



# Portable Biomass Energy





## A Revolution in Biomass Energy

The Biocharger® is a revolutionary new machine for the handling of biomass waste. It is a portable machine manufactured by Air Burners, Inc. and is used for eliminating vegetative waste in an environmentally friendly manner while converting it to electricity. The electricity is stored within the machine in a Battery Storage Module, ready to use onsite to support all your battery operated machinery from large excavators to cell phones. With the Biocharger it is now possible to run a completely diesel free remote work site. We are collaborating with Volvo CE for advice and guidance on the latest development of battery powered machinery for which Volvo are one of the world leaders.



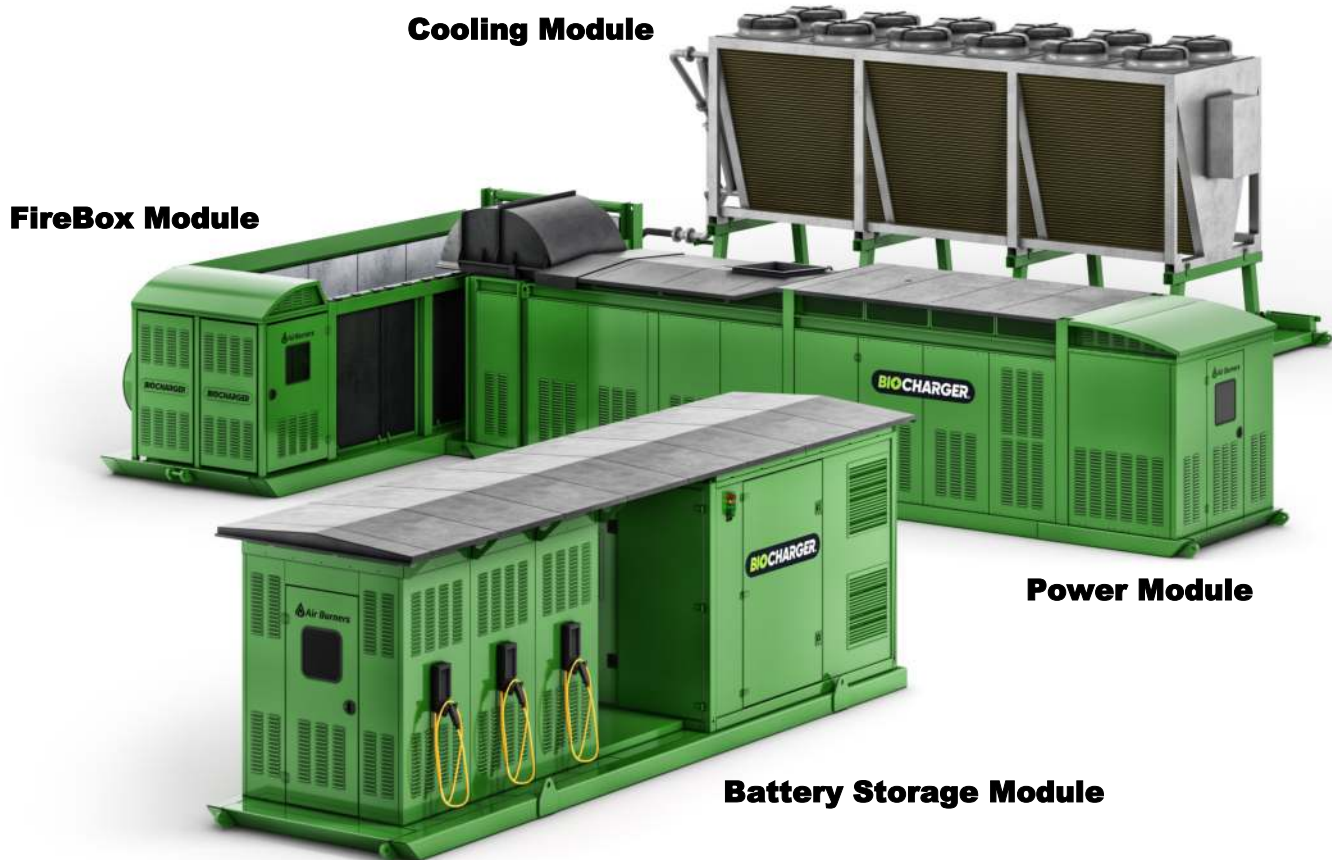
Air Burners' patented air curtain technology is used to eliminate your vegetative waste. Our technology has been tested multiple times by numerous air agencies around the world. Over the past 30 years our air curtain technology has proven to meet and exceed all US Federal regulations for air quality. Now we have combined this with Organic Rankine Cycle power generation and with Rolls Royce battery storage technology to create the most efficient and cleanest portable biomass energy system available today.

The onboard Organic Rankine Cycle generator uses the hot exhaust from the FireBox Module (FM) to create electricity. This electricity is stored in the Battery Storage Module (BSM) making it available 24 hours a day even after burning operations have ceased. The BSM has multiple electrical outlets for charging anything from vehicles and mobile offices to cell phones and radios. Primarily, the 550kWh Rolls Royce battery stores the generated electricity until needed. The Battery Storage Module has conditioning electronics that deliver the energy to vehicle chargers located on the side walls or to a variety of outlets providing AC and DC power used for recharging tools, lights and communication devices. The BSM also stores the energy necessary to start and run the BioCharger. Typically, the machine is operated throughout the working day. At the end of the day battery powered machines are plugged into the BSM and recharged. At the beginning of the next workday the BSM will provide the power to start the BioCharger so the cycle can continue.



Air Burners BioCharger brings cost-effective, renewable energy to the forefront in the fight against climate change. This innovative system ensures you can work off-grid while keeping your electric vehicles, forklifts, excavators, chainsaws, lights, and entire job site fully operational.

The BioCharger system includes four major components; FireBox Module, Power Module, Cooling Module and Battery Storage Module. Each of these Modules is built on a steel base called a "skid," The skids allow the component to be lifted by crane or dragged around a site by tractor or winched onto a trailer.



## The Power to Empower

The BioCharger comes equipped with all the power you need-and then some. The FireBox Module. The Power Module. The Cooling Module. The Battery Storage Module - the ultimate solution to fulfill your waste-to-energy needs.

### FireBox Module

Arrives fully assembled and equipped with our pollution control air curtain burner system. Toss in trees, logs, stumps, and root balls because there is **no** preprocessing like chipping or grinding required. All the waste materials burn naturally, there are no hydrocarbon fuels used to support combustion.

### Power Module

Fully integrated Organic Rankin Cycle (ORC) Generator and electronic controls operate completely independent of any electrical grid. The system arrives fully assembled and can be put to work immediately after a simple hood install.

### Cooling Module

The innovative Cooling Module (CM) is designed for portability. The system is transported on a steel "skid" base. Onsite the cooler is raised onto legs to provide ground clearance. When the system is ready to move again the cooler is lowered onto its base and the legs are bolted to a special storage rack on the base. Then the unit is ready to drag or lift onto a truck bed for transportation.

## Battery Storage Module

The Battery Storage Module (BSM) is your “power center” and can be utilized anytime day and night. Energy is collected throughout the workday and stored in the 550kWh storage battery, manufactured for us by Rolls Royce. Anytime during the workday or at the end of the workday, your battery-powered machines can be connected to the BSM for recharging, ensuring they are ready to run.



**Battery Storage Module**

**VOLVO**  
Construction Equipment

## Cooling Module



*The Cooling Module disassembles to allow the four stands to securely bolt in the racks at the rear of the steel skid. The cooler lowers and bolts to the steel skid for transportation.*