

Using Utility Savings to Support District Staff

Webinar – May 13, 2026

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institute



This webinar was developed in partnership with the LEARN Program.

The LEARN Program is a San Diego-based workforce education and training program that has partnered with New Buildings Institute to offer free energy efficiency and electrification webinars. Please visit the LEARN website for more information: www.sandiegolearn.com

Energy Trust New Buildings Program

▪ Incentives & support

- Commercial new construction and major renovation projects from early design through post-construction

▪ Trainings & events

- In-person events, live webinars and on-demand trainings

▪ Net Zero grants

- **Net Zero Fellowship** – Research that advances net-zero design and technologies and addresses barriers
- **Net Zero Emerging Leaders Internship (NZELI)** – Internship funding for architecture and engineering firms to support their carbon commitments

For more information:

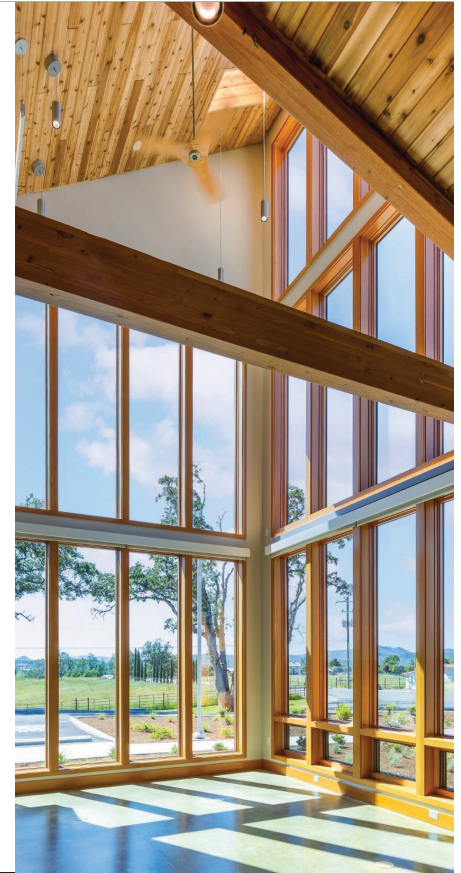
Kriya Kaping

Senior market engagement manager

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energytrust.org/commercial/newbuildings/education/training-and-events/



Using Utility Savings to Support District Staff

In today's webinar we'll discuss how:

- Districts can quantify utility savings from efficiency upgrades and reinvest those savings to justify and sustain dedicated staff positions
- To identify opportunities for quick efficiency savings
- To calculate and communicate avoided costs
- To align staffing needs with district financial priorities
- To leverage incentives and performance contracting

Today's Panelists



Alison Ward
Boise School District



Deb LaSalle
Straven Strategy
Group



Aaron Presberg
Stillwater Energy

Quick Overview

Why Schools?

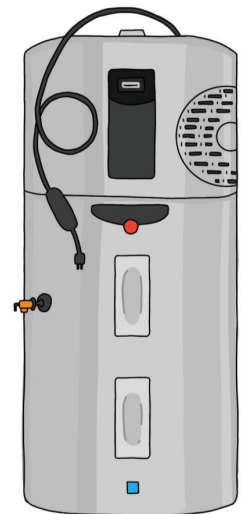
- Schools are among the largest publicly owned building stock in the U.S.
- Students spend 6+ hours/day in these buildings (over 1000 hours per year!)
- Health and comfort directly impact learning outcomes
- Districts have a LOT of competing priorities
- Buildings constructed 40-60 years ago not designed for today's climate or performance standards



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Utility Savings Are More Than Cost Avoidance

- School districts can unlock immediate utility savings through no/low-cost operational and physical improvements
- Quick wins (like LEDs) can create **measurable avoided costs** that can be reinvested
- Savings can **help build the business case** for dedicated staffing, better systems, and long-term planning
- Energy efficiency is not just a facilities strategy but a **financial resilience strategy**



Building Upgrade Scenarios

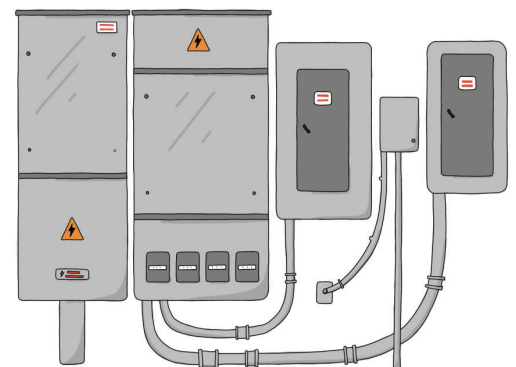
Event in Building Lifecycle	Outcomes
Emergency Replacement	High upfront costs, invasive installation/students impacted, struggles to obtain equipment or parts, etc.
Planned/Routine Capital Improvement & Deferred Maintenance OR Modernization / New Construction	Upfront costs planned for and expected, non-invasive installation, requires lead time and planning. High student outcomes, life cycle cost savings.
Efficiency & Cost Savings Project (Deep Efficiency Retrofit)	Preplanning required, lifecycle cost savings on utility bills and maintenance, high student outcomes

Be proactive to avoid this one!

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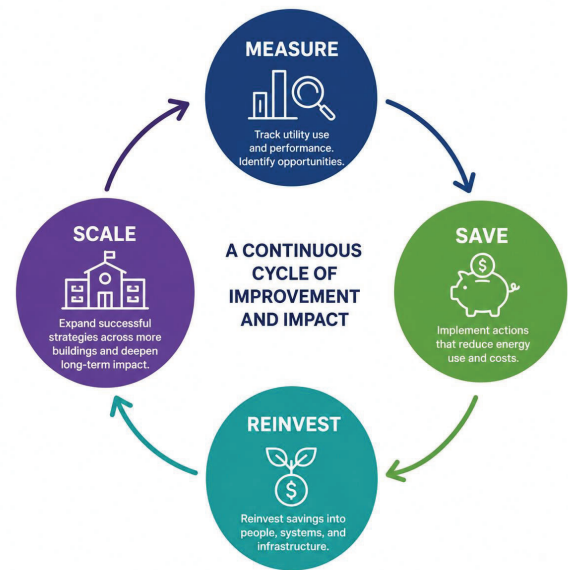
Start with Low Hanging Fruit

- Get energy audits (likely for free!)
- Benchmark energy use and document building systems
- Address low/no-cost options first:
 - Optimize schedules, controls, and setpoints
 - Air sealing, weather stripping, draft stoppers
 - Window films and covered clearstories
 - Lighting / LEDs for quick cost savings
 - Occupant engagement
- Capture available utility incentives and program support
- Track and communicate avoided costs and energy savings in terms appropriate for your stakeholders



Thinking Beyond Savings for Long Term Capacity

- Reinvest savings into dedicated staff/staff capacity and training
- Establish consistent utility tracking and performance accountability
 - Also helps track if issues are at the building level or driven by the utility
- Align efficiency work with capital planning and modernization efforts
- Build internal champions who can sustain progress district-wide



Upgrades to school facilities can:

- ✓ Improve air quality
- ✓ Improve comfort and health conditions
- ✓ Support better student learning
- ✓ Provide significant reductions in school energy bills
- ✓ **Help to stabilize utility costs for annual budgeting and funding staff positions**
- ✓ Opportunities for safety and security



Questions?

Thank you for your interest and
joining us today!

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Share your feedback
in this short survey

Power up your electrification
knowledge with the
San Diego LEARN program:
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Other LEARN courses of interest:

Decarbonizing School Buildings

Guidance for schools and districts considering system and equipment upgrades.



Net Zero Energy

Essentials of Zero Net energy buildings, campuses, and communities, and the “passive house.”



Microgrids for a Resilient, Renewable Future

How microgrids are playing a role in modernizing the power grid and strengthening community resilience.



Utility Savings in Schools

Strategic Energy Management

May 13, 2026

Polling Question

•What is the state of your energy management practice:

- A. Wait, there's something to manage?!
- B. It's ad hoc. We do what we can when we can.
- C. We have goals. We kind of track them, but there is no plan, and we lack commitment.
- D. We have goals, a plan, report to upper management and track everything.



Polling Question

•Where do you see energy waste in your schools?

- A. Building controls
- B. Lighting
- C. Building envelope
- D. Students, staff, teacher behavior



Polling Question

•Do you have a capital management plan for replacing failing equipment?

- A. What's a capital management plan?
- B. I'm supposed to plan for equipment replacement *before* it fails?
- C. We try to budget for expected failures, but it is not a formal process
- D. We have a formal process for budgeting for planned equipment replacement on at least an annual basis



My Journey: From School District Energy Manager to Energy Coach

Operations



Energy Management



O&M

Planning



Design Standards +
Policies

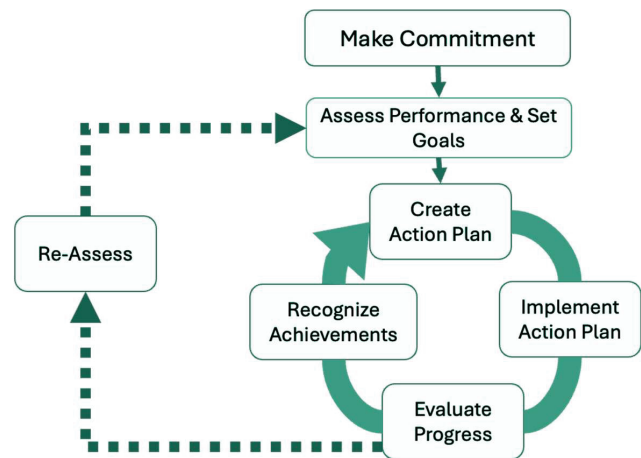


Decarbonization
Roadmap



What is Strategic Energy Management (SEM)?

