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# YOUR GUIDE TO OUR TECHNOLOGY

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# THE ONLY EFFORTLESS ENERGY TECHNOLOGY SOLUTION

To keep your facilities operating effectively, safely, and profitably, count on Budderfly's unparalleled ability to completely manage your energy-using systems. Budderfly does more than simply upgrade our customers' facilities. We assume full responsibility for making sure our technology saves energy, reduces costs, and improves the environment of the facility. We combine our own unmatched proprietary hardware, software, and expertise with the best available systems and devices, seamlessly implementing and managing it all for you.



During the COVID-19 Pandemic and looking forward to the months and years that will follow it, the ever-changing "New Normal" that our customers face requires technology that can evolve and adapt to the emerging needs and opportunities of their industry, all integrated, managed, and maintained flawlessly. Below are some of the most important devices and systems Budderfly uses to help our customers save and succeed.

# BUDDERFLY HVAC SOLUTIONS

The systems that heat and cool your buildings are often your biggest source of energy waste, and it only gets worse each year your system is in operation. As we all work together to safely resume and expand buildings and operations during the **COVID-19 pandemic**, ventilation systems as a potential point of viral transmission present a particular challenge.

**THE BUDDERFLY  
APPROACH TO HVAC IS  
SIMPLE AND POWERFUL:**



## UPGRADE

WE ATTACK EVERY ASPECT OF YOUR ENERGY USING SYSTEMS: REPLACING AND UPGRADING AS NEEDED TO GENERATE MAXIMUM SAVINGS AND TO GIVE YOU OPERATIONAL CONTROL OVER YOUR SIDE OF THE ELECTRIC METER.

## CONNECT

ALL OF YOUR EQUIPMENT WILL BE CONNECTED TO THE BUDDERFLY ENERGYCLOUD, MAKING US RESPONSIBLE FOR CREATING COMPREHENSIVE EQUIPMENT, OPERATIONS, AND DATA REPORTING SYNERGIES.

## MAINTAIN

EVERYTHING IN YOUR HVAC SYSTEM WILL BE FUNCTIONING TO THE HIGHEST AND MOST EFFICIENT STANDARDS WHEN WE ARE DONE, WITH OPTIONS WHERE WE WILL HANDLE YOUR FUTURE MAINTENANCE AT NO ADDITIONAL ANNUAL COSTS.

## REFINE

IN THE FUTURE OUR PLATFORM WILL ALLOW PERFORMANCE AND USAGE TO RESPOND TO CONTINUOUS AI LEARNING OF YOUR SYSTEM. UNTIL THEN, CAPACITY, HEATING AND COOLING WILL BE SET TO OPTIMIZE SETTINGS FOR THE BEST TIME OF USE AND MINIMIZE THE AMOUNT OF ENERGY USED.

# H V A C

## **ANTIVIRAL UV AIR DECONTAMINATION:**

We are working to provide safety for your employees, customers, and visitors from your HVAC system

Soon Intense UV-C light may kill viruses as your system recirculates your air. Our laboratory is working to find solutions that will make sense for each of our unique sets of customers from Public Schools to Quick Serve Restaurants.

## **BUDDERFLY HVAC REACT CHIP:**

Smart technology recaptures wasted energy

Installed at the HVAC coil locations, these devices use algorithms to anticipate temperature changes in small HVAC units and capture lost heating/cooling energy.

## **BUDDERFLY SUPER HVAC CHIP:**

Advanced duct temperature monitoring

We are testing the deployment of sensors in the supply and return air ducts of medium-sized systems (5 ton to 20 tons) to see the efficiency impacts of advanced air temperature monitoring.

## **NEXREV VFD:**

Control fans and airflow for even greater efficiency

This software-enabled VFD system does not replace existing motors, but links airflow and fan activity to smart thermostats for better savings and performance in medium to large systems (5 ton to above 20 tons).

## **VENSTAR PROGRAMMABLE THERMOSTATS:**

Total Control for the most sophisticated HVAC systems

These Wi-fi enabled devices are in constant communication with all adjustable components in your optimized, upgraded HVAC system.

## **BUDDERFLY SOLAR THERMAL HVAC:**

One day the sun can enhance your HVAC

We are reviewing systems that use solar heat to supplement and relieve loads from compressors, cut electricity usage, and prolong equipment life. Whenever new technologies prove themselves in our lab or the field, Budderfly will be knowledgeable and ready to implement them quickly.







# BUDDERFLY LIGHTING SOLUTIONS

With brighter, clearer, whiter light and adjustable LED components, **Budderfly** interior and exterior lighting solutions cut energy costs by **50% or more** while transforming customer facilities to look better, cleaner, and **more inviting**. Our planning processes seek to integrate smart meters, timers, and sensors to maximize energy savings and also to ensure that your facility has the right lighting profile.

