BLUE FRONTIER™

RETHINKINGAIR™

BF-DOAS™ with Thermal Storage

EFFICIENT - 3X more efficient than traditional DX equipment

FLEXIBLE - Dispatchable thermal storage

HUMAN - Superior temperature and humidity control

www.BlueFrontierAC.com

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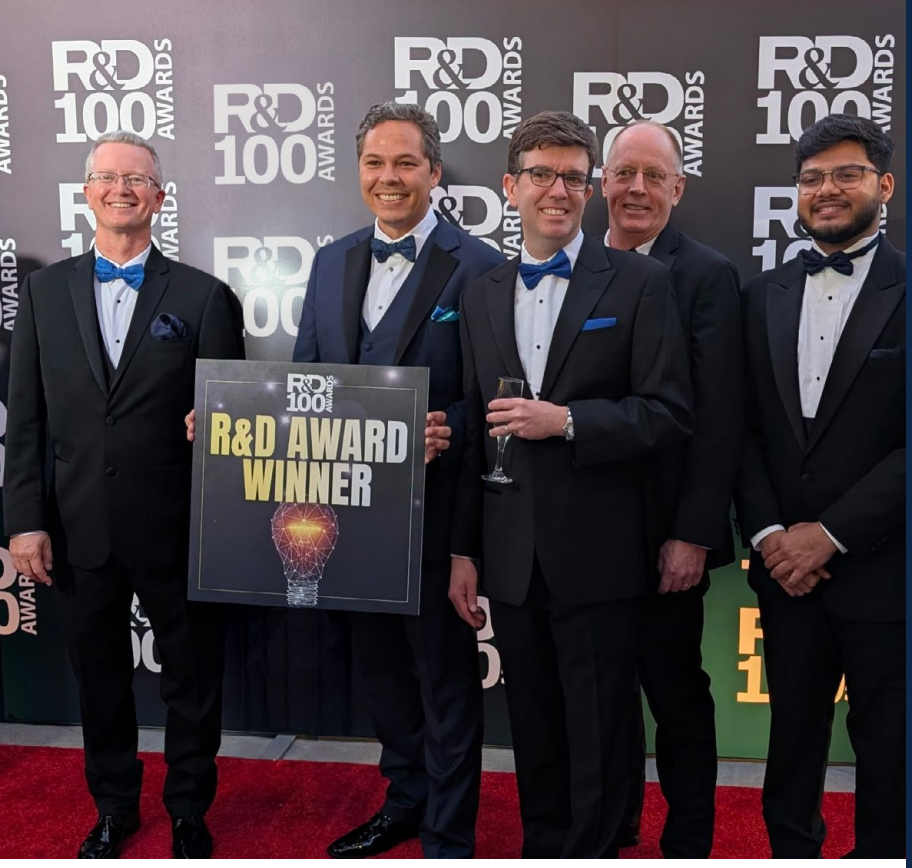
BLUE FRONTIER
THE WORLD'S MOST EFFICIENT



*OUR **VISION***

To transform air conditioning from an environmental problem to a sustainability solution that is widely accessible and improves people's lives.

*OUR **MISSION***

We are creating a sustainable planet by making buildings flexible, efficient, healthy, and comfortable.
We are 'Rethinking Air'.

Who is Blue Frontier?

We are a Boca Raton, Florida-based manufacturer working to change the HVAC industry. Led by CEO Dr. Daniel Betts, Blue Frontier is revolutionizing HVAC with its unique BF-DOAS™. The unit was created to handle the challenge of dehumidifying air while using less energy than conventional units.

Blue Frontier has engineered an air conditioner that decouples sensible and latent loads, delivering independent control of discharge temperature and dew point. Integrated with a 90kWh equivalent thermal battery, it enables dispatchable cooling—storing energy and using it when advantageous for the grid and the ratepayer. The result: 3X higher efficiency than conventional DX systems, precise humidity and temperature control, and a grid-interactive platform that redefines how air conditioning consumes and shifts energy.

Discover the
WORLD'S MOST EFFICIENT DOAS

[Dedicated Outdoor Air System]

3X More Efficient
Up to 90% reduction in yearly electricity use.

Perfectly Quiet
No condenser.

Improved Comfort
Independent humidity and temperature control.

Flexible Efficiency
Up to 6 hours of embedded energy storage. Use it when you need it.

