



Energetic, LLC

Partner Showcase: Phase Change Solutions

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Energetic: What We Do



Energetic provides four service bundles:

1. Energy Bundle
 - a. Energy Savings and Cold Storage Risk Management: Phase Change Solutions
 - b. Energy Production and Efficiency Retrofits
 - c. Energy monitoring, smart building control systems and data management
 - d. Energy rate brokering
2. Energy Off-Taker Bundle (behind the meter energy consumers)
 - a. Cold Storage
 - b. Datacenters
 - c. Critical Industry
 - d. Controlled Environment Agriculture
3. Commercial Real Estate Development to support the above, as needed
4. Commercial Finance and Capital access

This presentation will focus on the application of phase-change products as part of an energy reduction application.



Introduction to PCS and the BioPCM[®] platform

Advanced materials leader, focused on temperature management and decarbonization

Our Vision: Smart Materials for People & the Planet

Target applications



Energy Efficiency & Storage



Cold Chain, Refrigeration, Mobility

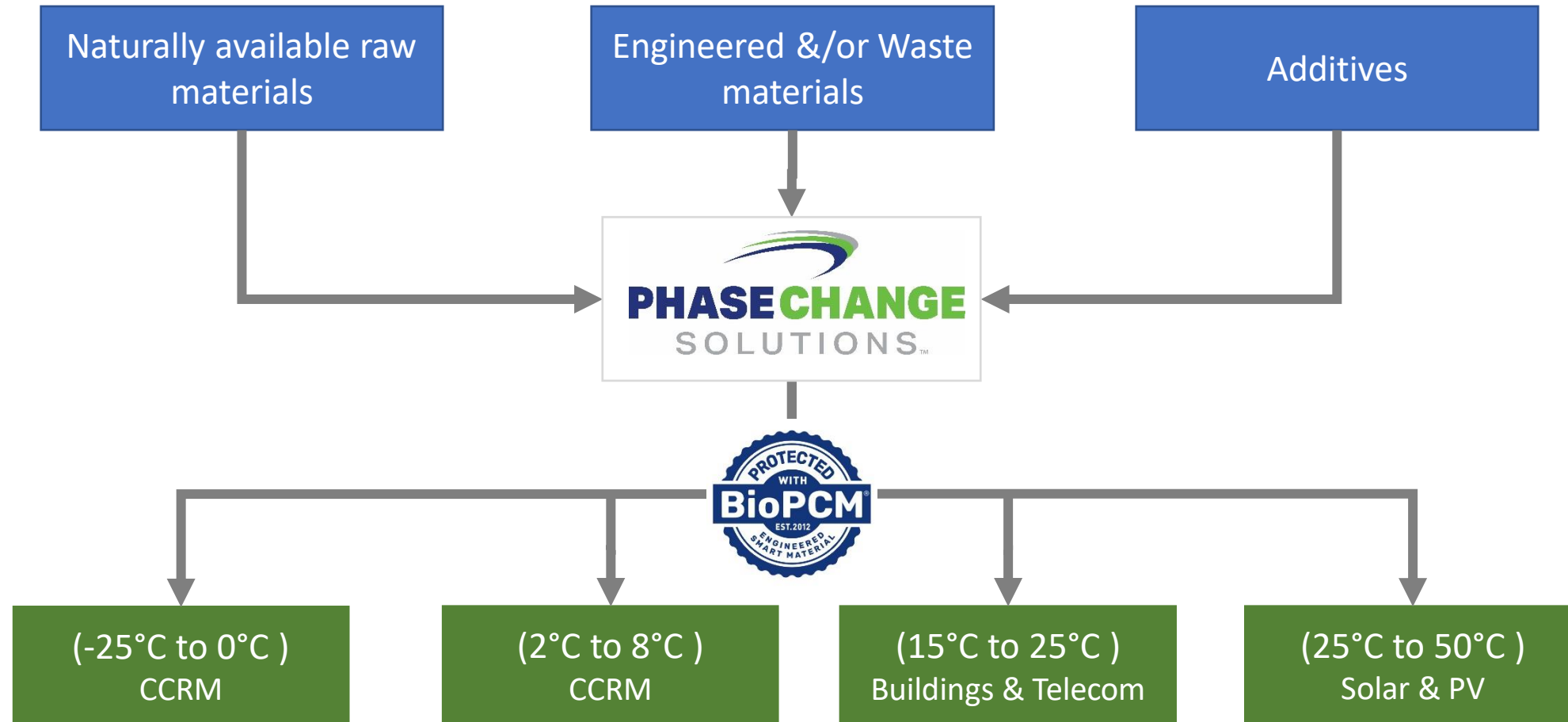


Telecom & Data Centers

Technology platform



BioPCM® - Engineered Smart Materials from PCS



CCRM: Cold chain, Refrigeration & Mobility

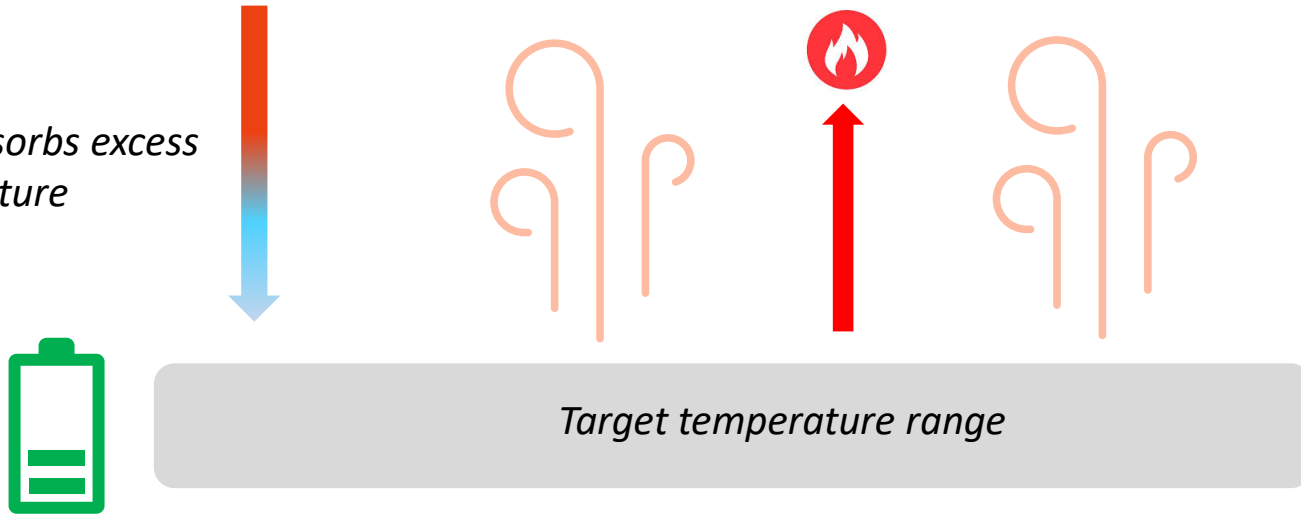
How does BioPCM[®] maintain temperature?



