



"Control Your Energy Destiny, or
Someone Else Will."

U.S. PATENT PENDING • PHOTOVOLTAIC + THERMAL ENERGY

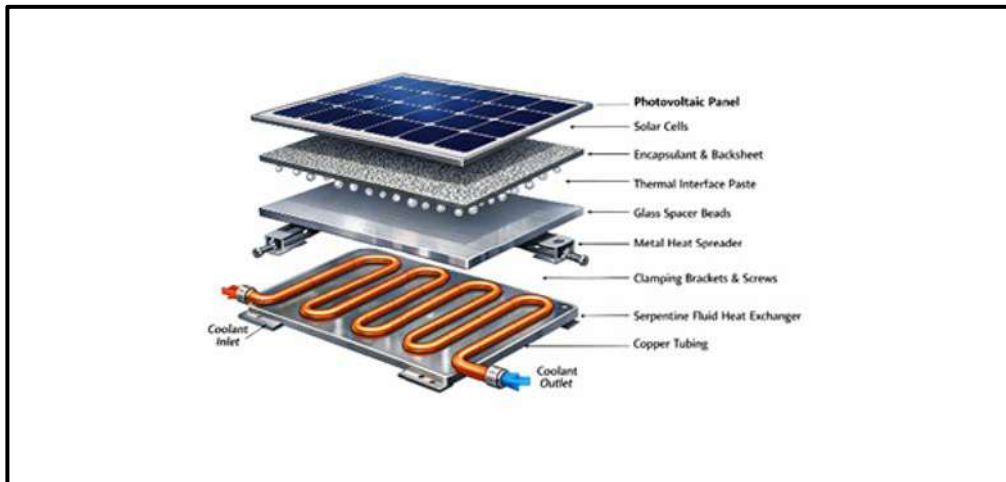
ThermaVolt™ PVT

Turn solar heat into working energy.

ThermaVolt™ PVT transforms a conventional solar array into a high-performance hybrid energy platform producing electricity and recovering usable thermal energy from the same panel footprint.

Stop Throwing Away Solar Heat.

Conventional photovoltaic systems lose much of the sun's energy as heat. **ThermaVolt™ PVT** captures that otherwise wasted energy and converts it into a useful, dispatchable thermal resource. The result is a true hybrid solar platform that produces electricity plus high-grade heat from the same installed panel surface.



WHY IT MATTERS



MORE ENERGY FROM EVERY PANEL

Produce electricity while recovering thermal energy that conventional PV systems typically waste.



COOLER, HARDER-WORKING PV

Active temperature control helps panels operate in a more productive range and reduces temperature-related stress.



THERMAL ENERGY ON DEMAND

Pair recovered heat with thermal storage to retain it and use it when the facility needs it most.



STRONGER PROJECT ECONOMICS

Unlock additional energy value streams and improve total solar-project returns without expanding the site footprint.

THE ThermoVolt™ ADVANTAGE

Built to Recover More of the Sun's Value.

ThermoVolt™ PVT combines advanced heat recovery, active panel-temperature management, storage readiness, and MTD's proprietary heat-transfer approach to turn a solar array into a more capable energy asset.

01. HEAT RECOVERY

Integrated Thermal Interface

A conductive thermal layer draws heat away from the back of the PV module and into the recovery system.

02. SMART TEMPERATURE CONTROL

Optimized Panel Operation

Temperature monitoring and responsive flow control help balance electrical output with recoverable thermal energy.

03. STORAGE READY

Dispatchable Thermal Energy

Recovered heat can charge thermal energy storage for flexible use across facility operations.

04. MTD HEAT TRANSFER

Heavy Cool™ HTF

MTD's advanced closed-loop heat-transfer fluid moves recovered heat from the panels to the point of use.

Recover it. Store it. Dispatch it. Monetize it.

ThermoVolt™ PVT turns conventional solar generation into a more valuable hybrid-energy platform.

ThermoVolt™ PVT | MORE VALUE FROM THE SAME SOLAR FOOTPRINT

Performance Signals

ThermoVolt™ PVT is designed to convert thermal loss into a measurable energy opportunity. The following figures are planning-level indicators to be validated during project engineering.

60–75%

solar energy typically lost as heat in conventional PV systems*

5,000–10,000

BTU of usable thermal output per panel, depending on location*

700 W/m²·K

target effective heat-transfer coefficient at the thermal interface*

10,000 cycles

thermal-stability target for Heavy Cool Pro*

Built for Every Buyer

ThermoVolt™ PVT creates distinct value for the stakeholders who specify, develop, operate, and benefit from solar-energy projects.

EPCs

Differentiate bids with a premium hybrid solar scope that combines thermal recovery, storage, and controls—not commodity PV alone.

Developers

Improve project economics by monetizing recovered heat, increasing total energy yield, and reducing temperature-related stress on modules over the asset life.

Corporate Sustainability Teams

Deepen decarbonization by using recovered thermal energy for heat pumps, hot water, heating loads, and industrial processes without expanding the site footprint.

Facility Owners

Reduce operating costs and gain dispatchable high-grade heat for practical uses across industrial, hospitality, data-center, and campus environments.

Paired with MTD's advanced **Heavy Cool™ HTF** cooling fluid and smart controls, the **ThermoVolt™ PVT** PV+Thermal platform gives building owners, data centers, and industrial facilities a new way to boost total energy output, open additional revenue streams, and significantly improve project returns without adding complexity to their operations.

High-Value Applications

Recovered PVT thermal energy can be configured around the loads that matter most at each site—turning a solar array into a flexible energy resource rather than an electricity-only asset.

Heat Pumps Provide a renewable thermal source for high-COP heat-pump applications.	ORC Power Generation Support Organic Rankine Cycle opportunities where site conditions and project economics align.	Industrial Process Heat Serve process loads that require practical, dependable thermal energy.
Domestic Hot Water Preheat or contribute to hot-water demand in commercial and institutional facilities.	Space Heating Support commercial heating loads and thermal distribution systems.	BESS Thermal Management Help manage battery operating temperatures in advanced energy-storage installations.

RECOVER IT. STORE IT. DISPATCH IT. MONETIZE IT.

Ready to make solar work harder? Contact Modern Thermal Design.

317-505-9200 • www.modernthermaldesign.com

*Planning-level statements. Actual performance depends on location, weather, system design, operating profile, equipment selection, and site conditions. Confirm final specifications and performance claims before publication.