How we make a
Difference

Dramatically reduces AC electricity consumption

Eliminates peak electrical demand charges

Ties AC to renewable demand

A pathway to eliminating refrigerants with >1 GWP

Provides precise ventilation and humidity control

Blue Frontier solves every problem with today's AC equipment.

The Blue Frontier Process

Designed for commercial use, the Blue Frontier DOAS integrates energy storage, cooling, and humidity control into a single system, cutting peak air conditioning power demand by more than 90% and lowering electricity bills for cooling by more than 45%.

BF-DOAS™ operates by separating dehumidification from active cooling using a TE-Sal desiccant system that absorbs moisture directly from the air, and ultra efficient indirect evaporative cooling to precisely suppress discharge dry-bulb. This method requires significantly less energy than conventional dehumidification processes, helping reduce operating costs.

Blue Frontier DOAS Unit Specifications

MODEL	NOMINAL CAPACITY	AIRFLOW RANGE	DIMENSIONS	INSTALLED WEIGHT
BF DOAS	15-20 ton	400 - 3500 CFM	17'L x 6'W x 6'H	7,950 lbs

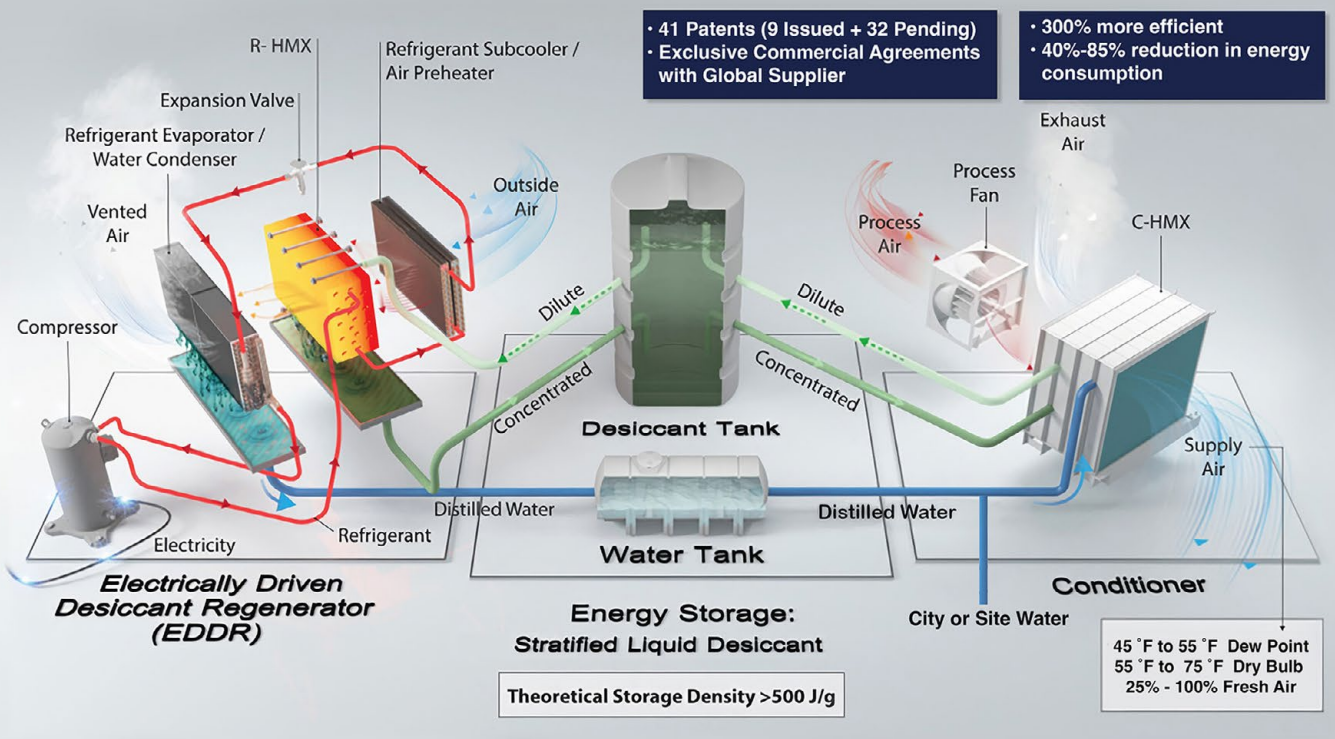
Db RANGE	Dp RANGE	ESP	WATER CONSUMPTION	% OUTDOOR AIR
63°F - 75°F	48°F - 55°F	0.2" - 2.5"	0.2 - 0.8 gpm	25% - 100%