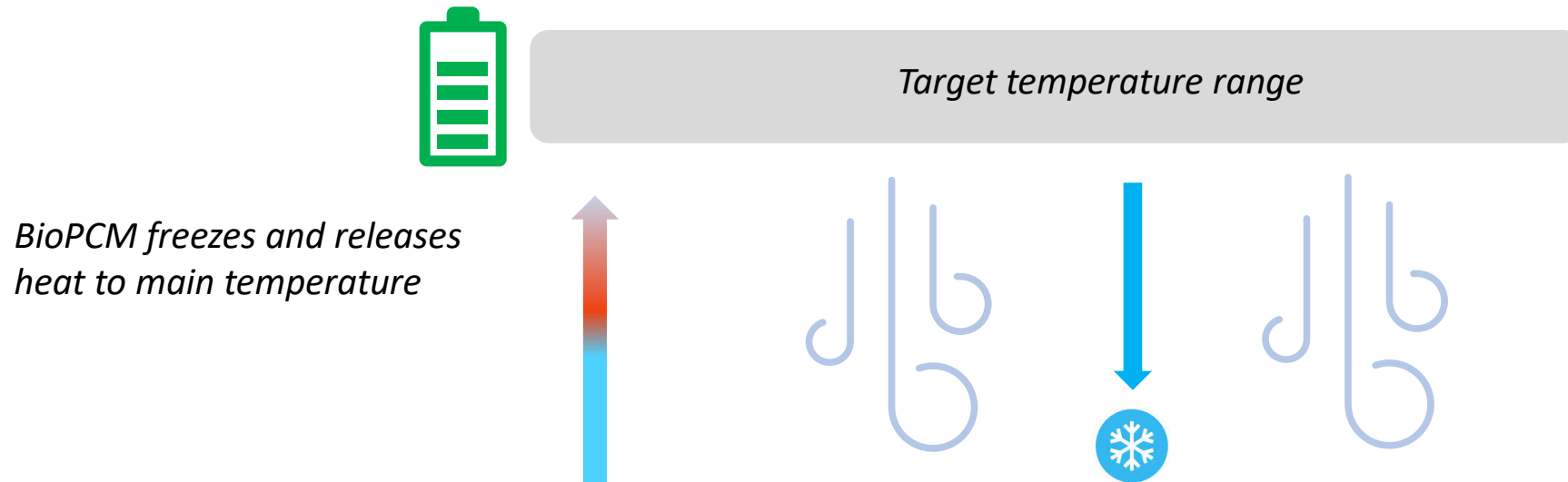
Target temperature range

How does BioPCM[®] maintain temperature?

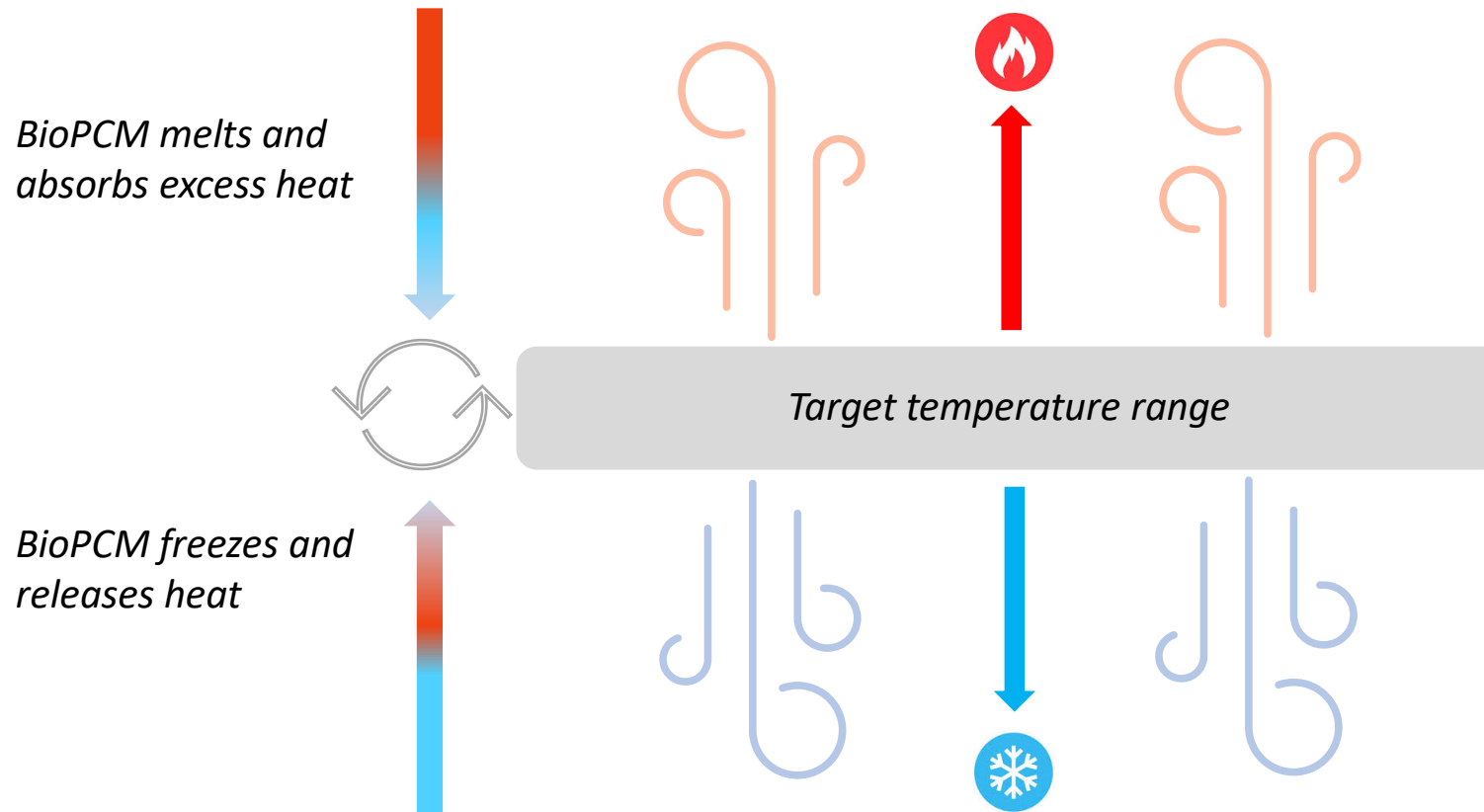
BioPCM melts and absorbs excess heat to main temperature



