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news-global-energy-capstone-microturbine-wood-industry-container-dry-kiln

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Global Energy LLC

News for Global Energy and Container Lumber Dry Kilns

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Global Energy buys and sells Capstone Turbine for the microturbine industry and also develops renewable energy products, shipping container dry kilns and vacuum lumber dry kilns since 1990.

PDF Version of the webpage (first pages)

Why Salt Water may be the Future of Batteries

There’s no shortage of solutions to the world’s need for renewable energy storage, but there is a shortage of accessible and cheap resources to use for those solutions. Lithium and vanadium aren't limitless, so what about regular, run-of-the-mill salt? Redox flow batteries, or RFBs, can exploit the abundance of elements like sodium and iron. One U.S. company already has salt water batteries ready to go, with at least two others developing iron flow variations built to effectively run on rust. They promise to last longer and be far cheaper than the competition. So, what happens if we go with the flow?

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Firewood Container Dry Kiln and Wood Heat for Drying

The firewood container kiln consists of one or two 40 foot high-cube aluminum shipping containers side by side, or two refrigerated vans (already insulated).

These can be HT (or high temperature) kiln type design since you want to dry the wood (cracking is fine) as fast as possible.

We recommend a direct fired heat pipe (Furnace Type Dry Kiln), Conifer sawdust burner, or Central Boiler which can use your wood waste as the heat source.

The benefits of KD (kiln dried) firewood is reduced drying time, increased customer satisfaction, less creosote when burning, and higher revenue from sales. This allows you to dry into heating season, when other firewood suppliers have run out of inventory.

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Topics for Global Energy Container Kiln

Short articles written by Global Energy for the wood, lumber, poles, firewood kiln drying, kiln drying, wood terms, wood warp, recycled flooring, wood energy, quality control potpourri, softwood conifers, high temperature kilns, equalizing and conditioning, dry kiln business, lumber operation logistics, kiln investment, using shipping containers as dry kilns, dry kiln profit, wood heat options for dry kilns, and return on investment of a dry kiln. Global Energy developed the container kiln concept back in 1992.

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Repurposing Shipping Containers and Refrigerated Vans for AI Data Centers:

Containers and vans have been used successfully in shipping since 1954 around the world. They are used in all environments from deserts to the arctic. When they fall off of ships, they can float for literally years.

Containers which have been used for many years, get cycled off of ships and get sold. Prices range from $800 for a 20 ft. container to $2,500 for a 40 ft. container. They make perfect crypto miner facilities, since they are watertight. Parts are readily available since there are somewhere between 5-170 million of these around the world.

Watertight: the doors on containers come with replaceable rubber gaskets which gives them an airtight seal.

No Foundation Required: Containers are meant to be stacked up to 10-15 high, which means they are very rugged on the bottom and four corners of the container. They can be placed on gravel, pavement, a concrete pad, or even simple timbers or railroad ties. Because they do not require a foundation, a great deal of money and site preparation time can be saved.

Durability: Steel or Aluminum skinned containers work perfect as miner facilities. The end posts on containers are made from very thick steel. The walls and top are made from 1/8 inch steel or aluminum sheets. Every 12 to 16 inches are U or C channel stock which provides support for the skin. The bottom of the container is made up of I-beams. A wooden floor of Paudak wood or plywood, which covers the I-beams.

Longevity: While the useful life of a container may be limited for shipping, they make perfect modular buildings. Containers can be moved by using a undercarriage or cranes, which may get expensive. A better option for portable miner facilities are over-the-road insulated vans, which have a undercarriage.

Versatility: Containers can be stacked vertically, or placed side-by-side.

Roof Mounted Options: The flat roofs allow installation of solar panels and heat exchangers to dissipate heat in night-time or colder climate locations.

Advanced HVAC Cooling: Infinity offers solutions for utilizing the waste heat to make power and cooling. Our innovative solutions allow waste heat to make cool flows for AI data centers more efficient.