Equivalent Rated Efficiency

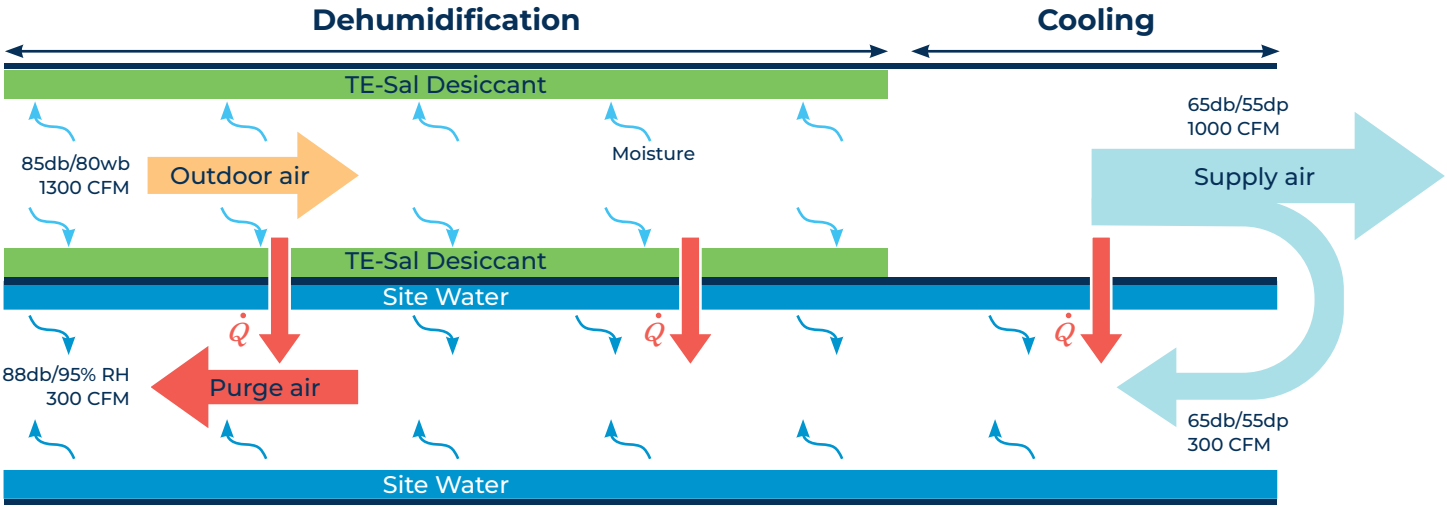
	ASHRAE 90.1 Min. Efficiency	BLUE FRONTIER (Standard Run Mode)	BLUE FRONTIER (Storage Mode)	% ABOVE MIN. EFFICIENCY (Standard Run Mode)
EER	11.0	23.6	90 - 130+	114.5%
IEER	14.2	23.0	35+	62.0%
$ISMRE2_{70}$	4.0	10.5	45+	162.5%
COP	-	6.9	25.6	-
kW/ton	-	0.51	0.14	-

Electrical Specifications

VOLTAGE	MCA	MOP	POWER (Standard Mode)	POWER (Storage Mode)
460/60/3	50.4	70	15kW - 20kW	0.9kW - 2.0kW
208 - 230/60/3	73.0	100		



How we are more EFFICIENT

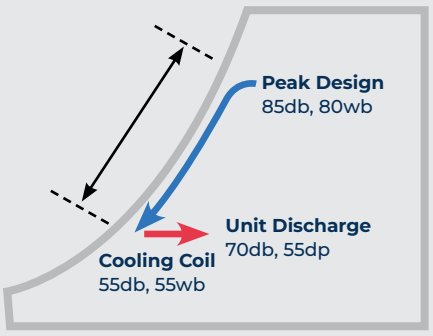


Dry-bulb - Controlled by water flow (0.2 - 0.8 gpm/unit) and purge air flow rate.

Dew point - Controlled by TE-Sal flow (2.0 - 2.5 gpm/unit) & TE-Sal concentration.