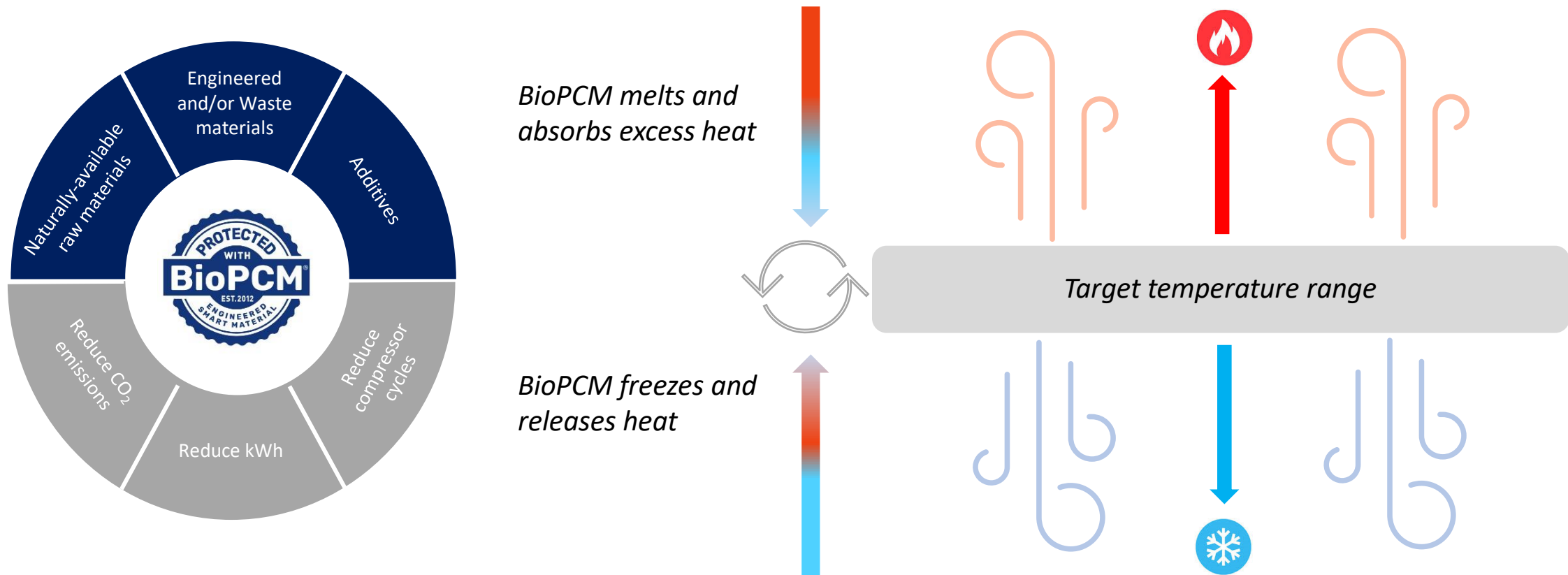
How does BioPCM[®] maintain temperature?



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How does BioPCM[®] maintain temperature?