- Prioritize low/no cost O&M projects
- Framework to manage energy more closely and strategically
- Focus on changes in daily operations
- Engage staff at all levels of the organization
- Provides complimentary services to capital efforts & other energy services



Why SEM?



Zero Cost to Enroll & Save

You're already paying for this program through ratepayer \$

Utility bill public purpose charge

Energy Savings & Cash Incentives

A typical school can receive ~\$50,000 back in direct incentives & services, via:

- Milestone Bonuses – district level
- \$X.XX per kWh reduced YOY
- Unbiased consulting & coaching

Collaboration & Partnership

Engage Staff & Students to drive down energy usage

Leverage expertise and best practices of fellow participants in the program



Hear from other Districts:

School Districts across the country are benefitting from Strategic Energy Management Programs.

Listen to what a few of our participants have to say:

” I would highly recommend participating in the SEM Program. It helps save money, engage staff, and create sustainable systems that continue to pay off.



Sustainability Coordinator

Beth Church – Douglas County

” Stillwater provided our small team with valuable industry knowledge and nationwide perspective on how other organizations were addressing energy challenges.



Director of Facilities

Travis Whitley – Colorado Springs

” The data and reports provided by Stillwater through the SEM Program have become essential tools in our ongoing energy management efforts



Energy Manager

John Berdon – Colorado Springs



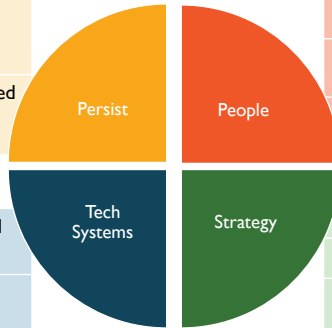
What's the Commitment?

- Join quarterly workshops (~2 hours) with other District M&O, Facility, and Energy Managers
- Share utility account info so we can request data, build energy models & document savings
- Walk through enrolled schools with us to identify projects: low & no cost focus
- Join monthly meetings with your SEM Coach to review topics important to you



What matters most to you?

Operational Control	O&M activities drive energy savings consistently
Documentation	Energy-related activities recorded clearly and consistently
Program Auditing	Overall program revised based on performance reviews







Management	Commits to goals and performance improvement
Energy Team & Champion	Executes action plan and meets regularly
Awareness & Communication	Understand role in energy use and are trained in savings activities
Training	Training in energy related systems and topics

KPIs	Performance metrics tracked closely
Measurement & Analysis	Energy data widely available and analyzed for action
Energy Review	Energy-using equipment consistently reviewed for savings
SEUs	Understanding and monitoring of SEUs

Policy & Goals	Goals understood across your organization
Strategic Plan	Strategy covers next 3-5 years
Action Plan & Objectives	Deadlines and accountability for actions over next 12 months
External Requirements	External requirements are reviewed in advance of new equipment or process
Procurement & Design	Energy is included in the design of purchasing policies for equipment and supplies



SEM Overview

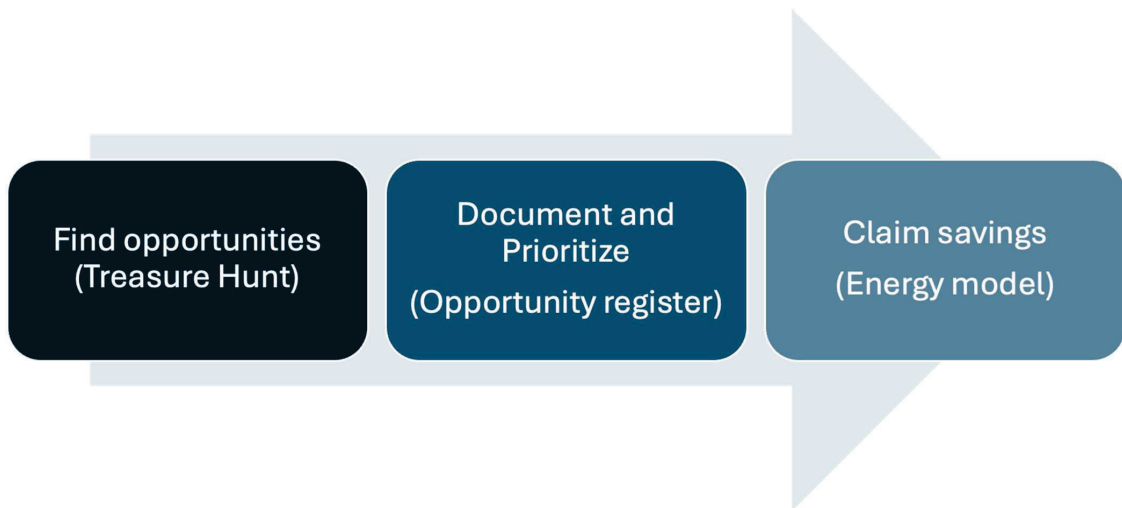
-  Program is FREE to participants
-  Three years of ongoing energy management support
-  Monitor and track energy consumption
-  Incentives provided for completed no-cost/low-cost energy savings



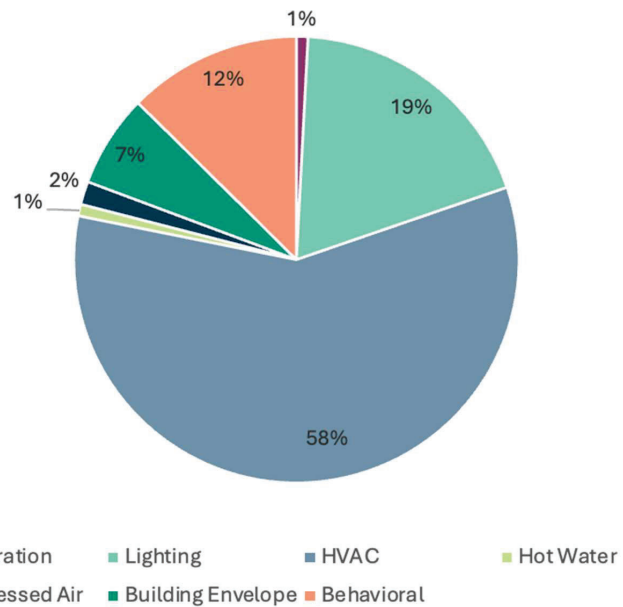
Program Elements



Drive Energy Savings



Energy End Use in Schools

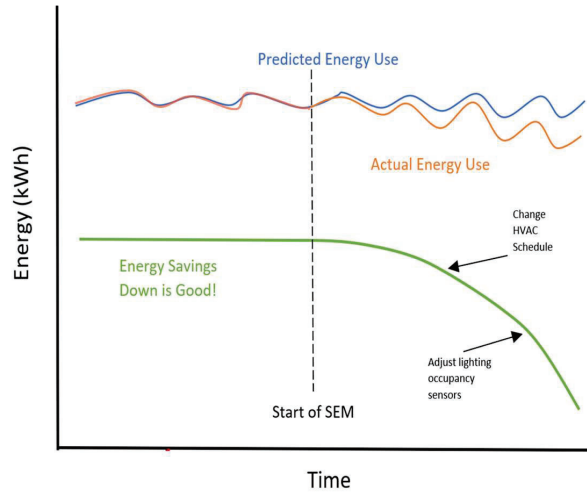


Project Prioritization

Opportunity Register						
Opportunity Name/Description	Facility	Opportunity Category	Opportunity Type	Energy Type	Date Identified	Priority
Investigate if it's feasible to tighten/trim the schedules on the VRF units on the 1st floor.	All	HVAC	O&M	Electricity	7/23/2019	01 High
Work with IT to investigate Server Room efficient cooling strategy. Verify equipment temperature requirements. ASHRAE (American Society of Heating, Refrigerating and Air-conditioning Engineers) typically recommends a setpoint of 72-76°F. Consider implementing hot and cold aisle strategy.	All	HVAC	Organizational	Electricity	7/23/2019	02 Medium
Consider adding a schedule to the unit ventilators to schedule them at night during mild weather.	All	HVAC	O&M	Electricity	7/23/2019	01 High
Consider increasing hot water temperature as the temperature decreases outside. This places more load on the chiller, but is still more efficient than electric resistance heaters in the unit ventilators (UVs).	All	HVAC	O&M	Electricity	7/23/2019	01 High
Develop standard operating procedures (SOPs). Include after-hours temperature setpoints and communicate this to all staff. The building is currently maintaining occupied temperature setpoints after hours (evenings and weekends) to accommodate very low after-hours usage.	All	Other	Organizational	Electricity	7/23/2019	01 High



Measurement and Verification



Thank you!

Aaron Presberg, Senior Energy & Climate Coach
Email: apresberg@stillwaterenergy.com

Using Utility Savings to Support District Staff: Building Organizational Capacity and Momentum



Sustainability | Energy Strategy | Facilitation

www.GoSTRAVEN.com

Deb LaSalle, J.D.

Founder & Principal Energy & Sustainability Strategist

Where Strategy Meets Action

Integrated Sustainability Team

Energy and Emissions Analysis

Assess and visualize energy and emissions across fleets, buildings, and infrastructure to develop baselines and inform data-driven decision-making.



- Energy & emissions audits and inventory modeling
- Dashboard development
- Benchmarking, M&V

Strategic Decarbonization

Create actionable decarbonization roadmaps with measurable targets, timelines, and cost-benefit analyses to guide long-term strategies.



- Interval data analysis
- ROI, payback, & co-benefits
- Roadmap development
- Capital & utility coordination

Climate Planning & Adaptation

Identify climate vulnerabilities and integrate resilience strategies into energy and infrastructure planning to safeguard services and people.



