

OASIS MONTANA INC., 436 Red Fox Lane, Stevensville, MT, USA, 59870 Main Web Page: www.oasismontana.com E-Mail: info@oasismontana.com 406-777-4321 or 4309, or fax 406-777-0830. Hours 8:30 to 4:00 MST, Mon.-Fri. Toll-free Order Lines 877-627-4768 or 877-627-4778 (877-OASISMT or 877-OASISPV) Spring Flier 2008

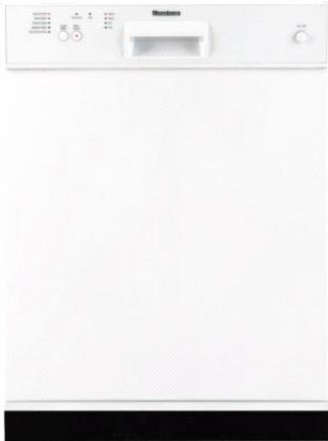


GREETINGS FROM OUR SOLAR POWERED OFFICE: While our winter was not as cold as usual (there were no weeks of -20 to -40 below at nights!), we have had decent snow pack in the mountains, and hope our summer will not be too fiery and smoky from forest fires. Solar water pumping has really taken off for us, and we are happy to have provided water for families, drip irrigation, fisheries and livestock. Renewable energy systems are our focus, for remote homes, utility-tied residences, water pumping, RV, back-up or marine use. We offer complete systems to fit your project's needs. If you want to do something to make your home or business 'greener' give us a call. We also offer a line of efficient electric and gas appliances to help keep a lid on your electric bill.

For those of you who aren't "on line", or are beginning your project, we have an extremely **informative Product Catalog on disc for \$10** (\$18 out of country)—essential for your energy library! Products, system sizing, pricing, components, importance of energy efficient appliances, battery care, and wind turbines are just some of the topics covered. If you *are* on-line, you can see example systems (costs, components and power output) at www.oasismontana.com/systems.html -- and e-mail us to get on our e-list.

To assist your information input, we've tried to develop as much on-line information as we can. For solar water pumping, see www.PVsolarpumps.com; for utility-tied photovoltaic systems, visit www.grid-tie.com; for efficient AC appliances, DC 'fridges, coolers and freezers see www.eco-fridge.com; for natural and LP gas appliances, see www.LPappliances.com. Our main index page is www.oasismontana.com and we now offer composting toilets at www.eco-potty.com. Visit our web pages and stay a while!

**NEW
MODEL DW2432 EURO
ENERGY STAR DISHWASHER**



You can keep dishes out of the sink and money in your pocket with this new Energy Star qualified European-made dishwasher. Using only 322 kWh/year with an energy factor of 0.67, it operates a remarkably 43% better than the federal standard. It offers five unique washing programs for your specific cleaning needs, including "quick wash" when time is limited. This model is also ultra-quiet; no more having to leave the kitchen when the dishwasher is turned on. Its many features include folding tines in the upper rack to allow for more space when needed for glasses or cups. These ship direct from the importers in NY state to the end user.

Model **DW2432** feature list:

- > 12 place setting
- > 322 kWh/year average energy consumption
- > 4 wash temperatures
- > Adjustable unloaded upper rack
- > Fold-away upper rack tines for more versatility
- > Stainless steel tank
- > 120V/60 Hz
- > Dimensions: 32 1/2"H x 23"W x 21 5.8"D
- MSRP \$860

- > Energy Star Certified
- > 5 wash programs
- > 3-way Euro filtering system
- > Cutlery basket
- > Ultra-Quiet
- > 4.35 to 145 allowable operating PSI
- > 1,000 watt heating element
- > Door color white, door swing upward
- Our price **\$735 plus freight!**

NEW ENERGY STAR RATED EURO WASH MACHINE, MODEL SPW1102

The SPW1102 will clean your clothes better, and be easier on your clothes than top loading machines. Its reversing action removes more soil and stains than more expensive machines. These machines are built in Europe by Gorenje, a progressive manufacturer, and are similar in performance and components to more expensive European brands. Capacity is 11 lbs.; it's white, door swing is reversible, and shipping weight is 280 lbs. **\$739** each plus freight. Features include:

- > Stainless steel tub
- > 12 program wash cycles
- > Water heats up to 200 degrees to clean clothes better
- > 3 water levels
- > No-spin option
- > Manual setting option
- > U.L. Approved
- > For matching (240V) dryer that can be stacked with suction cup kit or set alongside, model number is SPDE1112 for \$579 plus freight. Note: electric dryers are *not* considered energy efficient appliances and these are not rated for efficiency.
- > Energy Star listed
- > 1000 RPM
- > Automatic Door Lock
- > Extra Rinse Option
- > Fits under standard counters
- > 115V, 60 Hz.

