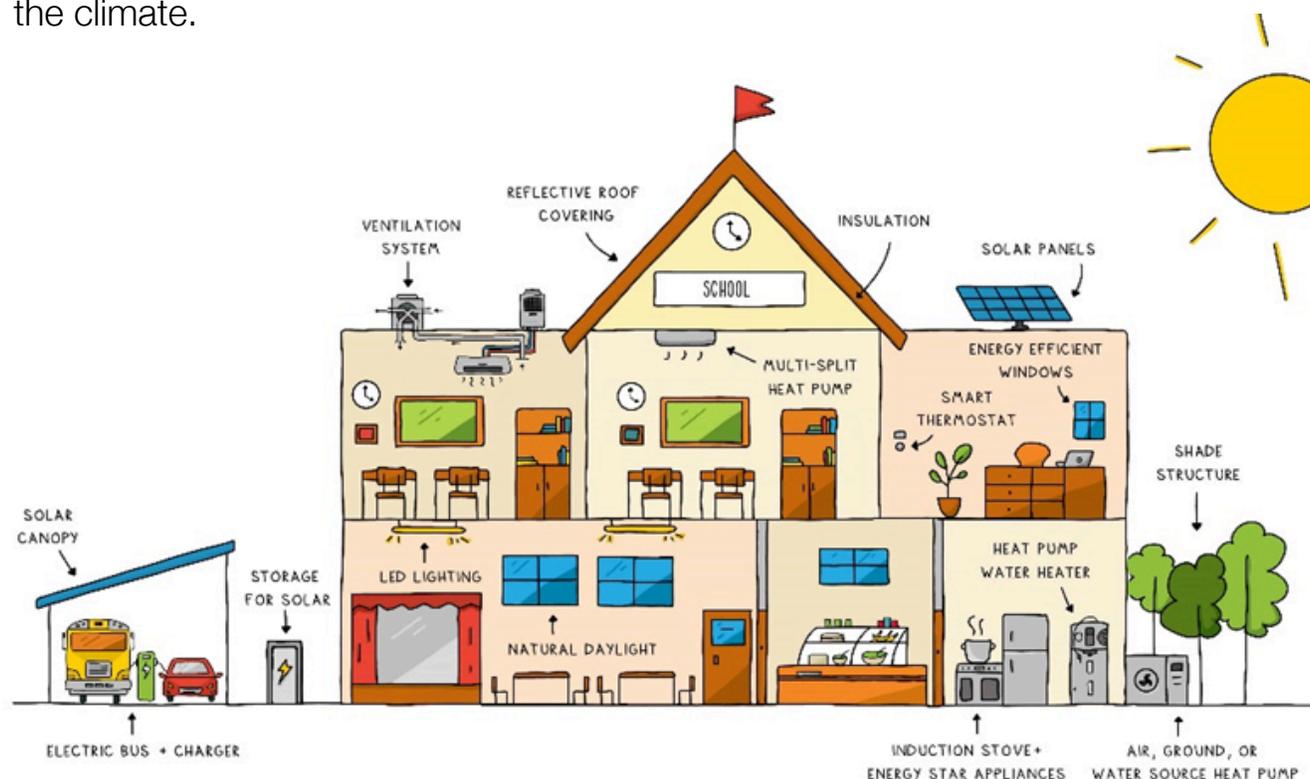


Powering Up Our Schools

A Bright Future with Electrification

Why Electrification Matters

School electrification means replacing fossil fuel powered systems with clean, electric alternatives. Swapping out old gas-fired systems for clean electric ones means students breathe easier, classrooms stay comfortable year-round, and our buildings run more efficiently so schools save money in the long run. By electrifying our schools, we're cutting pollution, lowering energy costs, and creating safer spaces for students and staff. It's a win for kids, communities, and the climate.



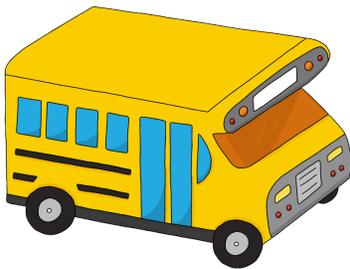
An all-electric school. Artwork by Nicole Kelner.

What is School Electrification?

School electrification is the process of replacing fossil fuel-powered systems like heating, cooling, cooking, and transportation with all-electric alternatives that run on clean electricity. While it can seem complex, electrifying a school is an achievable and increasingly common process especially when approached in phases to help manage budget, building constraints and available utility infrastructure. Coupled with energy efficiency and renewable energy systems, electrification is a key approach for school districts to reduce reliance on fossil fuels.

Key approaches to electrification include:

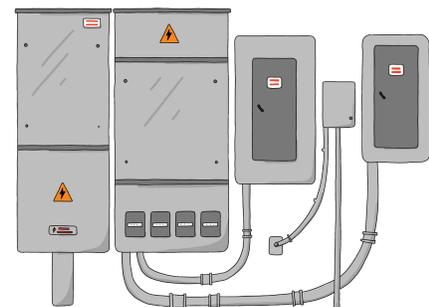
- Swapping gas-fired HVAC for electric heat pumps
- Installing heat pump water heaters
- Powering kitchens with induction stoves
- Using electric buses and fleet vehicles instead of gas-powered or diesel
- Utilizing energy management systems to track and shift energy loads
- Upgrading existing electrical infrastructure to accommodate additional load
- Tapping into solar energy and utilizing on-site battery storage to enhance resilience and reduce energy costs



Electric School Bus



Water Heater



Electrical Panel



However, electrification should be done in tandem with energy efficiency to ensure long-term cost and operational savings.