- Vulnerability assessment
- Scenario planning
- Adaptation strategies
- Resilience co-benefits

Clients We Serve

- K–12 schools and universities
- Cities and public agencies
- Commercial and industrial organizations

Sustainability Reporting

Compliant, clear, accessible public-facing reports, presentations, and interactive visuals that support decision-making and community engagement.



- Graphic-rich reporting
- Data visualization
- Clear messaging
- Progress tracking

Stakeholder Engagement

Interactive workshops that surface cross-departmental and partnership insights, generate alignment, and build momentum.



- Staff workshops
- Facilitation & synthesis
- Priority alignment

Waste Reduction & Management

Evaluate solid waste, water, and operational materials systems to optimize resource use and identify cost-saving strategies.



- Waste audits
- Reduction strategies
- Circularity planning

Where Strategy Meets Action

STRAVEN TEAM



Deb LaSalle, JD.

Zach Bell, BA
Environmental Studies

John Gardner, PhD, PE

RT Williams, PhD, CEM

Sustainability Consultant

- Energy efficiency and feasibility studies
- Sustainability strategy and implementation
- Strategic planning and stakeholder alignment

Data Analyst

- ESA Credential I energy and sustainability analysis
- GHG accounting and benchmarking
- Data visualization and systems evaluation

Senior Engineer

- Professor emeritus of mechanical engineering
- 60+ peer-reviewed research publications, 3 textbooks, 3 patents
- 130+ industrial energy assessments

Certified Energy Manager

- Building performance and energy systems engineer
- Energy modeling, forecasting, and analytics
- Utility incentive strategy and anomaly detection dashboards

Where Strategy Meets Action

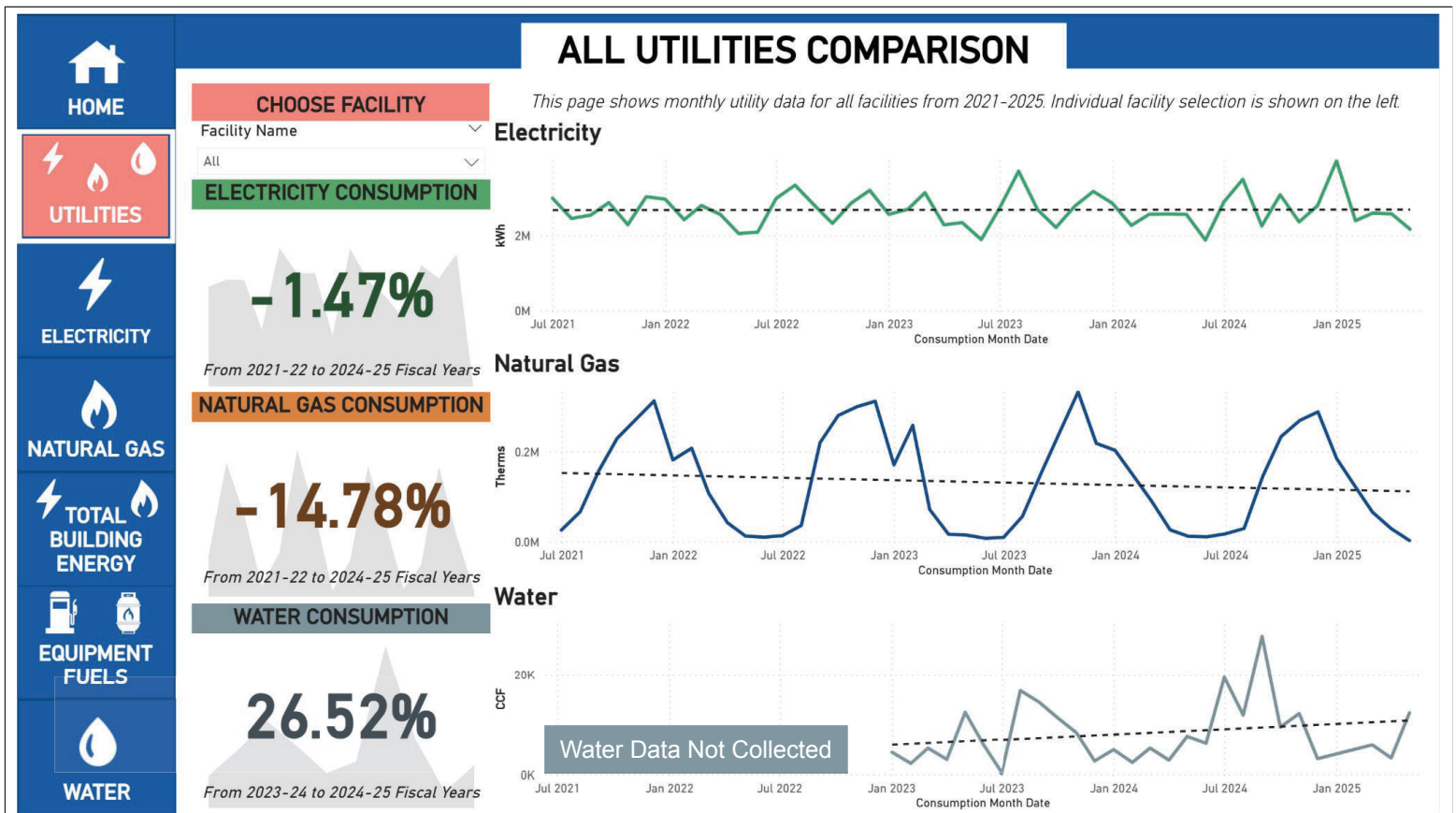
School Resilience Framework

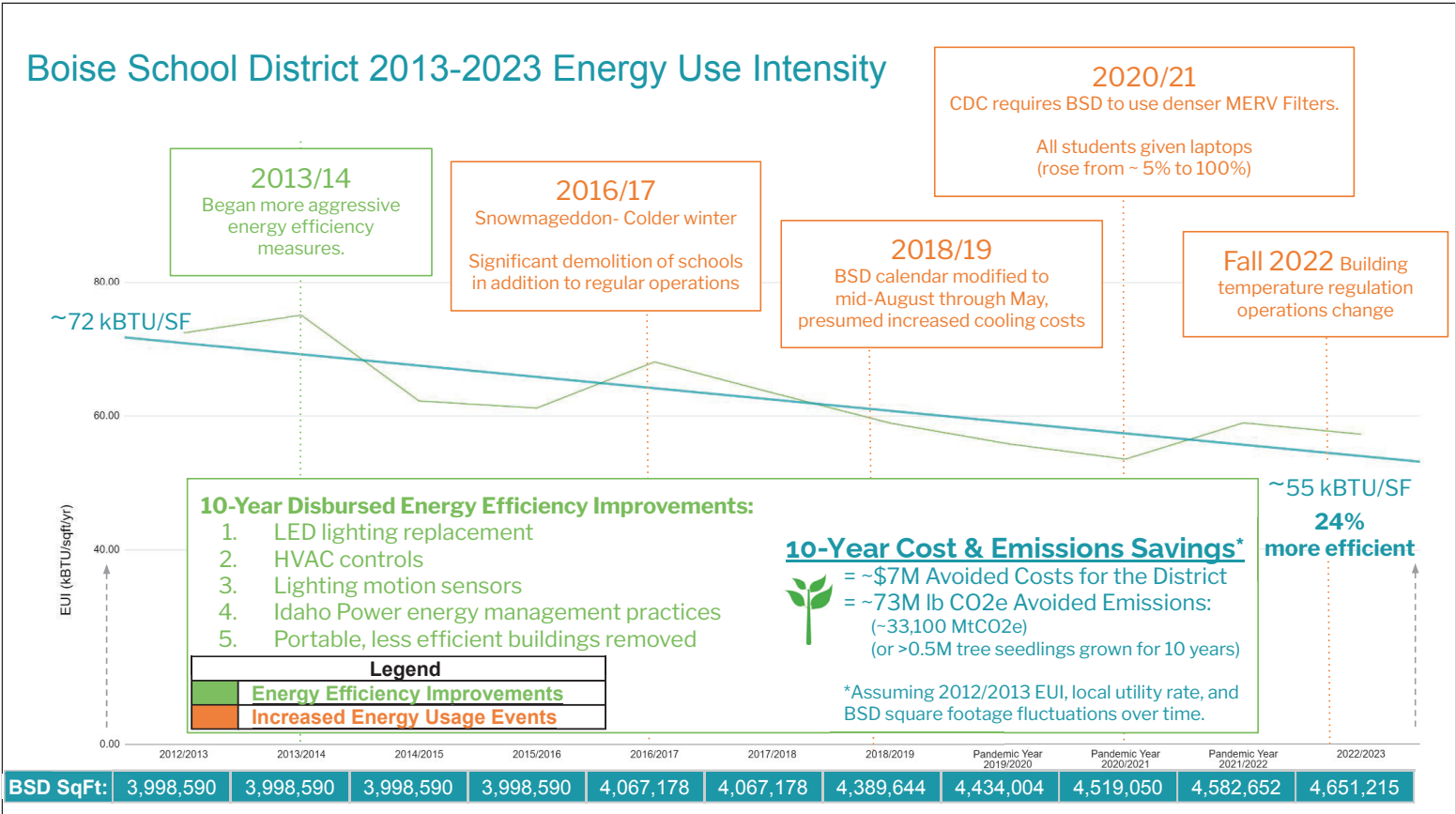
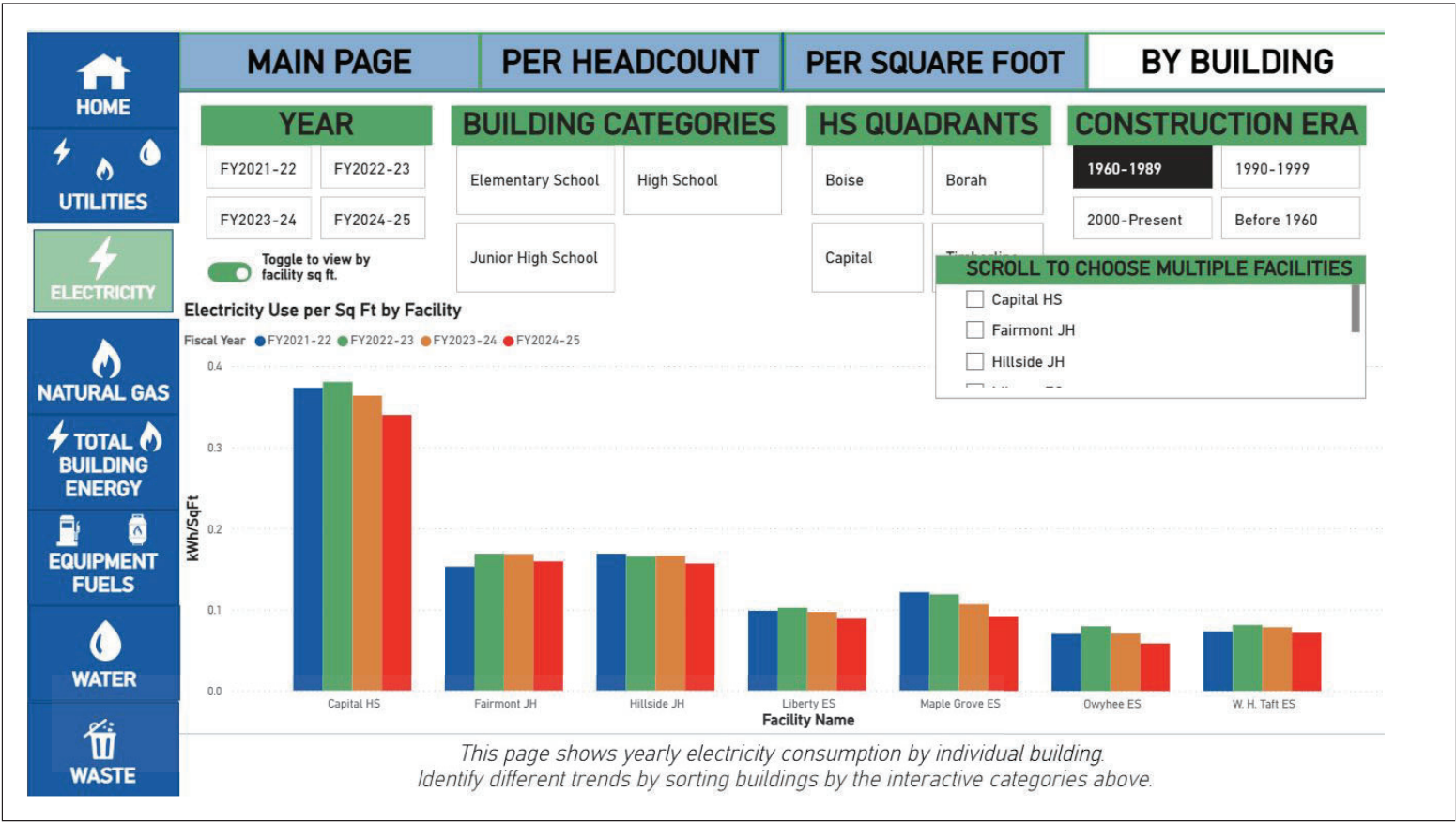