Now, HERE'S some efficient alternatives for clothes drying! If you can't utilize your solar dryer (i.e. sunshine and a clothes line!) on rainy days or in winter, you can use these solidly built **floor dryers**. They provide maximum drying space but are fully collapsible for storage. These dryers have struts across the leg bottoms to give added support; strong, smooth 3/4" dowels are attached to the 3/4" x 1 1/4" hardwood frame with screws, not staples. I've had the largest one for years; Amish-made in the USA.



Mini: **\$64.95** Small: **\$89.95** Large: **\$103.95**

We measure drying space by adding up the total usable dowel length.

Model	Upright (HxWxL)	Folded	Weight
Mini - 24 ft.	38"x12"x30"	30"x16"x8"	8 lbs.
Small - 34 ft.	60"x19.5"x40"	40"x25.5"x8"	16 lbs.
Large - 40 ft.	70"x23"x48"	48"x30"x8"	18 lbs.

Air drying your clothes will reduce wear and tear on them, and they will last much longer than getting beat up in an electric dryer. These have a 3-4 week lead time.



\$739 +
freight

More new Energy Star rated appliances from Oasis Montana Inc!

SPW1102 shown here with matching dryer stacked on top

OASIS MONTANA INC. Web: www.oasismontana.com E-mail: info@oasismontana.com

406-777-4321 or 4309; fax 406-777-0830 Toll-free order lines: 877-627-4768 or 4778 (877-OASISMT or 877-OASISPV)

To design a power system for you, we need your power requirements (electrical load information). See our web page for system sizing information and examples of power systems, which are based on the part of the country you're in and how much sunlight you receive. We have design information on our web site, so please feel free to utilize this. Or, we also offer a product and design information CD for just \$10.00 (\$18 international)—filled with information for your energy library!

SOLAR PANEL PRICING

Call for availability, freight costs, and quantity pricing.

Mitsubishi PV-MF110EC3, 110W, 6.4A, 21.1V (56.1" X 25.4")	\$679
Sharp NT-175UI, 175W, 4.95A, 35.4V (62.01" x 32.52")	\$1040
ND-L3E1U, 123W, 7.16A, 17.2V (59.06" x 26.08")	\$715
ND-80EJE 80W, 4.67A, 17.1V (47.28" x 20.88")	\$499
(expect price increases by mid-to-late winter on Sharp products)	
Kyocera KC200GT, 200W, 7.61A, 26.3V (56.2" x 39")	\$1050
KC175GT 175W, 7.42A, 23.6V (50.8" x 39")	\$915
KC130GT 130W, 7.2A, 17.4V (56.1" x 25.7")	\$649
(same physical dimensions as the KC120 & KC125--when the ones we have in stock are gone, that'll be it for the 130s as they are being discontinued, along with the 175s & 200s)	
KC85T 85W, 4.75A, 17.9V (39.6" x 25.7")	\$480
NEW FROM KYOCERA: the KD Series	
KD205GX-LP, 205W, 7.71A, 26.6V (59.1" x 39")	\$1085
KD180GX-LP, 180W, 7.63A, 23.6V (52.8" x 39")	\$951
KD135GX-LP, 135W, 7.63A, 17.7V (59.1" x 26.3")	\$684
Suntech STP170, 170W, 4.83A, 35.2V (62.2" x 31.8")	\$879 ea; per skid of 44, \$799 ea.
Suntech STP160, 160W, 4.65A, 34.4V (62.2" x 31.8")	\$828 ea; per skid of 44, \$750 ea.
Uni-Solar US-64 64W, 3.88A, 16.5V (53.78" x 29.18")	\$369
Evergreen ES-190-RL, 190W, 7.12A, 26.7V (37.5" x 61.8")	\$990
(in pallet quantities of 30, \$975 each)	
BP SX-30U, 30W, 1.78A, 16.8V (23.4" x 19.8")	\$312
BP SX-20U, 20W, 1.19A, 16.8V (16.7" x 19.7")	\$226
BSP -2012, 20W, 1.2A, 17.3V (16.7" x 19.8")	\$192
Dura-Series modules , nearly identical to the old 'MSX Lite' series, same 5 yr. warranty	
BSP-1012LSS, 10W, 17.3V, .58A, 17.5" x 10.5"	\$129
BSP-3012LSS, 30W, 18.8V, 1.66A, 26.5" x 20"	\$299
Other modules offered as available. Call for your availability, costs and freight.	

REGARDING MOUNT STRUCTURES FOR SOLAR MODULES--

We offer a variety of styles to suit your project, including A-frame roof or ground mounts, top and side of pole mounts, flush mounts, tilt mounts, RV racks, as well as Zomeworks or Wattsun Trackers. Call for your cost, availability and freight. At this writing, some racks may have a 4-6 week lead time.