Case studies of BioPCM[®] in use

BioPCM[®] eliminates food and pharma waste and reduces Scope 2 and Scope 3 emissions



14% is lost WW

4% of global GHGe

\$936B food lost WW / year

or

Feed 1.3 billion people



Eliminates waste



15% is lost WW

5% of global GHGe

\$35B biopharma lost WW / year

Case study #1 BioPCM[®] in fridges maintains safety, reduces kWh consumed and avoids waste

CHALLENGE

Power outages and mechanical failures of compressors, HVACs, trucks and fridges

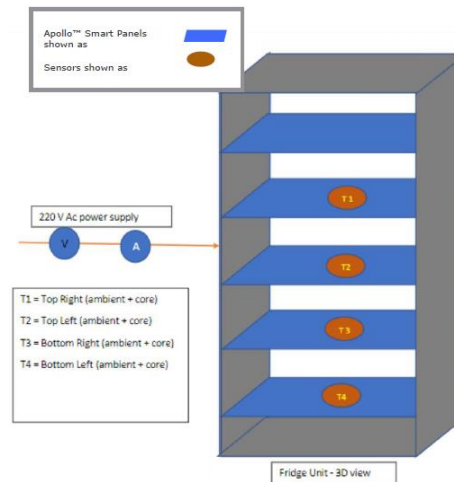
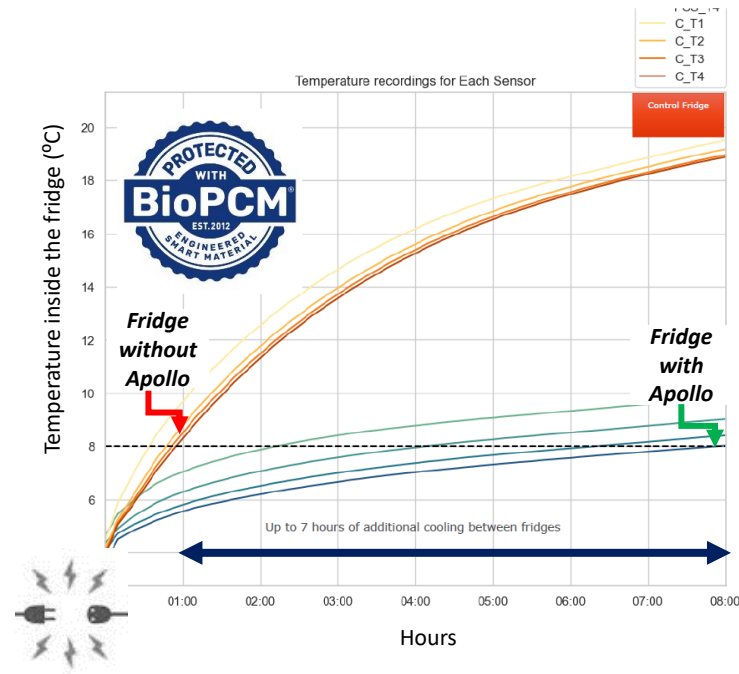
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Ambitious ESG commitments with few easy-to-deploy options

03



SOLUTION



Third party-verified BioPCM® performance database shows consistent results in buildings across every climate zone

- PCS performance database from previous pilots that followed strict IPMVP pilot of 1-year pre and 1-year post installation monitoring showed and proved consistent saving averages across all climate zones and regions.

| Region | # of Sites | PCM Coverage | % HVAC Saved | % WB Saved | (ft ²) Conditioned Space | kWh saved / ft ² |
|-----------|------------|--------------|--------------|------------|--------------------------------------|-----------------------------|
| Midwest | 71 | 63% | 26% | 9.1% | 3,914 | 3.31 |
| Northeast | 45 | 63% | 28% | 10.2% | 3,414 | 3.55 |
| Northwest | 12 | 65% | 33.8% | 11.8% | 3,766 | 3.25 |
| Southeast | 144 | 64% | 27% | 9.4% | 3,904 | 3.27 |
| Southwest | 207 | 61% | 23.1% | 8.2% | 3,998 | 2.83 |
| West | 176 | 60% | 19.6% | 6.2% | 4,648 | 1.71 |