Where Strategy Meets Action

Dashboards & Data Visualization

Where Strategy Meets Action

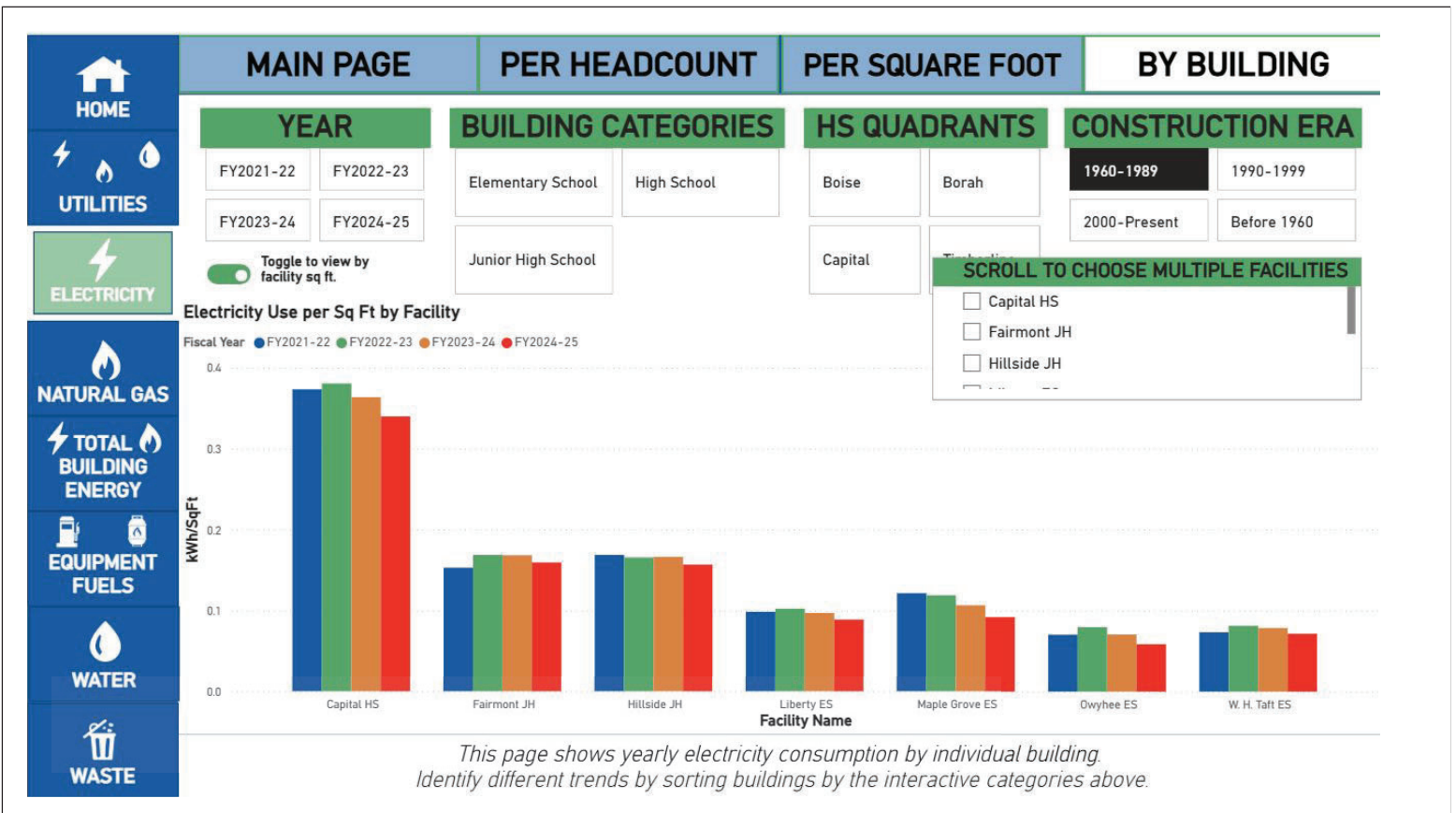


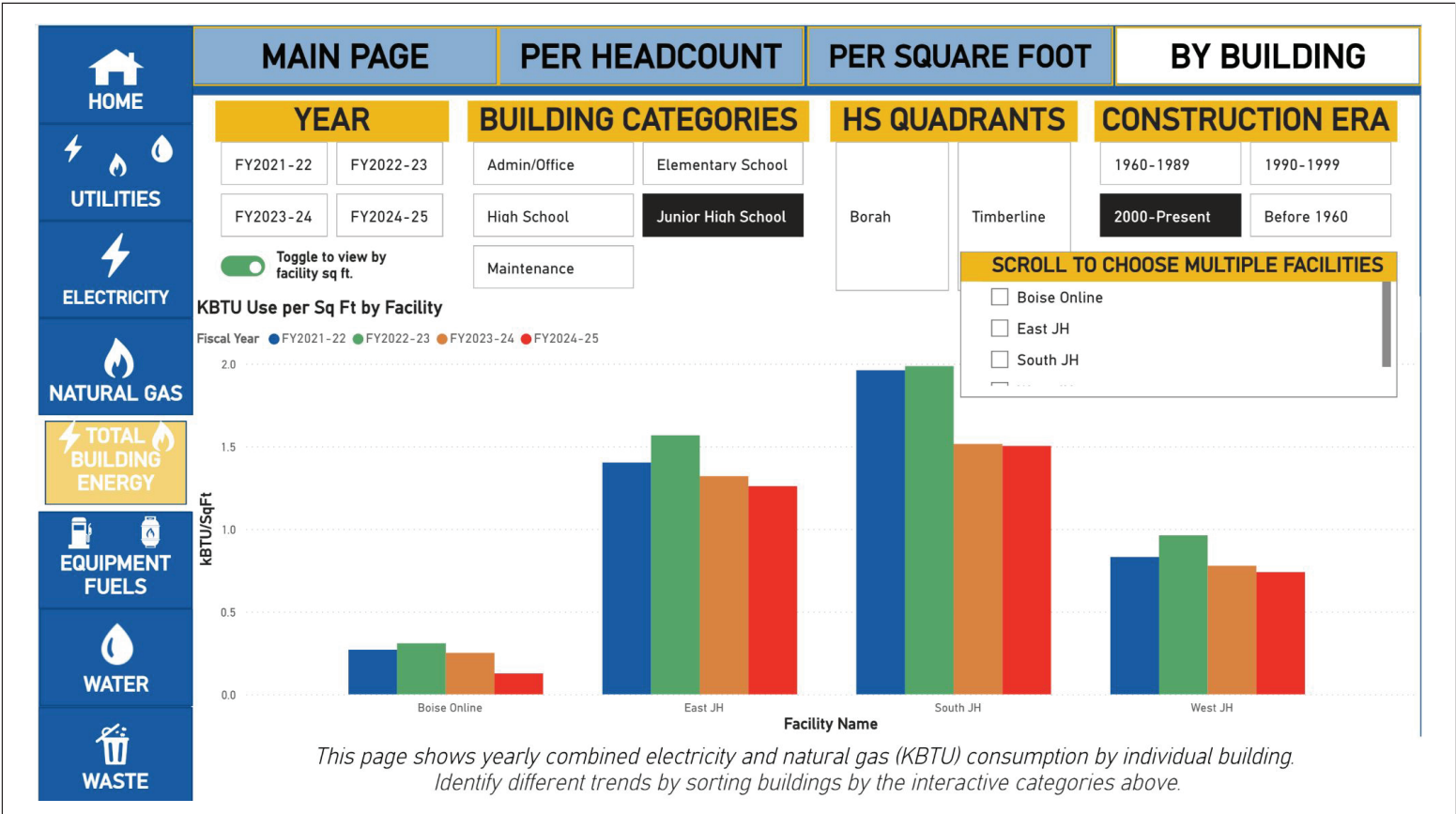
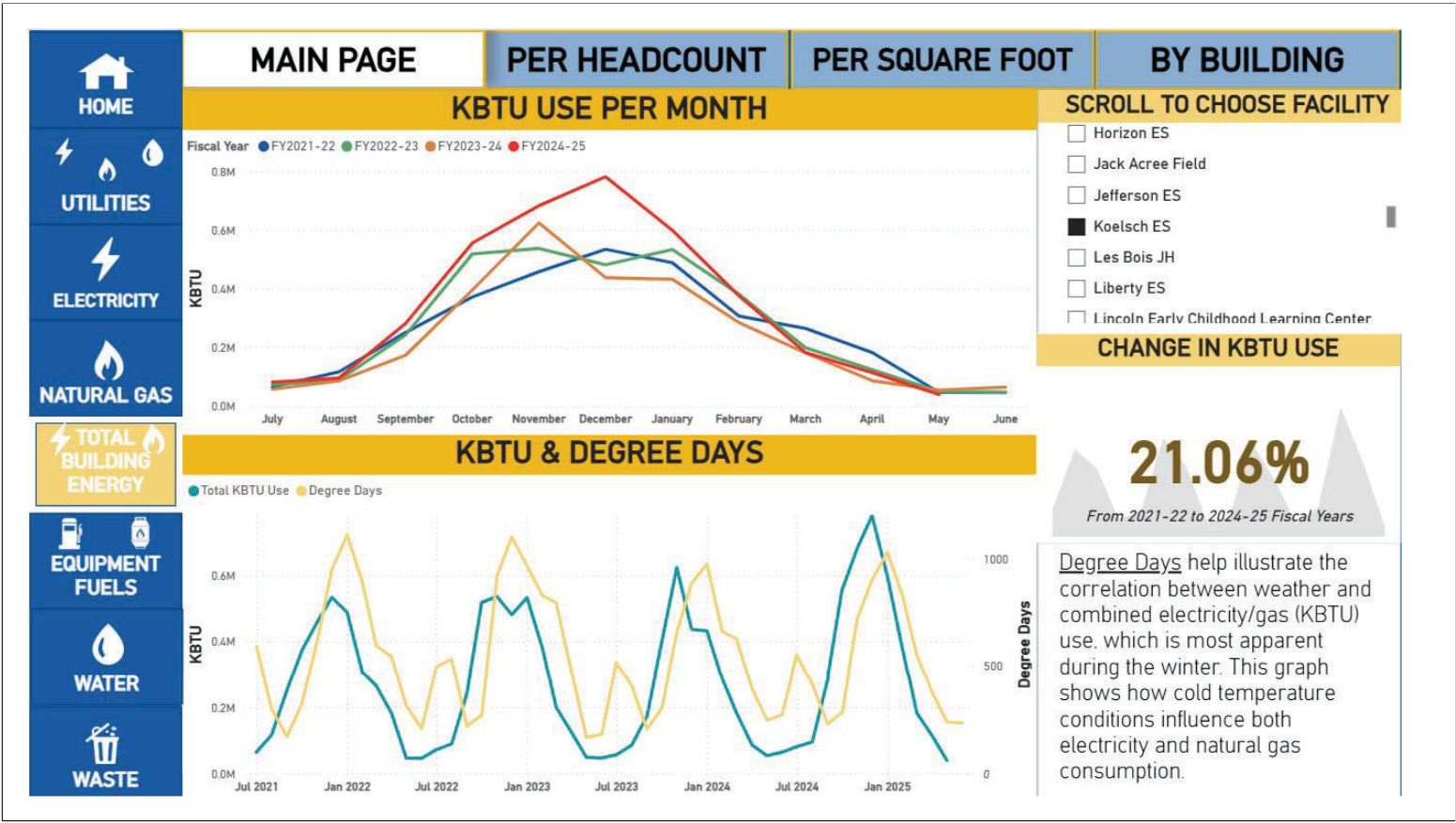