CONTROLLERS & REGULATORS

are essential for complete battery charging while preventing overcharging. Sizing a charge controller is based on the input amperage and voltage of the solar array.

Sunsaver 6 (handles up to 6.5A) \$50 (with low voltage disconnect option \$61)	
Sunsaver 10 (handles up to 10A) \$57 (with LVD option, \$72) also available in 24V	
NEW Sunsaver Duo 12V 25A (charges two batteries, w/ display & LCD) \$188 --great for RVs!	
Prostar PS15 \$115; PS15M (with meter) \$183; PS 30 \$155; PS 30M \$223	
Tristar Charge Controller, 60A, 12 to 48V, multiple settings & screens, \$224; 45A, \$174	
Tristar Digital Meter for their 45A or 60A charge controller \$99 5 yr. warranty on Morningstar products	
Xantrex C-40 (handles up to 40A) for 12, 24 or 48V systems \$159 (formerly	
Xantrex CM (digital volt meter for C-40 and C-60) \$99 known as	
Xantrex C-60 (handles up to 60A @ 12 or 24V) \$199 Trace	
Two year warranty on all Xantrex controllers.	
Outback Power MX60 Controller (MPPT, 60A with varying voltage input) \$589	
We can provide most brands of solar charge controllers, from Blue Sky Energy (formerly RV Power Products) to Specialty Concepts. Call us for availability and your pricing.	

SUN-MAR COMPOSTING TOILETS

from Oasis Montana! Visit www.eco-potty.com or call for free detailed brochure.

Sun-Mar is the world leader in composting toilet technology; the design of these has a unique, patented BioDrum which provides super fast, odor-free decomposition. These toilets have been sold worldwide for over 25 years, and are the first ones to be certified to ANSI/NSF standards for residential use. **WHEN TO USE A SUN-MAR?** Anywhere or anytime! When there is no plumbing, a Sun-Mar provides a low cost toilet; these are also great for upgrading an outhouse. Maybe you have a shortage of water, or you have toilet waste that needs to be removed from an overloaded septic system. Or perhaps you just want to minimize the environmental impact. Sun-Mar can handle all of these situations. Why use a Sun-Mar composting toilet? Here's why:

PRACTICAL REASONS.....

- > No Plumbing
- > No Water Needed (on most models)
- > No Odor
- > Inexpensive Solution

ENVIRONMENTAL REASONS.....

- >No Pollution
- > Saves Water
- > Recycles Nutrient
- >Little or No Liquid Output

These are used in cabins, barns, remote offices, boats, RVs, or wherever you need to minimize your environmental impact. www.eco-potty.com

WHO WE ARE and ORDERING INFORMATION:

Chris Daum, owner and manager of Oasis Montana, has been in the renewable energy field for 19 years, and Mark Dickson, our technical sales fellow, has been in the field of hydrology and RE systems for 6 years. Our staff offers experience, personalized service, quality components and excellent pricing. We are happy to work with your installer, electrician, or contractor. We provide detailed CAD-generated wiring diagrams with the systems we sell. **TO PLACE AN ORDER:** E-mail or call us for your freight; if you have any questions about your system or product, please contact us. E-mail is easiest and fastest (but we know that you aren't all on line). We accept **Visa/Mastercard** (personal and business checks are fine). For our international customers, we accept bank transfers—e-mail or call us for our banking information. Our hours are 8:30 am to 4:00 pm Mountain Daylight Savings Time, Mon. - Fri. If we're on another line when you call, please leave us a message, and we'll get back to you as soon as we can. We don't have a voice mail system (ugh!), but you may have to leave a message if we're with a customer or on one of the other lines. **406-777-4321 or 4309 or e-mail at info@oasismontana.com** — for tech support on renewable energy systems, e-mail mark@oasismontana.com We'd be very happy to help you with your power project — send an e-mail or give us a call!

GAS APPLIANCES: Propane refrigerators, freezers, ranges, cooktops - www.LPappliances.com for information. Servel propane refrigerator, 8 cu.ft. capacity \$1195
Crystal Cold 12 cu.ft. capacity propane 'fridge \$1749
Crystal Cold 15 cu.ft. capacity \$1999
Crystal Cold 18 cu.ft. capacity \$2199
Stainless 18 cu.ft. capacity (w/ black textured sides) \$2349
NEW 21 cu.ft. capacity White Crystal Cold 'Fridge \$2399
(it's *the* biggest propane refrigerator manufactured! Also available as a special order is a 19 cu.ft. *black* model for \$2299)

Blizzard 10 cu.ft. capacity LP chest freezer \$2150
Blizzard 15 cu.ft. capacity upright freezer \$2399
Blizzard 18 cu.ft. capacity upright freezer \$2599
The Servel refrigerator can be converted to use natural gas for \$200 (includes re-crating). The Crystal Cold refrigerators and Blizzard 10 cu.ft. chest freezers can be converted to natural gas for \$50; the Blizzard 15 and 18 cu.ft. freezers can be converted to natural gas for \$100 (more costly as these have *two* gas absorption units on them).

