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FISCAL IMPACT REPORT

SPONSOR Soules ORIGINAL DATE 1/27/2021
 LAST UPDATED 1/28/2021 HB _____

SHORT TITLE Photovoltaic Systems in New Public Schools SB 63

ANALYST Liu

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY21	FY22	FY23	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total		\$1,950.0 - \$5,931.0	\$1,733.0 - \$5,199.0	\$3,683.0 - \$11,130.0	Recurring	Public School Capital Outlay Fund

(Parenthesis () Indicate Expenditure Decreases)

Relates to SB29

SOURCES OF INFORMATION

LFC Files

Responses Received From

Public School Facilities Authority (PSFA)

SUMMARY

Synopsis of Bill

Senate Bill 63 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 any new public school constructed after July 1, 2021, that uses grant assistance from the public school capital outlay fund to include a PV system sufficient to meet the energy needs of the public school. The effective date of this bill is July 1, 2021.

FISCAL IMPLICATIONS

The bill does not make an appropriation, however, requiring PV systems for new public school construction will increase project costs and, consequently, increased grant assistance from the public school capital outlay fund. This analysis assumes the costs to provide PV systems sufficient to meet the energy needs of new public schools will increase project costs for planned PSCOC standards-based awards between 1 percent and 3 percent of total budgeted appropriations.

According to PSFA, a typical PV array costs approximately \$2.00 to \$3.50 per watt of produced energy, based on current market rates. The overall design and installation of a PV system typically increases the total project cost to plan, design and construct a public school by 1 percent to 3 percent, depending on the size of the school and type of installation (roof-mount or ground-mount).

School Size	Gross Square Feet (GSF)	Percent of Total Project Cost	Cost for Photovoltaic System
Small	less than 100,000 GSF	0.5% to 1%	Less than \$500,000
Medium	100,000 to 200,000 GSF	1% to 3%	\$500,000 to \$1,000,000
Large	200,000+ GSF	1% to 3%	\$1,000,000 to \$2,000,000

Source: PSFA

The FY21 PSCOC standards-based project awards obligate up to \$195.9 million for the design and construction phases for various school facilities. Most of these projects are currently in the planning phase and may need additional funds for the design and construction phases to accommodate this new requirement, as design and construction funding will be awarded and construction will commence after July 1, 2021. Provisions of this bill may increase the necessary funding per project up to 3 percent, resulting in a potential \$5.9 million increase in costs. The estimated local match may also increase up to 3 percent, up to \$2.4 million.

SIGNIFICANT ISSUES

According to PSFA, some PV systems are not designed to meet 100 percent of the electricity needs of a school. School districts implementing large PV systems at school facilities typically plan for production capability to cover 65 percent to 80 percent of annual electricity consumption. PSFA notes the decision to design PV systems to produce slightly less than the annual electricity needs of the school is usually based on two factors: (1) restrictions on maximum allowable permitted PV system size by some utility providers and (2) lower return on investment on large commercial systems due a longer “payback” period for larger systems, which creates less of an incentive to produce more than 1 megawatt.

Utility costs are generally the second largest expenditure for most school districts, behind salaries and benefits for personnel. 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. Districts that have installed PV systems typically recuperate the cost of installation in 10 years to 15 years of annual credits and savings from lower monthly utility bills.

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, heating, ventilation, cooling, fire alarm, and fire suppression systems.

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

PSFA would need to include PV system installation as an applicable request for systems awards and ensure new public school construction beginning in FY22 includes a PV system sufficient to meet the energy needs of the public school.

RELATIONSHIP

This bill relates to Senate Bill 29, which also expands the uses of the public school capital outlay fund to include PV systems but requires PSCOC to 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 directly 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.

ALTERNATIVES

PSFA recommends the sponsor consider amending the requirement of “shall include a photovoltaic system sufficient to meet the energy needs of the public school,” to “shall include a photovoltaic system sufficient to meet the majority of the energy needs of the public school.”

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