To optimize each individual facility, Budderfly may retrofit LED bulbs into existing fixtures or replace units with new ones, all at no cost to the customer. We have an extensive inventory and access to top suppliers, and we may be able to work with your preferred dealer to meet specific design needs.



# L I G H T I N G

## **BUDDERFLY OCCUPANCY SENSORS**

Simple, effective, essential

These sensors offset usage during low occupancy times in all general areas, as well as rooms that are not frequently used (ex. Bathrooms, storage rooms etc.).

## **BUDDERFLY EXTERIOR LIGHTING CONTROLS**

Responsive & reliable

These control systems incorporate timers that keep lighting usage on schedules and light sensors to adjust for daytime and overcast weather conditions.

## **BUDDERFLY FLAT PANEL LED LIGHTS:**

Ideal lighting, indoors & out

Our general-purpose LED units provide ideal lighting with adjustable hues.

## **BUDDERFLY HIGH BAY LINEAR LED LIGHTS:**

Amazingly bright & efficient

These units are ideal for indoor sports & activity areas with ceilings of 10 feet to 30 feet.

## **BUDDERFLY TROFFER CENTER BASKET LIGHTS:**

Bright & sophisticated

This designer variation on flat-panel LED units can give an upscale, classy appearance while providing clean, bright white LED light to any space.

## **BUDDERFLY LINEAR LIGHTS:**

Tons of light, tons of savings

These 4-foot by 8-inch LEDs provide ample, bright, clean, adjustable light to large spaces with ceilings up to 30 feet.

## **BUDDERFLY UFO LED LIGHTS:**

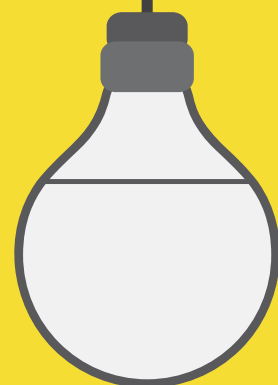
Out-of-this-world brightness

These attractive, bright units provide specialized spot and directional lighting.

## **BUDDERFLY OUTDOOR LED LIGHTING:**

Create a bright, safe space around your facility

Our full range of wall pack lights and pole lighting units cut lighting costs by up to 60% and give all your walkways, parking areas, and other outdoor spaces bright, beautiful lighting.





# BUDDERFLY REFRIGERATION SOLUTIONS

For facilities that store and serve food, refrigeration and freezing are major sources of energy waste, as well as vital systems that need to perform at their best, around the clock. This equipment and the food it keeps safe are huge investments for our customers.

That's why **Budderfly** provides the most advanced systems for monitoring and controlling refrigeration and freezer units, with sophisticated monitors, smart motor fan replacements and other site specific upgrades. **Budderfly systems reduce costs**, improve performance, reduce food spoilage and waste, and immediately alert both on-site and off-site managers of any irregularities or malfunctions.



# REFRIGERATION

## **KE2 THERM WALK-IN FREEZER/REFRIGERATOR UNIT**

This combined control, sensor, and alert system monitors temperature 24/7/365 and streams data to the Budderfly desktop app. The unit also automates defrost cycles to cut frequency and related energy usage by 50%. Sophisticated sensors track coil temperatures, air flow, door openings and temperature shifts and make adjustments as needed.

## **QM POWER ECM MOTOR UPGRADE & POWER FAN REPLACEMENT**

Small, smart motors (.25 to .5 Horsepower) act as a Variable Frequency Drive (VFD), communication with multiple sensors, maximize performance, and minimize energy waste, helping reduce usage by approximately 50%. A small graphite fan replaces older aluminum fans in walk-in box and other refrigeration equipment, yielding better functionality, longer life, and decreased energy use.

## **BUDDERFLY USES COLD PLUS FORMULA COOLANT**

This treatment improves the efficiency, extends the life, and reduces the maintenance costs of existing equipment.





# THE BUDDERFLY ENERGYCLOUD AND OUR SMART METERING SOLUTIONS

You can't manage what you don't measure.

**Budderfly** creates savings and improves building environments for our customers using our networked smart meters throughout each facility that track, analyze, and will someday even modify - on their own - the way energy systems perform. While your electric utility company measures at just one meter, outside your building, **Budderfly** can place dozens of sub-meters and sensors, collecting and implementing data from each energy-using fixture and piece of equipment.



The data and analytics we provide can be as valuable as the energy savings, allowing chains and Multi-Unit Operators (MUOs) to get a head start on PM issues and to compare their different locations in detail.





To be quickly connected to one of our Account Executives near you please call 855.299.1334, or visit [budderfly.com](http://budderfly.com) to learn more.



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