Peerless Premier gas ranges are available in 20", 24", 30" and 36" widths, with model colors ranging from white, bisque, black and stainless. Even the electronic ignition models will work without power (you can light the burners and oven with a match) -- there's no glow bar in the ovens on these mechanically simple, American-made stoves. All ranges are set up for natural gas but LP conversion kits are included for every model at no extra cost.

We also offer propane and natural gas **cooktops**, Italian-made by *Verona*; these professional cooking appliances are also available in a wide variety of finishes (stainless, black, bisque and white or black glass), with two, four and five burner models. www.LPappliances.com for pictures and specifications.

Outback Power Components Pricing

Sealed inverters: FX2012T, 2524T, 3048T	\$2020
Vented inverters: VFX2812, 3524, 3648	\$2196
Grid-tie, mobile, marine and export versions available on most of these sine wave inverters.	
MATE system display & controller	\$260
PSX240 Transformer	\$458
Communications Manager HUB-4,	\$175; HUB-10 \$330
MX60 MPPT Charge Controller	\$589, 60A 12/24/48V

There are *way* more Outback Power products than we have room to list...call or e-mail for more information. info@oasismontana.com or visit their web page at www.outbackpower.com They've got a nice product catalog there you can download too, at <http://www.outbackpower.com/catalog.htm>.

Yesterday was the deadline for all complaints. (sign in an Australian shop)

Solar-One Batteries with HuP. Technology -- heavy duty batteries for your renewable energy (RE) system! Solar-One batteries feature a design that's so unique, it's patented. Engineers at General Battery teamed up with Dupont chemists to design a flooded battery that is so dependable, it's backed by the longest standard warranty in the RE industry (7 year free replacement and 3 year prorated).

Solar-One batteries are very heavy and present special issues for the renewable energy installer. To put this superior technology to work for you, employees at General Battery designed an epoxy coated steel case that allows each 2 volt cell to be removed. This solved the weight issue and also offers excellent protection against breakage while in shipment. Oversized lead terminals are welded to the battery posts allowing the use of lead coated solid copper buss bars as the cell interconnects. Because the lead terminals are so large and heavy duty, they provide excellent conductivity and a strong connection point for the cell lifting strap. All these features mean fast and easy on-site assembly, great energy transfer and the ability to remove and replace individual 2 volt cells.

The purchase of these batteries also includes an installation and maintenance manual written for the end user, and also the manufacturer's written warranty. Solar-One batteries are warranted to deliver 2100 - 80% deep cycles and an estimated 4000 cycles at 50%, equaling more cycles and usable battery capacity. These offer a **10 year warranty** - 7 year free replacement and 3 year prorated; these batteries have been in RE service for over 13 years, with a 99.8% track record in RE systems. These ship FREE to most commercial carriers with a dock anywhere in the lower 48 states ('on the beaten path').

The Solar-One positive grid is the heaviest in the industry, allowing for the maximum amount of active material in each plate and increasing capacity. We have more specifications (and maintenance information) on these we can provide you regarding capacity and weight, so don't hesitate to contact us for additional information; e-mail us at info@oasismontana.com.



In spite of the high cost of living, it is still the preferred alternative...

Solar-One HuP Battery Pricing			
Model	12 Volt	24 Volt	48 Volt
SO-6-85-17	\$2555.00	\$5110.00	\$10,220.00
SO-6-85-19	\$2724.00	\$5448.00	\$10,896.00
SO-6-85-21	\$2831.00	\$5662.00	\$11,324.00
SO-6-85-23	\$3016.00	\$6032.00	\$12,064.00
SO-6-85-25	\$3155.00	\$6310.00	\$12,620.00
SO-6-85-27	\$3264.00	\$6528.00	\$13,056.00
SO-6-85-31	\$3750.00	\$7500.00	\$15,000.00
SO-6-85-33	\$3900.00	\$7800.00	\$15,600.00

Battery prices have gone up more than 60% in the past nine months, due to the skyrocketing prices of lead; while we endeavor to keep our prices as current as possible, they are subject to change without notice, so **please call to verify pricing.**

Model	A/H 20 HR Rate	Usable kWh(20 Hr Rate)			Dimensions Per 12V Battery (Inches)	Weight Per 12V Battery (LBS)	Electrolyte Per Cell (Gallons)
		12V	24V	48V			
SO-6-85-17	845	8.11	16.22	32.44	40 x 7.75 x 25	742	1.7
SO-6-85-19	950	9.12	18.24	36.48	40 x 8.25 x 25	808	1.9
SO-6-85-21	1055	10.1	20.16	40.32	40 x 8.75 x 25	880	2.1
SO-6-85-23	1160	11.13	22.27	44.54	40 x 9.00 x 25	959	2.4
SO-6-85-25	1270	12.2	24.4	48.8	40 x 10.25 x 25	1036	2.6
SO-6-85-27	1375	13.2	26.4	52.8	40 x 11.25 x 25	1102	2.8
SO-6-85-31	1585	15.2	30.4	60.8	40 x 12.75 x 25	1252	3.1
SO-6-85-33	1690	16.2	32.4	64.8	40 x 13.5 x 25	1336	3.3