Classic DX DOAS

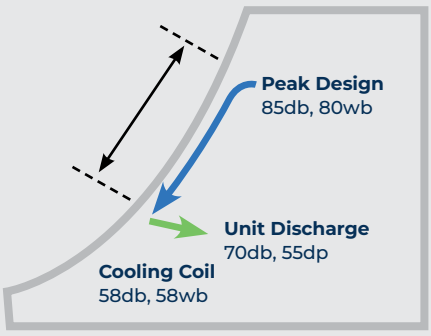
21 tons to achieve set point, assuming "free" hot gas reheat.



A traditional DX DOAS requires an excessive extraction of thermal energy in order to reach the desired discharge dew points. If available, hot gas reheat is injected back into the air to prevent overcooling the space.

DX DOAS
with Desiccant Dehumidification

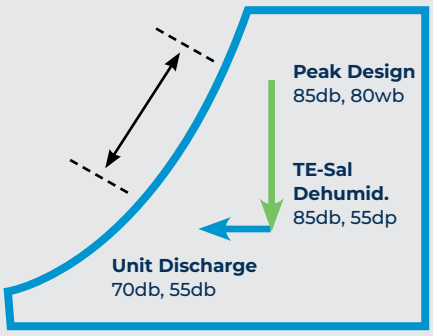
18 tons to achieve set point, assuming free regeneration heat - an 11% reduction in energy consumption, to achieve the same set point.



Even more sophisticated liquid or solid desiccant dehumidification systems still require overcooling to account for the adiabatic heat pickup during their dehumidification process.

Blue Frontier DOAS

14 tons to achieve set point with "free" indirect evaporative cooling - a 35% reduction in energy consumption, to achieve the same set point.



Blue Frontier's process extracts thermal energy to reach a desired dew point. Additional, sensible energy, is extracted through indirect evaporative cooling to meet the desired dry-bulb.

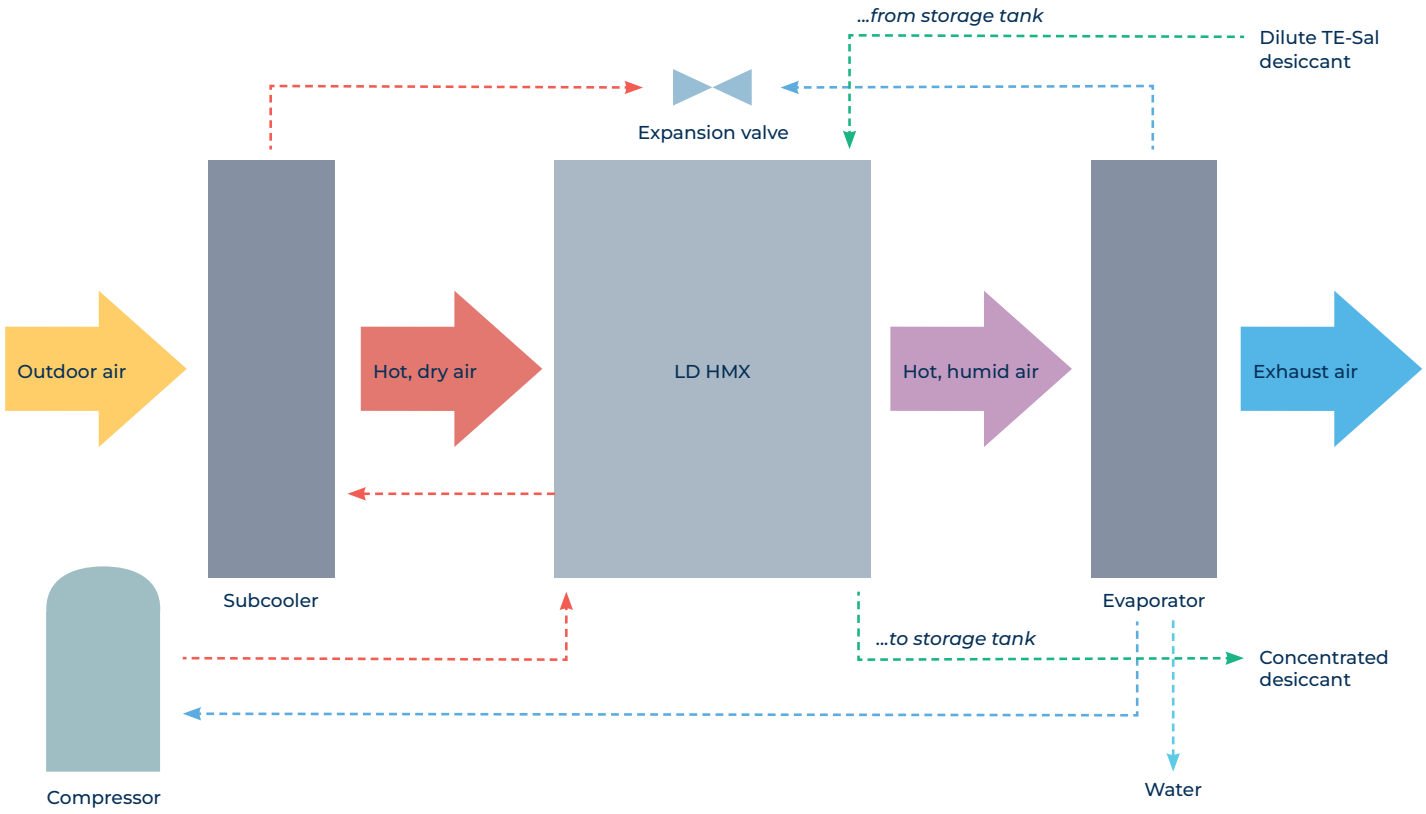
Blue Frontier follows the most efficient path to a discharge air condition.

