

Electrification is making peak demand worse. Buildings need a new tool.

Heat pumps, EV chargers, and electrified water heating are increasing coincident peak demand on already-stressed feeders. Utilities need scalable peak mitigation at the building level — not just behavioral demand response.

40% of cooling load from windows

2–7pm peak demand window

30% federal solar ITC eligible

80% of buildings are existing stock

SolMod reduces cooling demand when it matters most.

Not passive solar hardware. A flexible thermal load modifier that intercepts heat at the facade — the cheapest point of intervention — during the hottest and most expensive hours.

Reduces peak cooling demand Exterior shading intercepts heat before it enters — directly cutting the coincident peak that drives infrastructure stress and demand charges.	Smooths the load shape Less thermal load at the facade means less HVAC cycling, lower ramp rates, and a smoother demand profile throughout the day.
Supports pre-conditioning During midday solar surplus, shaded buildings retain cooler temperatures — reducing the evening ramp when the grid is most stressed.	De-risks electrification Buildings adding heat pumps face higher peaks. SolMod reduces the incremental load — making transitions feasible within existing feeder capacity.

What this means for building owners

RESULT Lower demand charges Reduced peak electricity costs on your utility bill during the most expensive hours.	RESULT Less HVAC strain Reduced compressor cycling during extreme heat. Longer equipment life, fewer maintenance calls.	RESULT Electrification-ready Faster path to heat pump adoption without feeder upgrades or capacity constraints.
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Grid Impact (Modeled)

Peak demand reduction — Direct cooling load cut at coincident peak hours	Load-shape improvement — Smoother demand profile, reduced ramp intensity
Coincident peak reduction — kW reduction during ISO/utility peak window	Feeder deferral potential — Aggregated per-building impacts at feeder level

Electrification Synergy

Every building adding a heat pump or electrifying water heating increases peak demand. SolMod reduces that incremental load at the facade.

Heat pump retrofits

Reduce the incremental peak that heat pump adoption creates. Keep electrification feasible within existing feeder capacity.

Electrified water heating

Lower overall thermal load frees capacity for electrified water heating and commercial process loads.

Deployment Model

MODULAR

Retrofit-first

Works with existing window openings. No structural changes, no building electrical tie-in.

SIMPLE

Permit-light

Exterior-only install avoids interior renovation permitting complexity.

SCALABLE

Start with one facade

Expand based on measured results. Phased deployment from pilot to full building.

Regulatory Positioning

SolMod is passive infrastructure that enables controllable electrification at the building envelope.

- **Non-traditional demand response** — envelope-level load modification, not behavioral nudges
- **Infrastructure deferral** — aggregated building impacts reduce feeder upgrade pressure
- **Electrification enablement** — de-risk heat pump transitions by cutting coincident peak
- **Resilience co-benefit** — passive thermal management during grid stress events

Ready to explore a pilot?

We work with facilities teams, sustainability offices, and utilities to scope, install, and measure a facade-specific retrofit pilot.

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