NEW XANTREX XW Hybrid Inverter/Charger - the next generation inverter/charger for renewable energy systems, grid-tie and backup power applications. Folks, it's so new that the *pricing we have (below), is only preliminary--and may change upon product release (later this spring). These new models are capable of being grid-interactive or grid-independent, and can operate with generators and renewable energy sources to provide full-time or back-up power. Optional accessories are at the bottom of the page.

Model (all sine wave)	XW6048 - 120/240	XW4548 - 120/240	XW4024 - 120/240
Continuous Power Output	6000W	4500W	4000W
Surge rating (10 seconds)	10,000W	9000W	8000W
Idle consumption - search mode	<8W	<8W	<8W
AC Connections	AC1 (Grid), AC2 (Generator)	AC1 (Grid), AC2 (Generator)	AC1 (Grid), AC2 (Generator)
AC output frequency	60.0 +/-0.1 Hz	Auto Transfer Relay 60A	Typical Transfer Time 8 ms
Multiple unit configurations	Up to three parallel units in 120/240 volt split-phase configuration		
Max continuous charge rate	100A	85A	150A
Efficiency at max charge rate	89.4%	90.2%	85.8%
Non-volatile memory	Yes	Yes	Yes
Shipping weight	132 lb.	122 lbs.	122 lbs.
PRICE	*\$4500	*\$3600	\$3250
XW Power Distribution Panel	\$1500	XW Connection Kit for 2nd Inverter	\$850
XW Conduit Box	\$250	XW Solar Charge Controller	\$650
XW System Control Panel	\$300	XW Automatic Generator Start	\$200

For all the information on these exciting new inverters, visit Xantrex's newest web page at www.xantrex.com/xw.

Small Batteryless Grid Tie System with the Sunny Boy 700U Inverter If you are wanting to add a small photovoltaic system to your home or business to help keep a lid on your utility bill -- or to just doing something to become 'greener', this may be the system for you! It features a 700W grid-tie inverter, and it's the *smallest unit available* for a utility-tied system that will work without batteries. Here's how the system breaks down.



SunnyBoy 700U
\$1459

- Sunny Boy 700U Inverter \$1459
- Fan Kit \$89
- 8 - Sharp 123W Solar Modules @ \$675 ea. \$5400
- 2 - 4X A-frame Roof/Ground mounts w/Adjustable legs \$738
- Square D AC and DC Disconnect \$175
- SOV Lightning Arrestor \$42
- 6 - 33" #10/2 Module Interconnects @ \$18 each. \$108
- 2 - Wire Kits @ \$50 each \$100
- Total System \$8111**

Not included are freight, installation, concrete (if ground mounted), wire nuts, roofing material/caulk, or site specific items necessary for the installation. **This system will provide ~3.5 kilowatts for five hours of full sun.**

In this system, we specified eight of the Sharp 123W modules since that still keeps us under the 1000W max limit of the inverter's 1KW rating, and the maximum power point window of the SB700U 200 inverter (100 to 200V) is a good match for eight Sharp 123's (8 x 17.2V = 137.6V). In the worst case scenario, the maximum open circuit voltage output of the Sharp 123s (8 x 21.3V x 1.25 = 213V) won't exceed the inverter's maximum DC input voltage (which is 250V). When all is said and done, typically you get about ~75% of the nameplate wattage of a grid-tie system when the array is in full sun. There are several factors taken into account for typical system losses: dust, clouds, module power mismatch, temperature, wire loss, inverter inefficiency, etc. Under certain conditions (cold temperatures with bright sun), your solar array may make up to 25% more power than its nameplate rating--which helps counteract the system losses. The inverter may even limit (or 'clip') the power a little bit at such times.

The Sunny Boy 700U is the smallest, batteryless inverter available to us at this time. If you are looking for more output or a battery-based system for powering important loads in an emergency situation, call us and we will design a system to suit your project, or e-mail mark@oasismontana.com for more information.

Gary Reysa of Bozeman, MT, has a plan to cut household energy use in half. **Why cut down personal energy consumption?** There are lots of reasons, but some include putting a dent in greenhouse gases, creating less pollution, and saving money while doing the right thing. Mr. Reysa is a retired Boeing aeronautical engineer, and you can view suggestions about solar home heating, efficient lighting, phantom loads and other energy-saving projects at www.BuildItSolar.com.