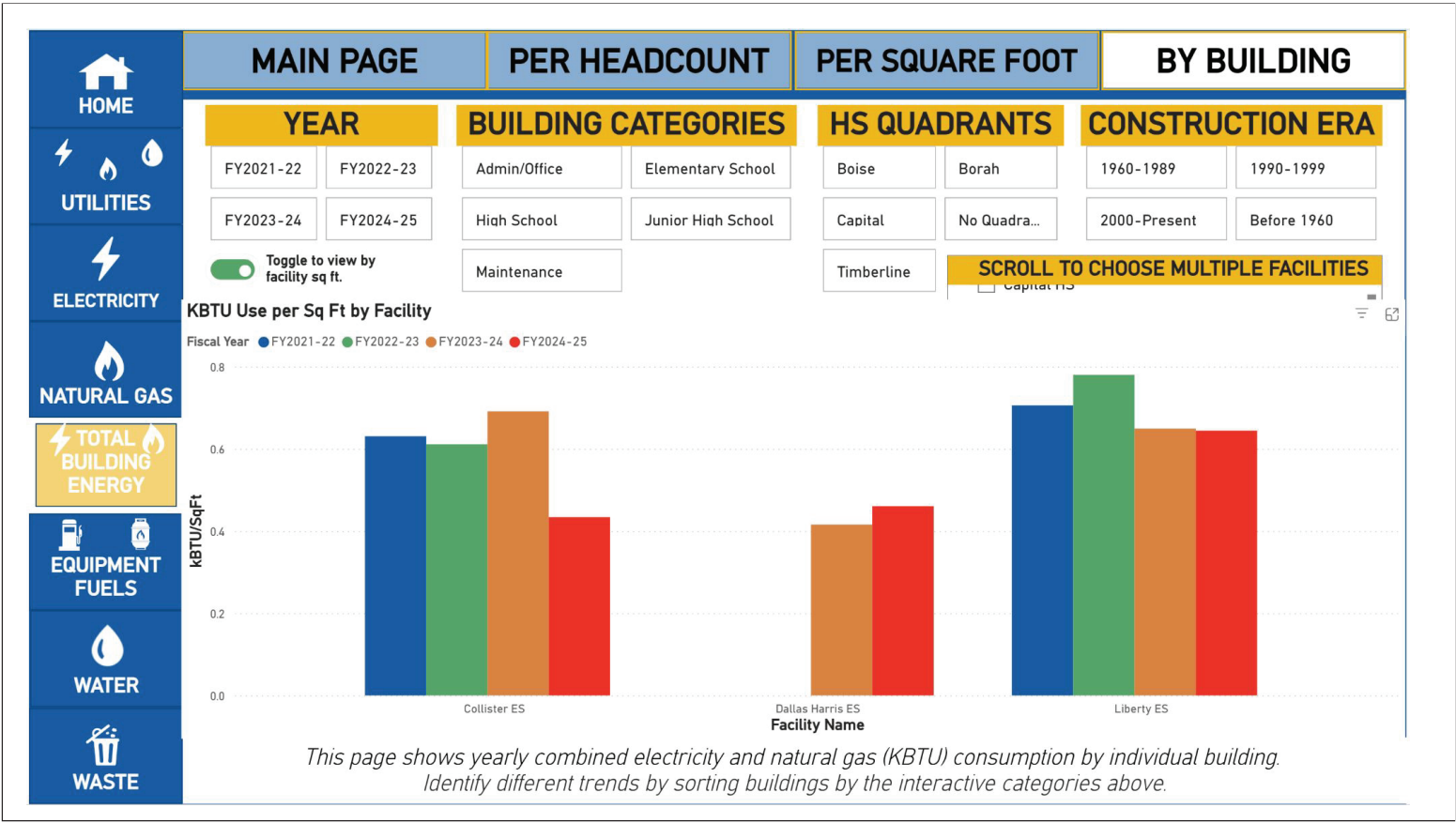
Students and Teachers Engaging on Data



Where Strategy Meets Action







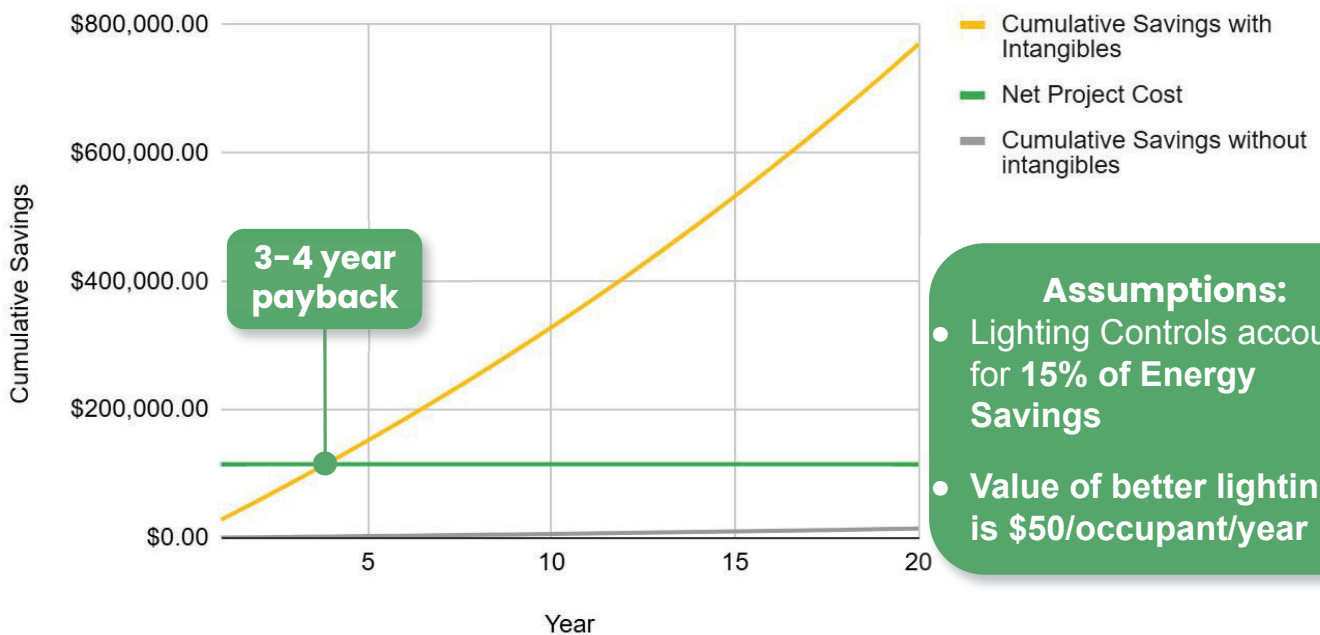
Creating Capacity for Long-Term Planning

Organizational Capacity Growth



Where Strategy Meets Action

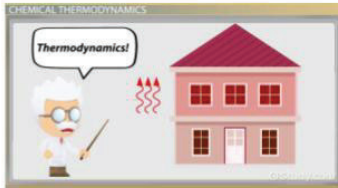
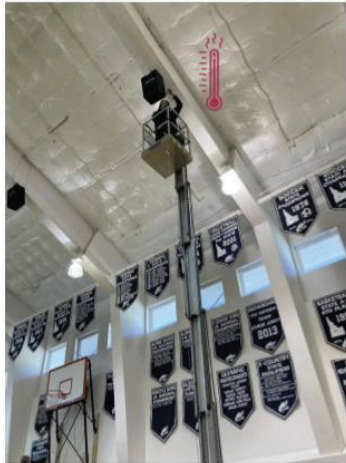
White Pine Lighting Controls Savings



- Assumptions:**
- Lighting Controls account for 15% of Energy Savings
 - Value of better lighting is \$50/occupant/year

Student Presentations

HVAC Proposal: Gymnasium Fan



HEAT TRAVELS UP!

GYM DATA:

TEMPERATURE IN THE UPPER HALF:

100+ DEGREES

TEMPERATURE IN THE LOWER HALF:

< 70 DEGREES

!!HEATERS ARE ON 24/7!!

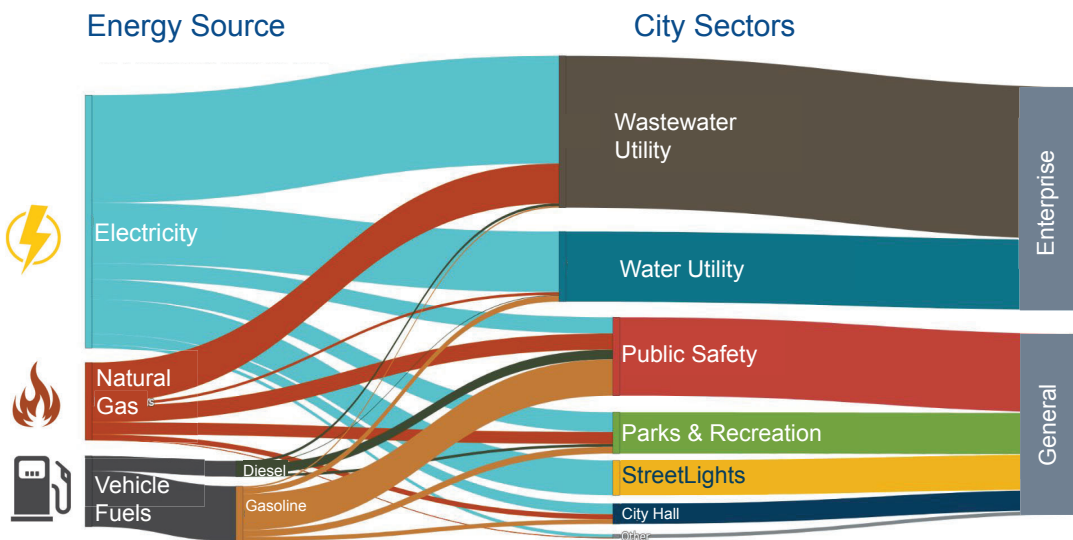
PROPOSAL:

INSTALL 2 , LARGE FANS

COST: \$3500 /FAN

SAVINGS: \$ 2K/YEAR

Turning Utility Data into Action



Anomaly Detection Identified:

Unusually high natural gas consumption

- Undetected gas leaks
- Clogged HVAC filter



Creating Breathing Room

Operational savings create enough breathing room for districts to:

- invest in staff capacity
- evaluate modernization opportunities
- conduct feasibility studies
- modernize systems
- engage students