| ASHRAE Climate Zone | # of Sites | PCM Coverage | % HVAC | % WBS | (ft ²) Conditioned | kWh saved / ft ² |
|---------------------|------------|--------------|--------|-------|--------------------------------|-----------------------------|
| 1a | 30 | 63% | 23.5% | 8.2% | 4,074 | 3.00 |
| 2a | 131 | 63% | 28.4% | 9.9% | 3,932 | 3.65 |
| 2b | 74 | 60% | 22.3% | 8.1% | 4,132 | 2.53 |
| 3a | 94 | 63% | 20.5% | 7.1% | 3,854 | 2.49 |
| 3b | 144 | 61% | 20.2% | 6.2% | 4,678 | 1.72 |
| 3c | 176 | 60% | 19.6% | 6.2% | 4,648 | 1.71 |
| 4a | 39 | 63% | 31.1% | 10.9% | 3,462 | 3.67 |
| 4b | 3 | 62% | 38.1% | 13.3% | 4,090 | 3.52 |
| 4c | 10 | 65% | 33.6% | 11.8% | 3,719 | 3.23 |
| 5a | 80 | 62% | 24.9% | 8.9% | 3,811 | 3.28 |
| 5b | 17 | 61% | 29.5% | 10.3% | 3,967 | 3.04 |
| 6a | 2 | 65% | 34.6% | 12.1% | 4,264 | 2.74 |

| State | # of Sites | PCM Coverage | % HVAC Saved | % WB Saved | Conditioned Space (ft ²) | kWh saved / ft ² |
|-------|------------|--------------|--------------|------------|--------------------------------------|-----------------------------|
| AZ | 76 | 60% | 22.4% | 8.1% | 4,084 | 2.52 |
| CA | 170 | 59% | 19.1% | 6.0% | 4,687 | 1.63 |
| CO | 15 | 61% | 29.1% | 10.0% | 3,902 | 2.86 |
| CT | 3 | 65% | 36.0% | 12.6% | 3,063 | 4.39 |
| FL | 103 | 64% | 27.0% | 9.4% | 3,968 | 3.39 |
| GA | 34 | 64% | 25.2% | 8.8% | 3,870 | 2.57 |
| IL | 21 | 59% | 19.4% | 6.8% | 3,771 | 2.84 |
| IN | 11 | 65% | 21.2% | 7.4% | 3,691 | 1.97 |
| KY | 3 | 62% | 28.0% | 9.8% | 3,728 | 3.09 |
| LA | 3 | 63% | 47.9% | 16.8% | 3,308 | 8.24 |
| MI | 21 | 65% | 34.0% | 11.9% | 4,055 | 4.72 |
| NC | 1 | 60% | 19.8% | 0.9% | 700 | 0.44 |
| NJ | 17 | 65% | 27.7% | 9.7% | 3,396 | 3.33 |
| NV | 7 | 66% | 33.0% | 11.6% | 3,591 | 3.65 |
| NY | 25 | 60% | 27.2% | 10.3% | 3,468 | 3.60 |
| OH | 16 | 64% | 26.6% | 9.3% | 4,028 | 3.09 |
| OK | 4 | 56% | 17.5% | 6.1% | 4,472 | 1.73 |
| OR | 2 | 61% | 34.4% | 12.0% | 3,425 | 3.30 |
| TX | 112 | 63% | 23.0% | 8.0% | 3,935 | 3.06 |
| WA | 10 | 66% | 33.7% | 11.8% | 3,835 | 3.24 |
| WI | 2 | 65% | 34.6% | 12.1% | 4,264 | 2.74 |

Whole building savings = WBS

Database created by Touchstone IQ after auditing PCS results

Case study #2: BioPCM® in a bank site in Florida



- Goal: Bank site in Miramar, Florida wanted to reduce energy consumption in their buildings and improve overall comfort. Square footage with installed blankets: 2,720 sq. ft.

| | Pre-ENRG Blanket® | Post-ENRG Blanket® |
|-------------|-------------------|--------------------|
| HVAC Cycles | 2,724 | 2,385 |
| Time (hrs) | 1,185.25 | 1,230 |
| Cycles/hr. | 2.30 | 1.94 |

| | Pre-ENRG Blanket® (kWh) | Post-ENRG Blanket® (kWh) | HVAC Energy savings (%) |
|--------------|-------------------------|--------------------------|-------------------------|
| Cooling | 55,805.85 | 43,262.13 | 19.84% |
| Heating | 7,403.42 | 5,491.53 | 3.02% |
| Total | 63,209.26 | 48,753.66 | 22.87% |

Case study #3: BioPCM[®] in a gas station in Greece

- Goal: Gas stations in Greece were being upgraded with new ceilings. The investor was looking for an opportunity to reduce energy consumption and decarbonize these buildings.

