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FISCAL IMPACT REPORT

ORIGINAL DATE 1/27/2021

SPONSOR Soules LAST UPDATED _____ HB _____

SHORT TITLE Cost of Photovoltaic Systems SB 29

ANALYST Liu

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY21	FY22	FY23	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total		\$0.0 - \$1,420.0	\$0.0 - \$1,420.0	\$0.0 - \$2,840.0	Nonrecurring	Public School Capital Outlay Fund

(Parenthesis () Indicate Expenditure Decreases)

Relates to SB63

SOURCES OF INFORMATION

LFC Files

Responses Received From

Public School Facilities Authority (PSFA)

SUMMARY

Synopsis of Bill

Senate Bill 29 amends the Public School Capital Outlay Act to include photovoltaic (PV) systems, or power systems designed to supply usable solar power, as a building system eligible for funding from the Public School Capital Outlay Council (PSCOC). The bill further requires applications for PSCOC building system awards to include assessments on the system's ability to significantly reduce utility costs and increase sustainability. PSCOC must consider the cost and value of including a PV system to offset utility costs over the life of the PV system in applications for renovating or replacing heating, ventilation and air conditioning (HVAC) systems that include a PV system.

The bill also requires PSCOC to give the highest priority to system applications that respond to viral or bacterial epidemic health and safety needs. There is no effective date of this bill. It is assumed that the effective date is 90 days following adjournment of the Legislature.

FISCAL IMPLICATIONS

The bill does not make an appropriation, however, making PV systems eligible for building systems funding from the public school capital outlay fund may increase project costs. With school

closures and new reopening guidance from the Public Education Department requiring high air filtration standards, PSFA expects upcoming requests for building system awards to increase – particularly for HVAC projects.

Based on industry analysis from the U.S. Environmental Protection Agency (EPA) and the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), 20 percent to 30 percent of schools' annual electricity consumption results from HVAC loads. To offset the electrical usage from a newly installed HVAC system, PSFA estimates that small schools would need to install PV systems that could generate 10 kilowatts (kW) for small schools and up to 150 kW for larger schools. Assuming a typical installed cost of \$2.00 to \$3.50 per watt for PV systems, PSFA estimates the additional cost associated with HVAC projects will range between \$30 thousand to \$500 thousand per project, or approximately 8 percent to 10 percent of the total cost of a typical HVAC project.

Assuming requests for systems awards increase costs by 10 percent for PV systems, the potential additional fiscal impact to the public school capital outlay fund could be up to \$1.4 million each year (based on the average of PSCOC systems awards from the past four years).

According to PSFA, new Covid-19-ready HVAC systems may consume more electricity than older designs that do not meet the increased standards for greater ventilation rates and increased filtration. State funding participation in PV systems would allow schools to purchase systems that may lower the operating cost of the school over the 25 year warrantied life of the PV system, after accounting for electrical production credits and lower monthly electrical bills. Districts that have installed photovoltaic systems typically recuperate the cost of installation in 10 to 15 years of annual credits and savings from lower monthly utility bills.

SIGNIFICANT ISSUES

According to PSFA, the state began making awards for building system replacement projects through the systems-based funding program in 2017. While the systems pilot was intended to promote the replacement of smaller building systems to extend the life of facilities (rather than whole school replacement or renovation), systems awards have decreased since inception. In the first year, PSCOC awarded \$23.9 million in state funding, followed by \$15.8 million in the second year, \$12.1 million in the third year, and \$5 million in the fourth year. According to PSFA, the systems most frequently in poor condition include: roofing, HVAC, fire alarm, and fire suppression systems.

With new HVAC standards for reopening schools, PSCOC may receive increased applications for systems funding moving forward. Provisions of this bill would prioritize requests related to HVAC systems projects that are related to addressing Covid-19 mitigation efforts. However, Section 22-24-5 NMSA 1978 already includes provisions that allow PSCOC to award grant assistance for projects using criteria other than the statewide adequacy standards for health or safety emergencies. In addition, any building system that poses an eminent life-health-safety hazard to students, teachers and other building occupants is already eligible for funding through the systems program.

Utility costs are generally the second largest expenditure for most school districts, behind salaries and benefits for personnel. PSFA notes schools with PV systems achieve annual savings from producing electricity on-site, receiving credits from the local utility for each watt produced on-site

and delivered to the electrical grid, and lowering the amount of electricity that would otherwise be generated off-site and purchased from utility providers.

PERFORMANCE IMPLICATIONS

Provisions of this bill may help the state meet targets established in the Energy Transition Act of 2019 which increases the share of electricity produced by renewable sources in the next 10 years and requires publicly regulated utilities to be completely carbon-free by 2045. Reducing fossil-fuel-based energy production and consumption will also reduce emissions of carbon dioxide (CO₂), methane, nitrous oxide, and fluorinated gases – collectively known as greenhouse gases.

Data from the National Renewable Energy Laboratory (NREL) shows New Mexico has some of the best renewable energy potential in the nation due to its high solar irradiance and average wind speeds. The total developable solar land area is 68 thousand square miles, with 49 thousand square miles on state trust and private lands for a potential 824 thousand megawatts available.

Although New Mexico’s potential for solar energy production is substantial, growth in the state’s solar development has been slightly less robust and consistent. To date, there are 1,068 megawatts of solar power installed in New Mexico, or enough to power roughly 259 thousand homes, according to the Solar Energy Industries Association, and solar industry investments total \$2.1 million. The Solar Foundation, which releases an annual solar jobs census, reported 2,021 New Mexicans worked in solar jobs in 2019, a decline of 6.8 percent from 2018. Provisions of this bill may increase the demand for solar energy production.

ADMINISTRATIVE IMPLICATIONS

Provisions of this bill would require PSFA to develop an assessment for evaluating capital outlay requests relating to PV systems. A 2011 NREL study highlighted multiple variables to consider in evaluating the effectiveness of PV system installation, including array positioning, roof conditions, school operating hours, and facility energy efficiency practices.

RELATIONSHIP

This bill relates to Senate Bill 63, which also expands use of the public school capital outlay fund to include PV systems but does not prioritize systems that address epidemic-related health and safety needs.

OTHER SUBSTANTIVE ISSUES

In 2000, the 11th Judicial District Court ruled in the *Zuni Public District v. State of New Mexico* lawsuit that New Mexico’s public school capital outlay system violated constitutional requirements, and ordered the state to establish and implement a uniform funding system for capital improvements and for correcting past inequities. Since the *Zuni* lawsuit, the state has spent \$2.7 billion to build school facilities up to the approved statewide adequacy standards. Despite significant improvements in statewide facility conditions, the *Zuni* lawsuit was never closed and, in December 2020, the court ruled in favor of plaintiff school districts on new claims of inequity. Provisions of this bill may divert immediate capital resources away from facility needs relating to educational adequacy.

The 2011 NREL study on PV system installation at schools noted the primary disadvantage of school districts directly owning PV systems is the capital commitment involved. Additionally, schools would be responsible for additional maintenance of the system and could not leverage federal tax credits as public entities.

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