Solar powered stock watering systems



If you have a water pumping need for your cattle, horses or other stock, give us a call with your project specifics and we'll be happy to propose a system for your site. We offer different pumps for differing situations, but of late we have been selling a lot of the Lorentz line. All of the Lorentz submersible pumps and controllers are covered by a 2-year manufacturer's warranty against defects in material and workmanship except the PS150 Boost pumps which have a 1 year warranty. Look over these Lorentz sample submersible pumping systems below and let us know if any of them will meet your needs. If not, we will design a system just for you.

Lorentz PS150 submersible centrifugal (shallow well, high volume)

- 1 Evergreen Spruce ES-190-RL 18V 190W solar module @ \$990
- 1 single module top-of-pole mount structure @ \$160 (2" ID SCH40 steel pipe required)
- 1 15' array-to-controller wiring kit @ \$38
- 1 Lorentz PS150 pump controller @ \$275
- 1 Lorentz CSJ5-8 submersible centrifugal pump @ \$895
- 1 Lorentz low water sensor @ \$65
- 1 float switch @ \$39

Equipment total = \$2,462

On average this system will produce ~2,100 gpd when pushing against 50' of head with 5 hours of full sun per day.

Lorentz PS1200 submersible helical rotor (deep well, low volume)

- 4 Evergreen Spruce ES-190-RL 18V 190W solar modules @ \$990 each = \$3,960
- 1 four module top-of-pole mount structure @ \$663 (4" ID SCH40 steel pipe required)
- 1 15' array-to-controller wiring kit @ \$38
- 1 Lorentz PV disconnect & junction box @ \$148
- 1 Lorentz PS1200 pump controller @ \$695
- 1 Lorentz HR-03H-2 submersible helical rotor pump @ \$1,230
- 1 Lorentz low water sensor @ \$65
- 1 float switch @ \$39

Equipment total = \$6,838

On average this system will produce ~600 gpd when pushing against 760' of head with 5 hours of full sun per day.



The PS600 & PS1200 systems can also be powered by a 120/240 VAC generator or utility power during cloudy periods by using the Lorentz AC power pack @ \$499. Note: these system costs do not include freight, installation, steel pipe, rebar, conduit, splice kits, wire nuts, or other site specific items necessary for installation.

Below is a chart with more Lorentz pumping systems; all systems are based on 5 hrs. of full sun, and come with wiring diagrams.

Lorentz system description	Head (feet)	Volume (gpd)	Price
PS150 Boost-125 surface mounted rotary vane	132'	590	\$1,711
PS600 BADU Top12 surface mounted centrifugal	20'	10,600	\$6,328
PS200 submersible helical rotor	130'	1,100	\$3,616
PS600 submersible helical rotor	400'	640	\$5,355



Hot stuff at Oasis Montana! Last year's garden was very successful; at this writing, we are still eating carrots, 'taters, garlic, and the last of the squash. And we are also enjoying our dried apples, plums and peaches, as well as several types of fruit wine. But what gets us through these cold Montana winters are the hot peppers! We've been seed-saving a couple of varieties for several years, and our favorites are a Cayenne type and another we call a Portugal pepper. They're both hot, around 60,000 Scoville units or better. The Cayenne is a long, slender pepper that hangs down on the plant and the Portugal is shorter, fatter and is held upright.

Both are as easy to grow as tomatoes; I start them around the first day of spring and set them out in mid-May (and they are pretty enough to be grown as ornamentals). By late July, I am getting red peppers, and right before the first hard frost I pull up the plants and hang them in my windows. The remaining green ones will eventually turn red. We have a grinder dedicated to the peppers, and when we process a batch, it makes the entire house radioactive! The coughing and sneezing is a pretty good indicator that it's pepper-grinding time--it's a tearful experience....

This year we are offering to share our pepper seed; if you will send us a self-addressed, stamped envelope, we will send you a few seeds of either or both (please specify) of whatever pepper you would prefer. Hot stuff is GOOD!



FREE COPY OF AN IMPORTANT BOOK: It's Lester R. Brown's "Plan 3B, Mobilizing to Save Civilization". You can download the entire thing or parts for free at <http://www.earth-policy.org/Books/PB3/Contents.htm>; subjects include Deteriorating Oil and Food Security, Climate Change, Shrinking Forests and Growing Deserts, Eradicating Poverty, Restoring the Earth, Stabilizing the Population, Rethinking Land Productivity, Designing Cities for People, Raising Energy Efficiency, Turning to Renewable Energy, and Saving Civilization.

GREAT GIFT IDEA!

**\$29 ea. or
two for
\$56**



Kill A Watt Meter: The Electricity Detector and Monitor can educate you about your monthly electric bill and help you save a lot of money. You can now be a 'detective' and ascertain what appliances are actually worth keeping plugged in. Simply plug in the Kill A Watt meter, connect your appliances to it and Kill A Watt will assess how efficient it really is, showing you the instantaneous power used, and also cumulative energy or kilowatt-hours used.