The key to our Energy Storage & Consumption

Blue Frontier has harnessed the next generation in liquid desiccants - **TE-Sal**. Our USA-manufactured TE-Sal ***eliminates*** corrosion concerns, brought on with the use of lithium chloride. We utilize a non-toxic, inexpensive and easily-sourced liquid desiccant that will transform the industry.

Our TE-Sal desiccant regenerator is capable of running off:

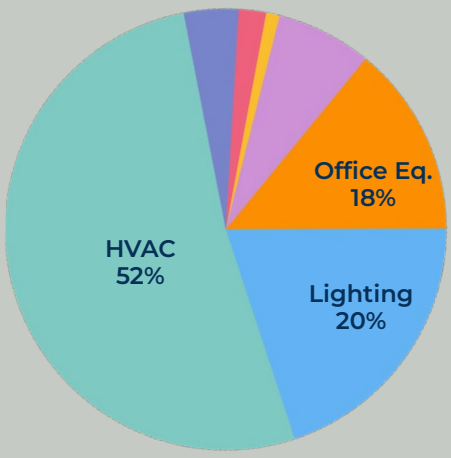
1. Heat from vapor compression cycle.
2. Waste heat at or above 122°F.
3. Either, depending on what is available at the time.



Currently using R454B refrigerant. Coming soon, R290 with a GWP of 0.02

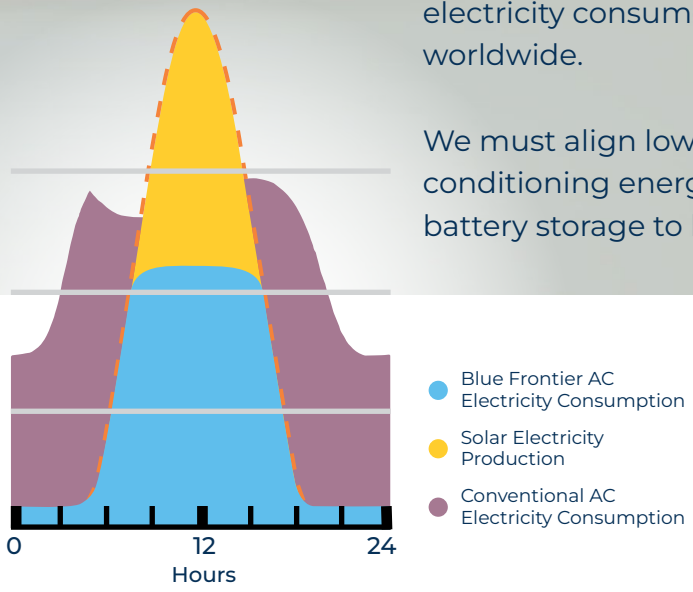
Utilities around the world are sounding the alarm that the rate of increasing energy production will not keep up with the rate of increased energy consumption. The primary concern is the increasing demand for inefficient air conditioning.

HVAC is the single biggest electricity consumer in buildings, and demand is only surging. The International Energy Agency warns that air conditioning is set to become the fastest-growing electricity consumer in buildings worldwide.