- plan more proactively

instead of reactive emergency response mode.



A strong lead creates space to train, try new strategies, and think proactively.


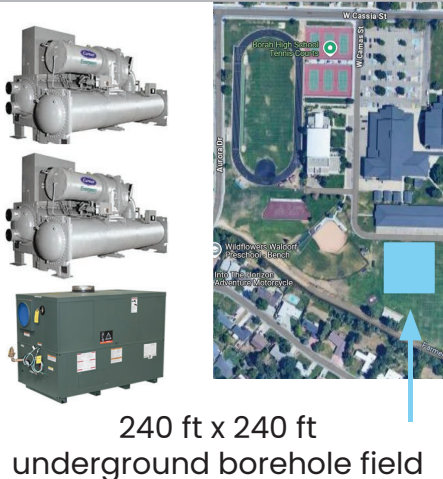

Feasibility Studies

Cooling + Heating System Feasibility Study: Borah High

Prepared by: **STRAVEN STRATEGY GROUP**
Sustainability Strategy & Energy Planning

Borah High New & Old Gym Complex: Heating/Cooling Equipment Options



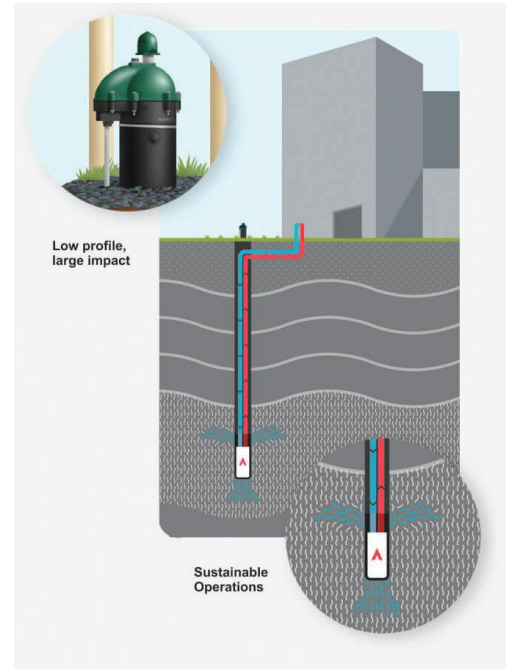
Air-Cooled	Water-Cooled	Heat Pump
<ul style="list-style-type: none"> • Two 230 ton Air-Cooled Chillers, operating when air conditioning required • Update Boiler for New Gym (Old Gym Complex recently completed) 	<ul style="list-style-type: none"> • Two 230 ton Water-Cooled Chillers • 340 ton capacity ground source heat sink • Update Boiler for New Gym (Old Gym Complex recently completed) 	<ul style="list-style-type: none"> • Two 230 ton Heat Pumps using the ground as a source for heating and a sink for cooling • For heating the New Gym Complex • For cooling the New & Old Gym Complexes • Update Boiler for New Gym to use as backup.
	 <p>240 ft x 240 ft underground borehole field</p>	 <p>300 ft x 300 ft underground borehole field</p>