Kill a Watt, with large LCD display, will count consumption by the kilowatt-hour, same as your local utility. With the help of Kill a Watt you can figure out your electrical expenses by the day, week, month or year on a given device. Kill A Watt can check the quality of your power by monitoring Voltage, Line Frequency, and Power Factor.

Still just \$29.

Now you'll know if it is time to install a power strip on your entertainment center instead of feeding those ghosts loads while you are sleeping or away from home. Or, find out how much energy you save with a laptop instead of a PC computer.

Operating Voltage: 115VAC Max Voltage: 125VAC

Max Current: 15A Max Power: 1875W

Dimensions: 5 1/8" x 1 5/8" x 2 3/8"

We've had fun as well as a learning experience with our Kill a Watt meter; last December we purchased some of the extremely efficient LED holiday lights and were positively thrilled at their efficiency. Some of the strands use a total of as little as 2 watts! It's also useful in checking your frequency (hertz range); if you are burning out lights or appliances, you may have power quality issues and not know it.

Power strips are a common occurrence around our home and office; while we do leave the fax and answering machine on 24/7, we use these power strips to kill any unnecessary loads when we leave the room. So we have power strips around all computers and printers, the TV & VCR, our entertainment center (stereo, tuner, turntable and CD player). When not in use, all loads are irrevocably turned **off**.

Magnum MS-AE 120/240V pure sine wave inverter/charger

No more stacking! That's right: someone has finally made a battery-based inverter that can produce both 120v and 240v interchangeably without needing to purchase and stack two separate inverters. The new MS-AE pure sine wave inverters from Magnum Energy are available in 4000 (24volts) and 4400 (48volt) watt configurations. If more wattage is necessary, you have the ability to link up multiple MS-AE's in series using a Series Stacking Interface. The inverter is based on the popular MS series that was designed for demanding mobile and off-grid applications and includes a Power Factor Corrected (PFC) batter charger. The PFC uses 25-30% less AC current from your generator than most other leading chargers.

Of course there are additional accessories that are available for the MS-AE. The easy-to-use Remote, allows programming the unit as well as access to various other inverter features. The AGS (Auto Generator Start) Module provides hassle free integration of almost any 2-4 wire start generator.



E-panel contents

We like to pair up the MS-AE inverters with the simple and cost effective Midnight E-Panel from Midnight Solar. The E-panel comes pre-wired with inverter breakers and cables, AC input and bypass, 500amp/50mV shunt, AC terminal blocks, din rails wall mounting brackets, charge controller bracket, and loads of extra hardware. When using the E-panel, all that is left for the installer to do is mount the inverter to the hinged door, install the necessary breakers and connect a few wires. Not only does this save loads of time, the cost of the panel is not much more than if you were to piece and part it all together yourself. The E-panel is available for a variety of other inverters, including the popular Outback FX and VFX series.

MS-AE 4024/MS-AE 4448	\$2499.00
MM-RC (remote)	\$59.00
ME-AGS	\$279.00
E-Panel	\$699.00



Magnum ME-AE 4448 mounted on a Midnight E-Panel

Note: Magnum Energy offers other RE related products, and you can view more information on their web page at www.magnumenergy.com.

Renewable Energy and Alternative News Bites: Missouri town of Rock Port goes 100% wind power! Its wind power status is due to four wind turbines located on agricultural lands within the city limits; Rock Port's community uses about 13 million kilowatt hours per year, and these wind turbines produce 16 million kilowatt hours per annum. Excess power is transmitted to Missouri Joint Municipal Utilities for use elsewhere. www.rockportwind.com for more information.

Hybrids, meet your rival: How does 376 miles to the gallon sound? Don't choke on your latte, check out the documented fuel efficiency of this Seattle man's car at http://seattlepi.nwsource.com/local/351903_needle20.html. If this could be done in the 70's, why not now?

Solar thermal technologies on a grand scale may solve a lot of pollution problems, stating that "over 90% of the electric grid, and car fleet in the U.S. could be powered by solar thermal power". Sunshine is used on a field of mirrors to make steam to drive turbines, and the heat can be stored for use at night, working even when the sun is variable. Read more about this exciting technology at <http://www.gizmag.com/solar-thermal-power-study/8965/> and another article about the same at <http://www.nytimes.com/2008/03/06/business/06solar.html?ex=1205470800&en=39265cb2f87e3916&ei=5070&emc=eta1>

Australia offers solar hot water for free with rebate: Three-quarters of Australians support government action to make homes more energy efficient, and the State Government may merge its rebate scheme with the Federal Government's scheme, which would make the buying and installation of a solar hot water system virtually cost-free. <http://www.smh.com.au/news/environment/solar-hot-water-for-free-with-new-rebate/2008/03/10/1205125819869.html> for a link to this article. Electric hot water systems use as much as 40% of the electricity in a household.

