

# School Energy and Water Reductions

H.B. 217

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# Consumption

8% of national energy consumption comes from schools.

In FY22, the amount that all districts and charters spent on energy consumption was:

- Water/Sewer: \$21.1 million
- Natural Gas: \$25.7 million
- Electricity: \$69.7 million

With such large amounts of money being poured into consumption, there is much room for saving of money and resource.

# Canyons School District has saved HVAC dollars and energy by:

- Reducing energy production 43% per year
- Keeping operational times only when the buildings are occupied by students, teachers and staff
- Using one boiler to heat instead of two
- Repairing and maintaining HVAC equipment promptly
- Inputting intelligent HVAC programming to the Building Automated System
- Installing LED lighting
- Building well-designed new buildings
- Having a very conscientious staff

# Water Monitoring System

Salt Lake School District has a special water monitoring system in place at 20+ schools.

“Over the most recent holiday break, while no one was in our buildings, we had a water line break at Fairfield Jr. High. We received the alarm that the building had used 10,000 gallons of water by 9am. This happened one day into our two week break. I dispatched our maintenance team and they found the issue, shutting off the leak. Without the water monitoring this leak could have dumped hundreds of thousands of gallons of water before anyone saw it. This is just one of many that this system caught and prevented both a waste of water and damage to the facility.” -Doug Anderson, Director of Utility Services, Davis School District

# Funding and Grants

- Salt Lake School District borrowed \$23.3 million from the bank via a Tax-Exempt Lease Purchase, with payback coming directly from guaranteed savings (utility payment reductions). This shows secure funds and guaranteed payback.
- If this bill passes, the Office of Energy Development will apply for a \$1.8 million grant, split with another program, which will be funding to go to schools' reduction efforts in addition the appropriation.
- This proposal is scalable. Any investments in energy and water reduction are obvious savings to the schools and the state, without burden to the taxpayer.

# FY22 Savings Salt Lake School District

Table 1 - Guaranteed Savings represented as kWh, kW, therms, and kgal

ECM	Guaranteed Savings Multiplier	Electricity Savings (kWh)	Electricity Savings (kW)	Natural Gas Savings (therms)	Domestic Water Savings (kGal)
ECM 09.01 Lighting & Lighting Controls	95%	5,099,085	22,354	(5,852)	---
ECM 10.01 Solar PV Installation	95%	1,354,862	---	---	---
ECM 18.01 Domestic Water Conservation	100%	---	---	12,900	11,106
ECM 22.01 Building Controls Optimization <sup>1</sup>	100%	2,780,251	---	153,913	---
ECM 23.01 Pilot Schools Electrification	90%	(602,116)	(3,609)	44,825	---
TOTALS	---	8,632,082	18,745	205,786	11,106

# FY22 Savings Salt Lake School District

Table 2 - Cost savings of all ECMs and O&M

ECM	Electricity Savings, kWh (\$)	Electricity Savings, kW (\$)	Natural Gas Savings (\$)	Domestic Water Savings (\$)	O&M Savings (\$)	Total
ECM 09.01 Lighting & Lighting Controls	\$203,169	\$399,774	(\$4,034)	---	\$84,470	\$683,379
ECM 10.01 Solar PV Installation	\$94,696	---	---	---	---	\$94,696
ECM 18.01 Domestic Water Conservation	---	---	\$8,301	\$109,486	---	\$117,787
ECM 22.01 Building Controls Optimization <sup>1</sup>	\$278,025	---	\$100,043	---	---	\$378,068
ECM 23.01 Pilot Schools Electrification	(\$23,804)	(\$64,541)	\$29,421	---	---	(\$58,924)
<b>TOTALS</b>	<b>\$552,086</b>	<b>\$335,233</b>	<b>\$133,731</b>	<b>\$109,486</b>	<b>\$84,470</b>	<b>\$1,215,006</b>