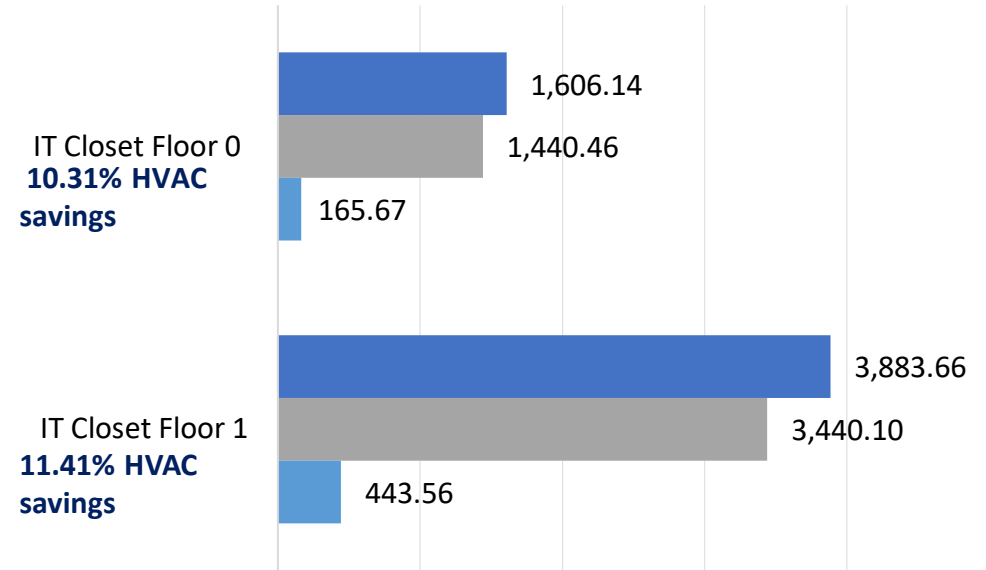


| Cooling Only | Heating Only |
|---|---|
| <ul style="list-style-type: none"> • 17% HVAC savings • 9,055 kWh Saved • OR 3.9MT of reduction in CO2 • €1,087 savings per year • 3.5-year simple ROI | <ul style="list-style-type: none"> • 36% HVAC savings • 8,558 kWh Saved • OR 3.7MT of reduction in CO2 • €1,027 savings per year • 3.7-year simple ROI |

| Heating and Cooling (combined) |
|--|
| <ul style="list-style-type: none"> • 23% HVAC savings • 17,613 kWh saved • 7.6MT of reduction in CO2 • €2,114 per Year • 1.8 – year ROI |

Case study #4: BioPCM® in IT closets at NewLab, NY

- Goal: Demonstrate HVAC energy savings in two IT closets at the Brooklyn Navy Yard, NY.
- Products used: ENRG Blankets



| | IT Closet Floor 1 | IT Closet Floor 0 |
|----------------------|-------------------|-------------------|
| ■ Pre-Install (kWh) | 3,883.66 | 1,606.14 |
| ■ Post-Install (kWh) | 3,440.10 | 1,440.46 |
| ■ Savings (kWh) | 443.56 | 165.67 |

Case study #5: BioPCM[®] in a telecom shelter



Goal: Telecom customer wanted to reduce energy consumption and slash CO₂e to meet corporate net-zero goals

Energy Panel[®] in a 20 sq. m. telecom shelter (33 panels)

| | |
|--|----------------|
| Annual savings in energy consumption (kWh) | 10,220 kWh |
| Annual cost savings per site (\$) | \$1,226 |
| Pay back period at \$0.12/kWh | 1.5 years |
| CO ₂ e reduced (MT) | 4 MT/site/year |



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Initial consultation to help us serve you better.

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Finance

30 mins | Free

Initial consultation to explore how we can best facilitate your finance requirements.

BOOK



Phase Change Thermal

30 mins | Free

Manage cooling risk, and lower your cooling costs 30%.

BOOK



Other Services

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Use this services category to schedule a discussion for our other services.

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