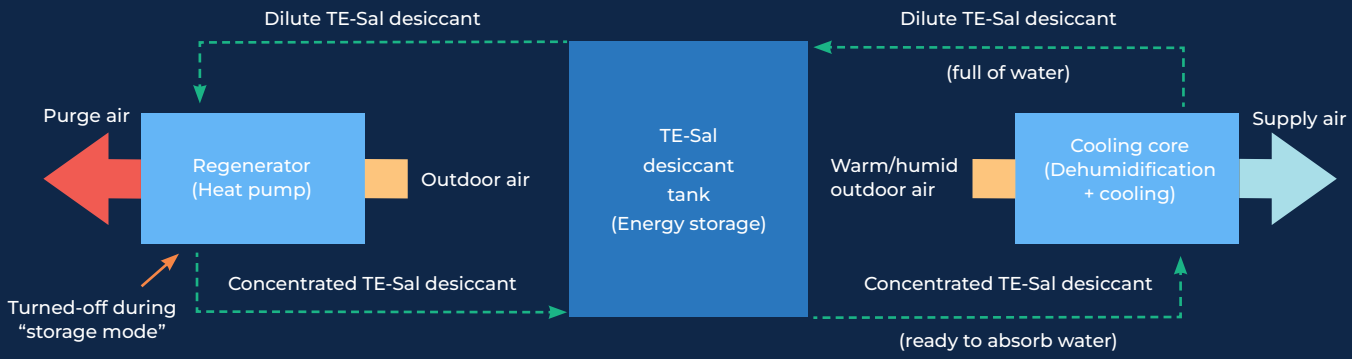


Electrical Consumption in Commercial Buildings

We must align low cost, efficient energy generation and air conditioning energy consumption without expensive lithium ion battery storage to bridge the gap when renewables are not available.



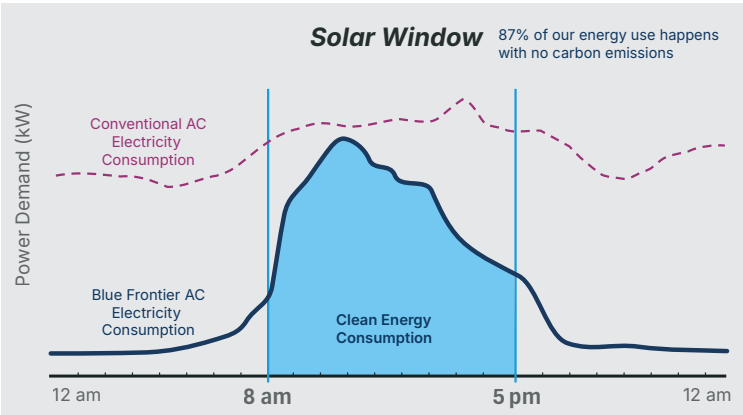
Blue Frontier solves this with our built in 150 gallon liquid desiccant tank (equal to a 90kWh battery), capable of providing 4-6 hours of full load performance per day with less than 1,800 watts of electricity consumption.