Experts Show Farmers the Future is Methane: cattle ranchers and dairy owners are finding that that one can turn a lagoon of cow manure into electricity, fuel--or even dollars, as well as earn green credits and control pollution. While not as pretty as wind turbines, this technology will be a part of our renewable energy future. More information at http://www.redorbit.com/news/business/1286941/experts_show_farmers_the_future_is_methane/index.html.

Only 4% of the Earth's oceans remain undamaged from human activity. It appears that human's pollution, fishing, climate change, and other factors have degraded most of the world's water; visit <http://news.bbc.co.uk/2/hi/science/nature/7241428.stm> for more information.

How green are photovoltaic (PV) modules? Yes, they sit basking in the sun, making electricity for roughly 30 to 40 years, but what about their manufacturing process? Is the process more toxic than the power they produce? <http://pubs.acs.org/cgi-bin/abstract.cgi/esthag/2008/42/i06/abs/es071763q.html> for the answer!

Storing wind power has always been a major issue due to the variable nature of wind supply. A company called Xcel Energy is launching a major wind-to-battery project, with batteries the size of semi-trailers. Two of these would be able to store 7.2 megawatt hours of electricity; the project will take place in Luverne, MN, and is expected to go online by October of 2008. More information is available at www.xcelenergy.com.

Oil from algae? A company by the name of AlgaeLink is developing a new extraction method of oil extraction from algae without the use of chemicals, a centrifuge or an oil press. This new system not only makes the algae oil more eco-friendly, but some of the byproducts (like vitamins) may be useful to the food industries. See more about this interesting technology at <http://www.renewableenergyworld.com/rea/news/story?id=51772>.

GREEN IS NOT ALWAYS BLACK AND WHITE!



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Main Web Page: www.oasismontana.com
Utility Tie Systems: www.grid-tie.com
Efficient Appliances: www.eco-fridge.com
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Solar Modules: www.PVsolarmodules.com
Water Pumping: www.PVsolarpumps.com
Toll Free: 877-627-4768 or 877-627-4778
Fax: 406-777-0830

**Renewable
Energy
Newsletter!**

Spring/Summer '08

QUOTABLE QUOTES:

"There is no clean coal. There's cleaner coal, but all coal is dirty. What's important is we recognize we must move to renewables."

--Nevada Senator Harry Reid

"My mother always said democracy is the best revenge."

--Bilawal Bhutto Zardari, son of slain Pakistani Prime Minister Benazir Bhutto

"Perseverance in a noble cause is a renewable source of energy."

--Brad Collins, American Solar Energy Society, www.ases.org

"We simply must balance our demand for energy with our rapidly shrinking resources. By acting now, we can control our future, instead of letting the future control us."

--Jimmy Carter

"Spring is nature's way of saying, 'Let's party!'"

--Robin Williams

"The road to hell is paved with politicians." --Unknown

"It has become appallingly clear that our technology has surpassed our humanity." --Albert Einstein

"Having children is a lot like living in a frat house -- nobody sleeps, everything's broken, and there's a lot of throwing up going on." --Ray Romano

"When I despair, I always remember that all through history the way of truth and love has always won. There have been tyrants and murderers and for a time they seem invincible, but in the end they always fall...think of it...always." - Mahatma Gandhi

"We should be the heart and mind of the earth, not its malady. So let us be brave and cease thinking of human needs and rights alone, and see that we have harmed the living earth and need to make our peace with Gaia. We must do it while we are still strong enough to negotiate, and not a broken rabble led by brutal war lords. Most of all, we should remember that we are part of it, and it is indeed our home." --James Lovelock

"Midlife crisis is what happens when you climb to the top of the ladder and discover that it's against the wrong wall." --Joseph Campbell

"The factory of the future will have only two employees, a man and a dog. The man will be there to feed the dog. The dog will be there to keep the man from touching the equipment" --Warren G. Bennis

"If there is in fact a heaven or hell, all we know for sure is that hell will be a viciously overcrowded version of Phoenix." --Hunter S. Thompson

IT'S TIME TO REDUCE OUR MAILING LIST—with rising printing & mailing costs, we will be removing some old addresses from our mailing list. But, if you get e-mail, **subscribe to our EMAIL LIST**. It saves paper, labor and postage, and only disturbs a few electrons. Sometimes we have a great deal to offer, or just some good RE news to pass on. We do not sell or share our (small, hand-maintained) list with anyone. Contact us at info@oasismontana.com. This newsletter is available as an online version — just the same except the links work! If we have a sale or new product, e-mail *may* be your only notification. And we won't bother you more than a couple of times a year.