Summary: Shipping containers and refrigerated vans make great modular miner facilities. Hi-cube containers offer more flexibility for top mounted fan racks and interior space utilization. Insulated containers can save you time insulating the chambers. Over-the-road insulated vans offer you mobility and ready-to-deploy solutions.

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Salt Water Battery Technology as Alternative to Capstone Turbines and Microturbine Technology

Are you interested in alternatives to Capstone Turbines ?Large storage batteries may be the answer, especially for greenhouses and other electrical and thermal storage needs.
A Salgenx 3,000 kW (3MW) battery, it is much less expensive (Capstone 1,000 kW is around $1.5 million so a 3MW is 3 x 1.5 = $4.5 million) and has thermal storage capacities as well. Price includes charge controller and inverter.
Salgenx (division of Infinity Turbine LLC) has developed a revolutionary saltwater flow battery which also acts as a thermal battery.
Lower cost and faster access compared to Tesla Megapack which may take two years to deliver.
Does not use any Lithium, Vanadium, or a membrane.
Using a CO2 heat pump, you can double down on the payback for this new concept of a battery which stores heat as well as power.
When combined with a ORC (Organic Rankine Cycle) turbine, this concept is further extended to produce power, especially at oil and gas wells which have geothermal heated brine producer water. Imagine storing power at the oil well, to use to power the downhole pumps.
Grid based rate arbitrage for purchasing power during off-peak times, then using power during on-peak daylight times to save money.

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Consulting

Consulting available for Capstone Turbine and grid-scale batteries. We present data in logical, easy to understand format with links for additional research or verification of data.

Minimum contract $4,999. Up to 10 hours of consulting. Sold as-is and provided on a best efforts basis.

All time is documented and a summary log will be provided when requested.

Unused credit may be used for a period of six months after invoice date.

Consulting is provided via telephone, email, or other media as agreed to in writing (email).

Minimum billing is 30 minutes, so it is recommended to have questions, support, and consulting for at least that period of time. References available.

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Viktor Schauberger

Viktor Schauberger was a student of nature and more specifically water flows. He was gifted with the patient skills of observation and an appreciation of the outdoors.

His fascination of mountain streams and how water worked for the environment led to many innovations and inventions which pertain to flow control and the science of water. He realized that water flows were similar to air (just a different density) which led to his lift turbines and craft.

He was one of the first scientists to realize that water has many dimensions and structure. Water has surface tension and boundary layer mechanisms, which were revolutionary before 1900. Of course Nikola Tesla also realized this with his disc turbine around the same period.

Many of his early innovations were focussed around the transport of sawn timber and transporting and then sorting them by use of water and displacement. Back then, transporting timber from the mountains was not without problems. This was before helicopter lifts, trucks (and roads), and aerial cable lift lines.

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About Global Energy LLC

Capstone Microturbine: In the past 20 years Global Energy set up the worldwide secondary market for distributed energy (microturbines) focusing on the Capstone Turbine via this Global Microturbine website. Applications: Primary or backup power. Greenhouse or grow operations. Hurricane power. Forest fire backup power when the grid goes down. Waste heat can be used directly for drying hemp, firewood, and lumber in a container kiln. Cogeneration to produce both heat, hot airflow, and power for drying operations.

Global Energy has been selling renewable energy biomass systems (biomass burners, steam turbines, and steam engines) along with lumber/pallet/firewood container mounted dry kilns for the past 30 years.

Container Kiln: Global Energy invented the container kiln in 1991 for dimension lumber, timber frame, poles, pallets, and a novel market of kiln-dried firewood. When incorporating baskets or a drum drier, it can also be used for drying hemp and other botanicals.

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Waste Heat to Energy

List of selected waste heat to energy publications.

Waste Heat to Energy is a renewable energy field which deploys technology to utilize industrial, commercial, and home based heat which would otherwise be unused, to make power. Since much of the quality of this heat is low, efficiency to capture and convert to power is also low. This makes the most sense (payback) where utility (grid-based) power rates are at or above $.15 per kwh.

Add the Salgenx salt water battery storage for added savings and USA based tax credits.

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