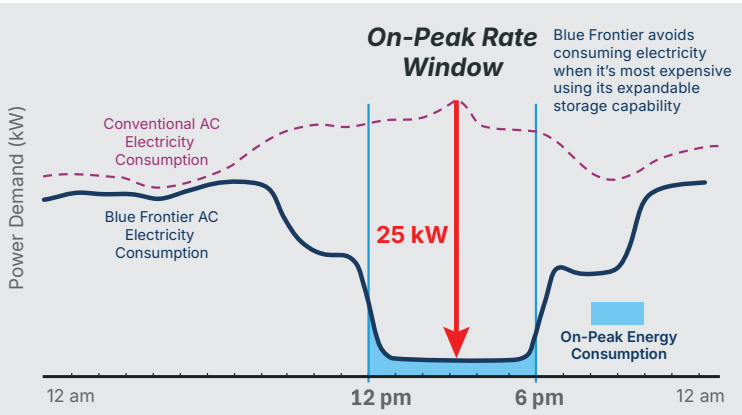


Charging when on-site solar is available

-OR-

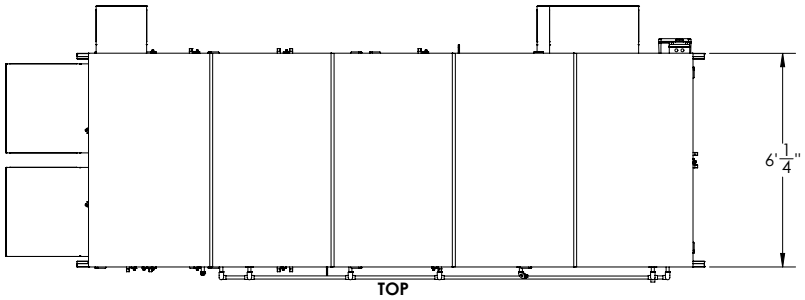
Supporting the grid during peak hours

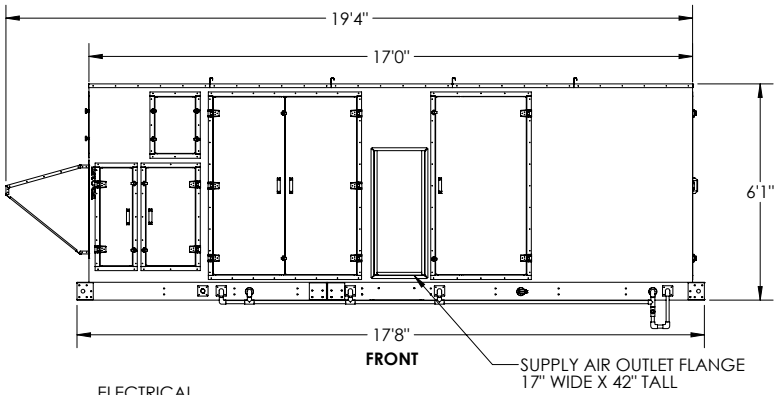


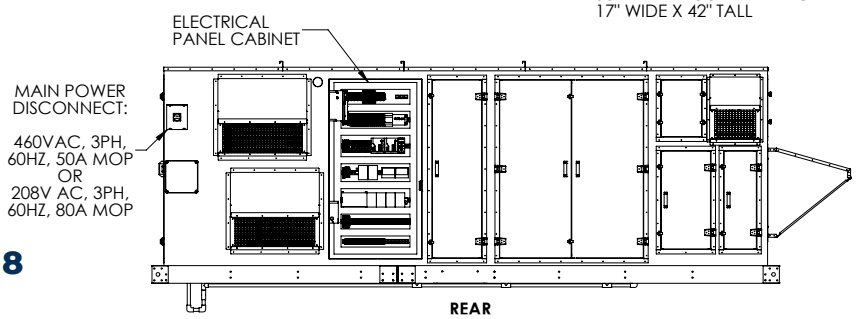


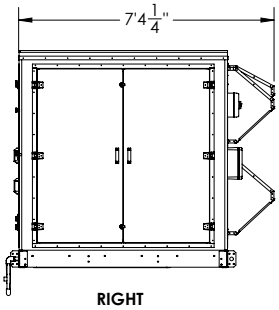
The Blue Frontier
Standard

Our team is relentlessly dedicated to continually enhancing our system's operation and underlying processes. We are constantly seeking advancements in efficiency and driving significant cost savings. Every unit is digitally twinned back to Blue Frontier's headquarters for continuous monitoring, fault detection and optimization.









The unit is eligible to receive a

30-50%

turnkey incentive tax credit (ITC)

The ITC can be applied to both the unit cost and the installation cost. Additionally, utility and further tax credits are available. Blue Frontier is happy to provide guidance and support to ensure maximum savings.

We partner with and are backed by the most prestigious names in the industry

NREL National Renewable Energy Laboratory · 2150 · VoLo Earth Ventures · Breakthrough Energy Ventures · Modern Niagara

Innovation Incubator IN² · Third Derivative · UTD Utilization Technology Development · Florida Opportunity Fund · Joules Accelerator

DeepWork Capital · ENGAGE · New York State of Opportunity. NYSERDA · SyracuseCoE Syracuse University Environmental and Energy Systems, New York State's Center of Excellence · Caltech Rocket Fund

Oak Ridge National Laboratory · U.S. Department of Energy · California Energy Commission · The Clean Fight New York · CalNEXT Energizing California's Future

Our technology and team have been acknowledged by the most reputable entities

AHR 2026 Product of the Year Winner — Blue Frontier

AHR 2026 Innovation Awards Winner — Sustainable Solutions — Blue Frontier BF-DOAS

2025 R&D 100 Winner

Winner BNEF Pioneers 2022 — BloombergNEF

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