GSHP Installations

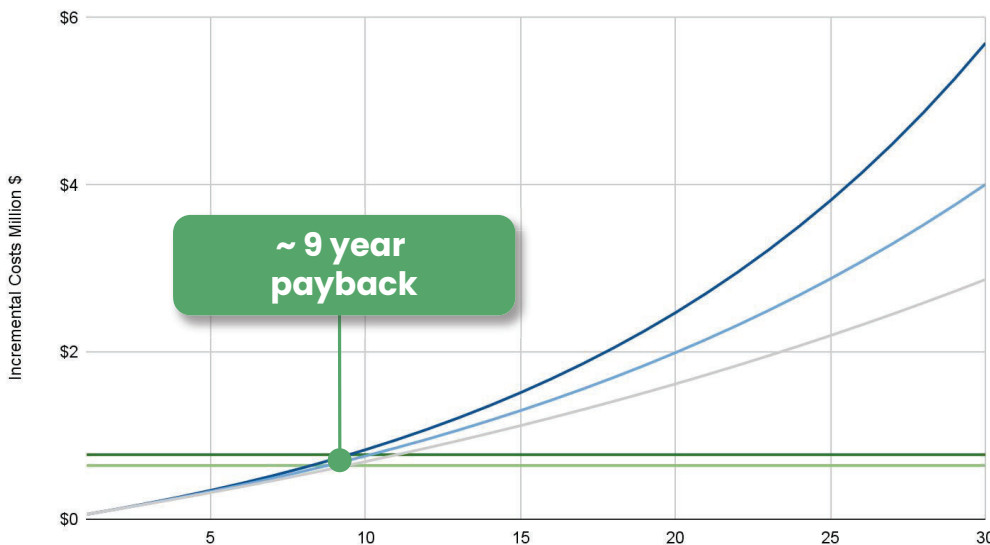


Boreholes can be and are placed closer to building to reduce trenching

Photo and Image sources: [Kenza Heat Pumps](#) & [Darcy Solutions](#)



Heat Pump Heater/Chiller ROI (Return on Investment)



~ 9 year payback

Assumptions: Electricity Escalation

- 7%
- 5%
- 2.5%






Natural Gas Escalation: 2%

Incremental CAPEX Estimates (costs above proposed baseline system)

- High CAPEX (20% Contingency)
- Low CAPEX (30% Direct Pay)




Borah HS Gym: Cooling + Heating Strategy Comparison



Metric	Air-Cooled + Boiler	Water-Cooled + Boiler	Heat Pump (HP) Heater/Chiller
Upfront Capital Cost Includes system, building upgrades, electrical, piping, & install Excludes 20% contingency specified by Musgrove Engineering	<ul style="list-style-type: none"> Two 230 ton Air-Cooled Chillers  Boiler for New Gym  	<ul style="list-style-type: none"> Two 230 ton Water-Cooled Chillers ground source heat sink  Boiler for New Gym  	<ul style="list-style-type: none"> Two 230 ton HP using the ground as a source for heating & a sink for cooling 
	<p align="center">\$6.3M</p> <p align="center">(\$3.5M boiler \$2.8M chillers)</p>	<p align="center">\$9.0 M</p> <p align="center">(\$3.5M boiler \$2.75M boreholes \$2.75M water-cooled system)</p>	<p align="center">\$9.7M</p> <p align="center">(\$3.4M HP \$2.75M boreholes \$3.5 for HP mods) (additional piping needed)</p>
	Includes: - Redundancy: Borehole field sized 460 tons; could downsize to 360 tons. - Idaho Power incentives: For more high-efficiency cooling system components Supports expansion for future expansion for heating and cooling		
Direct Pay Rebate Check	\$0M	\$2.0M	\$2.7M
Incremental Cost	\$0M	\$7M	\$0.7M
First Year Annual Energy OpEx (A/C and Heating)	\$112k <small>(\$68k/yr to heat New Gym Complex)</small>	\$84.7k <small>(\$68k/yr to heat New Gym Complex)</small>	\$51k <small>(\$28k/yr to heat New Gym Complex)</small>
Energy Costs Avoided	Baseline	\$900k over 20 years	\$2M over 20 years
Lifespan	AC Chillers: 15-20 Years Boiler: 15-25 Years	Ground Source Loops: 50+ years WC Chillers: 25-30+ Years	Ground Source Loops: 50+ years Heat Pump: 25 - 30 years

Borah HS Gym: Cooling + Heating Strategy Comparison



Metric	Air-Cooled + Boiler	Water-Cooled + Boiler	Heat Pump Heater/Chiller
Noise	Chiller Fan Noise  to Campus/Neighborhood	None 	None 
Aesthetics	Large Footprint Requires Enclosure	Visually Unobtrusive Housed inside Mechanical Room	
Carbon Emissions (Over 20 yrs)	12,000 MTCO2e <small>(203,000 tree seedlings grown for 10 years) (31.2M miles driven by an average gasoline car)</small>	11,000 MTCO2e <small>(179,000 tree seedlings grown for 10 years) (27.6M miles driven by an average gasoline car)</small>	3,000 MTCO2e <small>(47,000 tree seedlings grown for 10 years) (7.2M miles driven by an average gasoline car)</small>
Contained Glycol Use	Glycol Outside & Inside Buildings: Outdoor Air-Cooled Chiller shares loop with indoor equipment	Glycol Outside Only Heat exchanger keeps indoor loop glycol-free.	
# of Systems to Maintain	Two Outside	One Inside System	
Other Considerations	More exposure to weather Greater wear and tear on equipment. Limited future flexibility Cooling only; heating upgrade would require major changes. Higher refrigerant charge for larger outdoor units.	Future heating-ready Higher avoided carbon emissions if expanded to heating, with reduced combustion risks. Efficient land use after temporary field disturbance.	Balancing Heating and Cooling Rejection to ground + higher avoided carbon emissions if expanded to heating, with reduced combustion risks. Efficient land use after temporary field disturbance.

Similar Climate Case Studies

K-12 Case Studies



UNDAUNTEDK12 [Energy Tax Credits for Schools Hub](#)



Jefferson County Public Schools in Kentucky receives a \$1,824,613 check!



Westwood Public Schools in Massachusetts receives a \$5,055,655 check!



North Fayette Valley Community School District in Iowa receives a \$873,483 check!



Seattle Public Schools in Washington receives a \$7,970,439 check!



Tax Credits for Ground-Source Heat Pumps Remain Intact



Bozeman, MT



GEOTHERMAL HEAT PUMP CASE STUDY:

Montana State University

25% Decrease in Energy Use Intensity

MSU Facilities reported that out of 264 boreholes installed over the past few decades, only one had to be abandoned.



Source: [Energy.gov](https://www.energy.gov)

Name: Montana State University

Location: Bozeman, Montana

Site Type: University Campus

Size:

- 650,000 square feet (8 buildings) heated and cooled by geothermal systems
- 264 boreholes drilled 500–700 feet deep
- 100 boreholes and two new buildings planned for 2024–2025

Unique Features:

- 8,000 heating degree days per year
- Geothermal systems utilize 2.5 miles of existing utility tunnel system
- Includes fifth-generation ambient loop for energy sharing

Energy Savings:

- Norm Asbjornson Hall, a campus engineering building, includes a geothermal heat pump system and operates at 35 kBtu/square feet/year, equating to 40% less carbon emissions than other comparable buildings on campus
- Campus building energy use intensity decreased by 25% from 2007 to 2023

Cost Savings:

- The first campus energy district installed in 2011, including four buildings connected to a central heat pump plant and 52 geothermal boreholes, saves an average of \$130,000 annually

School Resilience Framework



Where Strategy Meets Action

Thank you!

Deb LaSalle, Founder & Principal Energy & Sustainability Strategist
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Sustainability

Environmental
Educational
Economic

Using Utility Savings to Support District Staff

Boise School District

Alison Ward
BSD Sustainability Supervisor
Alison.ward@boiseschools.org

Boise School District



Idaho's 2nd largest public school district



22,000 students
4,000 staff



52 schools
80 buildings (4.6 million sq ft)
Built 1881 - 2023



850 acres of grounds and fields



Sustainability at Boise Schools

2017

Sustainability Committees began and Joined Idaho Power Cohort (SEM) (1-4 sites adding additional sites in 2021)

2021

Board Resolution on Clean Energy

Key Action Items:

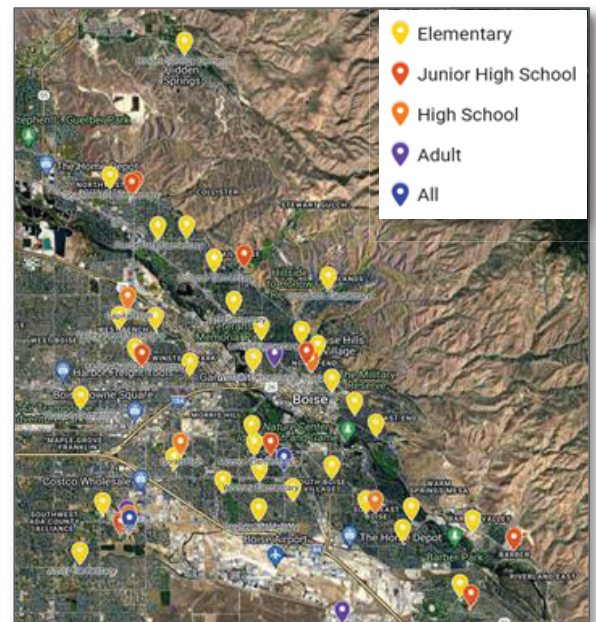
2023

- GHG Audits Districtwide
- Develop Green Team Leadership position for each school
- Add Sustainability Supervisor

2025

25 Sites in SEM program with Idaho Power
Established Sustainability Action Plan for 2026-2031
Reanalyze EUI and GHG district-wide, creating sustainability dashboard

Green Teams and Outdoor Learning [Site Map](#)



“My students love taking a leadership role in a meaningful and impactful way.”

