power
- ~ Show people great alternatives for cheaper and better solutions for our community
- ~ Influence people to use solar panels
- ~ By decreasing the cost of lights, the businesses will have more money to put into their buildings

Section 4: Project Activities

- ~ Calculate how much they cost per month and multiply that by 12 months to get how much they pay in one year
- ~ Consult with owners and managers to see if they were willing to install solar panels to their lights individually (like a solar powered garden light)
- ~ Show them how much money they would be saving
- ~ Test the idea and compare how much they were spending before the solar panels and how much they are paying after installing solar panels.
- ~ Conduct surveys within the community to see if they are willing to install solar Panels

Section 5: Data Collection

- ~ Solar paneled lights are powered by sunlight and do not require electricity from the grid, saving money on energy bills.

~ They have a low upfront cost compared to traditional lighting as they do not require installation of electrical wiring.

~ Solar paneled lights do not contribute to carbon emissions, making them an environmentally friendly choice.

~ They require minimal maintenance and have a long lifespan, reducing replacement costs

~ Solar paneled lights can be easily installed in remote areas or places where electricity is not readily available.

Place	# of floodlights	Cost per year
GSR	115	\$41,400

Section 6: Impact Analysis

~ Solar powered lights reduce reliance on fossil fuels, reducing carbon emissions and contributing to a cleaner environment.

~ They provide a reliable source of light in areas with limited access to electricity, improving safety and security.

~ Solar powered lights require minimal maintenance and have a long lifespan, making them a cost-effective lighting solution.

~ They can be easily installed in remote areas, reducing the need for costly electrical infrastructure.

Section 7: impact analysis

Our plan possibly can reduce the cost of the bill. Reducing the cost of the bill and it could replace many lights being used there. Even though there might always be a few lights without solar panels it could reduce energy usage and prices throughout the building.

SOLAR-POWERED FLOODLIGHTS

Goals And Objectives:

- ~ Show People how much money they spend on Power
- ~ Show People great alternatives for cheaper and better Solutions for us Community
- ~ Influence People to use solar Panels
- ~ By decreasing the cost of lights, the businesses will have more money to Put into their buildings



PROJECT ACTIVITIES

- Gathered business information for panels
- Calculated how much money they spend on electricity
- Calculated how much money they would save by using solar panels
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ABSTRACT
Our Project is to have solar lights for all the lights at the GSR stadium, and other places with great lights. This will improve the bills for those businesses and other communities. We will collect data by interviewing such as the GSR and the Ace stadium how much they pay for their lights. We would find the pros and cons and how much the business owners save on their bills. We would calculate what they had before, and how much solar panels save for other places already using them, and we will collect our data.

	Before solar panels	After solar panels
Place	GSR	GSR
# of floodlights	116	116
Cost of solar panel	\$41,400	\$24,776

This will save 6624 dollars a year in the system, that will save them 6624 dollars



DATA COLLECTION

- ~ Solar powered lights are powered by sunlight and do not require electricity from the grid saving money on energy bills.
- ~ They have a long lifespan and require no maintenance, lighting as long as they do not require maintenance of electrical wiring.
- ~ Solar panels require no maintenance, no water, no gas, no noise, making them an environmentally friendly choice.
- ~ They require minimal maintenance and they are long-lasting, reducing replacement costs.
- ~ Solar powered lights can be easily installed in remote areas or places without readily available electricity.

Impact Analysis
Solar powered lights reduce energy costs by reducing carbon emissions by cutting back on electricity consumption.
- They provide excellent security all night in areas with limited access to electricity, helping to protect the security.
- Solar powered lights require minimal maintenance & have a long life span making them a cost-effective lighting solution.
- They can be easily installed in remote areas, reducing the need for power lines and the associated costs of installation and maintenance.
- They are easy to install and can be used in a variety of settings, from residential to commercial.
- They are long-lasting and can last up to 25 years, reducing the need for frequent replacements.
- They are easy to maintain and can be cleaned with water and a soft brush.
- They are easy to install and can be used in a variety of settings, from residential to commercial.

Statement of Need:
Businesses such as the GSR will need to replace their floodlights with ones that have solar panels installed on top of them. We realize that this could be expensive, however it will be worth it because of the end result of spending less money on their power bills.



MISSION STATEMENT
We plan to help businesses such as the GSR and different spots in our stadium by saving them money. We can do so by adding solar panels to their floodlights. This can lower their power bills and at the same time will be efficient for their customers use.