These approaches should include:

- LED lighting and utilizing natural daylight
- High performance building envelopes and windows
- Controls for heating, cooling and lighting
- Using Energy Star rated appliances
- Utilizing the natural landscape and tree canopy for shading and cooling
- Reevaluating and reducing system sizes such as hot water heating

Why It's a Big Deal (and a Smart Move)



Cleaner Air for Our Kids

Less indoor air pollution and higher ventilation rates.



More Savings, Less Waste

Lower utility bills = more money for classrooms.



Resilient Schools

Safer, resilient schools that provide safe spaces during natural disasters.



Future-Proofing Our Schools

Prepares schools for the State of California's advancing climate goals and policy shifts.



Better Rides, Brighter Futures

Quieter electric buses that don't contribute toxic diesel fumes that can impact the long-term health of students.

Electrification Fun Facts

- Induction cooking can boil water in under 90 seconds!
- Gas stoves can raise indoor air pollution levels above EPA limits, especially for kids. (1)
- Electric buses reduce noise pollution by 90%! (2)
- Electric school buses can save districts over \$170,000 in fuel and maintenance costs over their lifetime. (3)



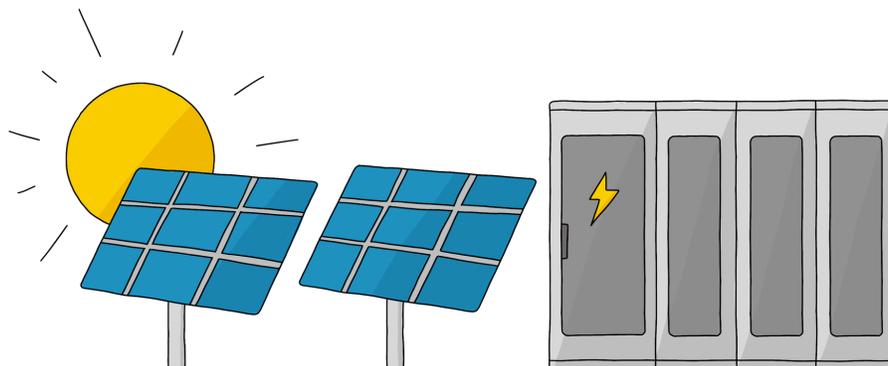
Common Myths About Electrification

“Can electric heat really heat or cool my building well enough?” Yes! And more consistently as it is less affected by the volatility of natural gas infrastructure. Even in cold places, there is likely an electric space heating option, such as cold-weather heat pumps and high efficiency electric heating, for your climate and operation.

“Electricity is expensive. Will this cost more?” If coupled with energy efficiency, and systems are properly commissioned, electrification can create cost savings for the district. Electric systems are also often easier to manage requiring fewer long-term maintenance costs.

“How will my district pay for this? Do electric systems cost more?” Grants, rebates and incentives from the State and utilities are available to help with the transition. Additionally, if upfront costs are higher, long-term energy savings coupled with renewable energy systems can lead to a shorter payback time.

“Using electricity instead of natural gas isn’t actually that much better for the environment because my utility burns coal and/or natural gas.” Utilities across the country are moving away from coal and natural gas to increasingly produce electricity with renewable energy. Additionally, there are ambient and indoor air quality impacts from combusting natural gas on-site, which are eliminated when switching to electricity.



Lead the Charge Toward Electrification

As school leaders and stakeholders, you have the power to drive meaningful change across school campuses. Here's how you can help electrify your schools:



Plan Ahead: Include electric upgrades like HVAC, kitchens, electrical infrastructure and solar/storage in your facilities master plan, technical specifications or school bonds. Emergency replacements are the most costly to districts, ensure plans and practices are in place to quickly adapt and incorporate electrification when opportunities arise.



Look for Funding: Take advantage of federal and state grants, utility rebates and incentives, and technical assistance programs like the Efficient and Healthy Schools Program for support in funding electrification projects.



Engage Your Team: Train staff and contractors on electric technologies and plan for ongoing education to ensure a smooth transition.



Communicate Early and Often: Share your electrification goals with school boards, staff, and the community to build support and momentum. Consider adopting an electrification policy or resolution to formalize these into district processes and practices. Create a cycle of communication so stakeholders stay up to date and the process stays inclusive.



Start Small, Think Big: Begin with smaller pilot projects or equipment replacements, and build toward full electrification. Utilize every opportunity in the building lifecycle to incorporate electrification and energy efficiency.



Establish a Network: Find a network of peers that can help provide support, case studies, and examples of what has worked in practice.

Electrifying schools isn't just a technical upgrade, but rather a transformation that supports healthier students, stronger communities, and a more sustainable future. By combining electrification with smart energy efficiency strategies, schools can reduce their environmental impact while creating comfortable, cost-effective learning environments. Whether it's swapping out gas furnaces, upgrading lighting, or adding solar panels, every step brings us closer to schools that are cleaner, healthier, and built to thrive for generations to come. Your leadership can help bring about this change!

Looking to get started?

Find out more about school electrification with these resources:

- **NBI's Electrification Tools for Schools:**
<https://newbuildings.org/resource/electrification-tools-for-schools/>
- **Southern California Edison:** <https://www.sce.com/partners/resources/reach-codes>
- **California Division of the State Architect:**
<https://www.dgs.ca.gov/DSA/Resources/Page-Content/Resources-List-Folder/Achieving-Net-Zero-Energy-and-Net-Zero-Carbon-in-School-Facilities>
- **National Center on School Infrastructure:** <https://school-infrastructure.org/>
- **Rewiring Schools:** <https://www.rewiringamerica.org/go-electric/electric-schools>
- **Undaunted K-12 Case Studies:** <https://www.undauntedk12.org/case-studies>
- **Electric School Bus Initiative:** <https://electricschoolbusinitiative.org/tools>
- Contact schools@newbuildings.org for support!

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