-Green Team Survey Respondent

Student Engagement

Green Teams Cultivate District-Wide Impact



52 Green Teams & 2504 Green Ambassadors

Worked on waste reduction, reduced energy consumption, environmental stewardship, and water conservation across the district. Up from 592 Green Ambassadors in 23-24. **A 323% increase!**



14,506 service hours

Collectively contributed toward sustainability, including hands-on projects, learning, and community engagement.



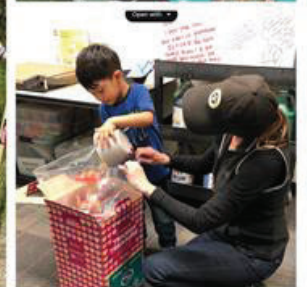
New Projects!

42 schools sponsored milk bottle pilot & Orange Bag plastic film collection.

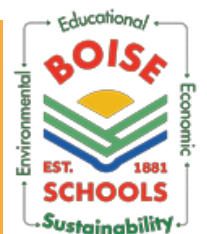


616 MWh Saved from Power Down Challenge, alone in 2024-2025.

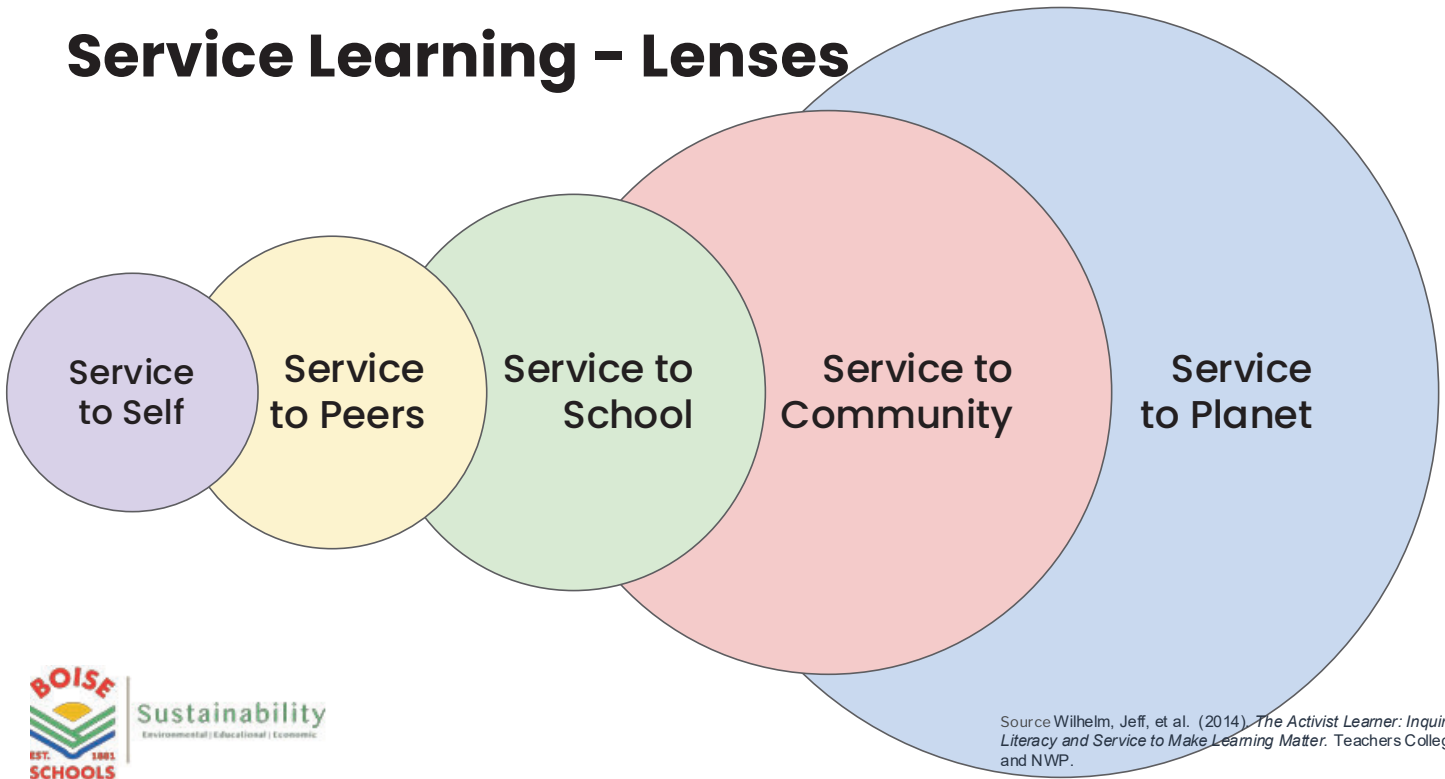
“Kids loved it! The younger kids were excited to one day be on the green team.”



Helping schools reduce their environmental footprints and providing students with hands-on education.



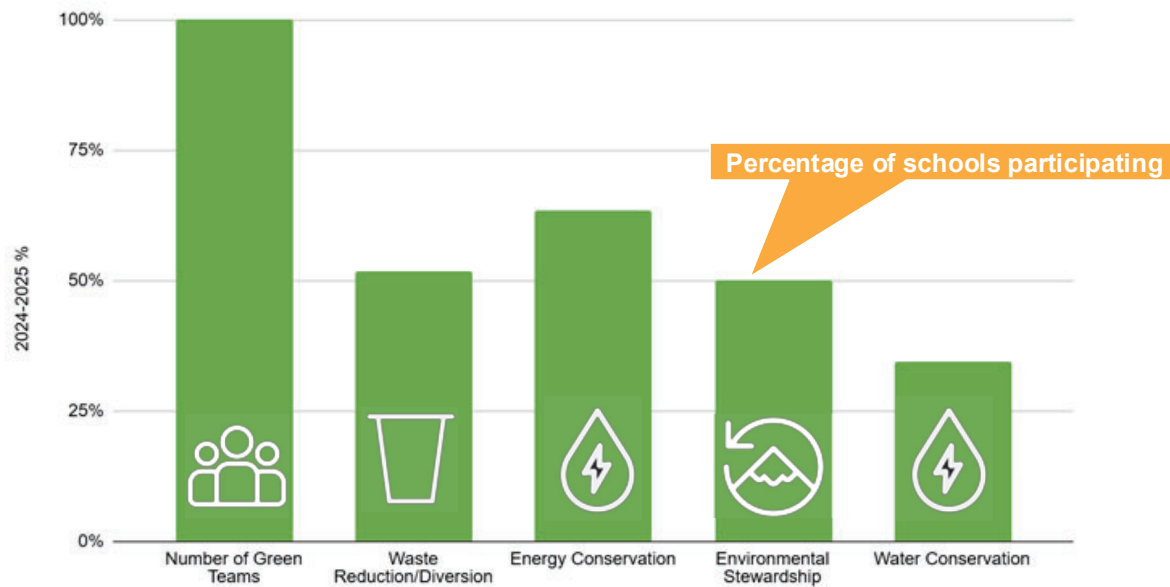
Service Learning - Lenses



Active Areas of Impact, 24-25



Green Team Participation by Sustainability Pillar 24-25



Power Down Challenges Kill-a-lot-of-Watts

2,593,256 kWh Energy Savings!

1,879 MTCO₂e reduction . . .
 equivalent to:



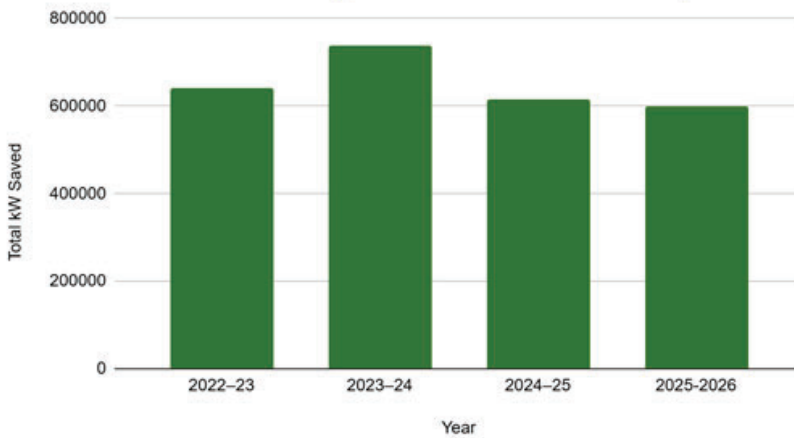
438 gas-powered
 passenger vehicles
 taken off the road
 for one year!



31,071 tree seedlings
 grown for 10 years!

Source: [Greenhouse Gas Equivalencies Calculator](#)
 Link to [BSD Data by Power Down Challenge Period](#)

Total kW Saved vs. Year by BSD Powerdown Challenges



“My students love taking a
 leadership role in a meaningful and
 impactful way.”

-Green Team Survey Respondent

Reinvesting Utility Incentives

Green Team Project Requests & Funding



\$1,000 stipends

For each green team lead to attend sustainability professional development and lead sustainability teams at their sites.



2 Americorps Service Members



Grace Jordan Organics Composting + Recycle



Hillcrest School Garden (Mindfulness Garden)



Borah Garden Classroom and Canopy Structure



ASCENT School Garden (Pollinator and Habitat)



Adams School Garden and Moon Tree



Horizon Elementary Tree Planting



Whitney Elementary Data Bots



Fairmont Junior High Courtyard Renewal

Funds for Consulting & Feasibility Studies



Leadership Support to fund:

- Greenhouse Gas studies and Dashboard development
- Clean Transportation study
- Solar Feasibility study
- Ground source heating / cooling Feasibility study and
- Waste data analysis and visualization (w/ student interns)
- Clean energy tax consultation and advising



