

# DISRUPTIVE ENERGY TECHNOLOGIES

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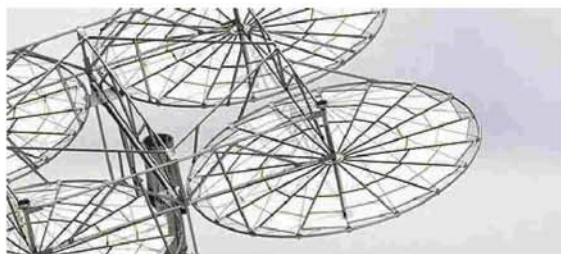
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## RaPower3 Technology

RaPower3 (Ra3) exclusively uses technology introduced by International Automated Systems, Inc. (IAS). Although Ra3 has contracted with operating and maintenance company LTB, LLC to utilize the full spectrum of IAS technologies in Ra3 projects only the RaPower3 Solar Concentration Lens is available to Ra3 members to purchase for use in these projects. Other technologies are forthcoming that should provide further opportunities for RP3 members.

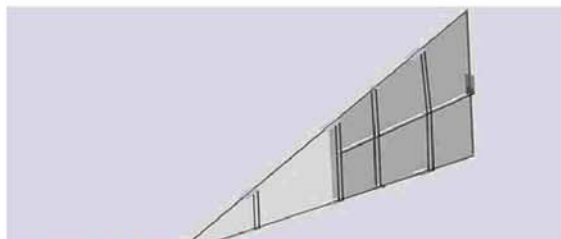
IAUS solar technologies have been lab and field tested. Each part has been designed to meet functional standards and to be able to be assembled in the most cost effective way. The man hours used to construct the mechanical assembly have been thoroughly evaluated in order to insure the final cost of the system is within the targeted amount.



### RaPower3 Solar Lenses

These special thin-film solar lenses are 92% efficient. They refract solar energy into a 2" focal point to generate temperatures well over 1,000 degrees F. They are constructed of extremely durable, non-yellowing aviation-grade acrylic and can be mass-produced in quantities never seen in the solar industry. These solar lenses are what we use in RaPower3 Solar Plants. Our lenses are the first and only solar lenses in the world to be manufactured using the unmatched mass-production process of roller-mold manufacturing.

For more information on our Solar Lenses click [HERE](#).



### RaPower3 Solar Lens Bracing

These RaPower3 Solar Lenses are fitted with harmonics bracing that cuts down vibrations from wind activity. The bracing makes the lenses wind resistant for winds up to 100 mph. These lenses can be used with other RaPower3 technologies from IAS to produce electricity from steam or from concentrated photovoltaics (CPV), to distill water, or for other manufacturing processes that require high temperatures.



For more information on all IAUS technologies click [HERE](#).

For more information on IAUS solar technologies click [HERE](#).

For parties interested in utility-scale projects of any IAUS technology, please contact:

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[greg@rapower3.com](mailto:greg@rapower3.com)

## Industry Comparison

### Lowest Cost of Operation!

Because of the nature of RaPower3 technology, our power plants have a far lower cost of operation than any other competing technology in the market today. This biggest costs saving can be attributed to our revolutionary bladeless propulsion micro-turbines, thin-film solar concentration lenses and pipeless heat exchangers. Our turbines can run off of low-grade steam and high-mineral content water without any damage and does not require a cooling tower allowing over 90% of the water to be instantly recaptured and recirculated. The solar lenses have permanent calibration with a focal point of 22 inches that reach temperatures well over 1,000 degrees. Our heat exchangers are 1,000 times smaller than our competitors and require very minimal maintenance.

### Most Sun Hours!

Our solar towers have a patented counter balanced dual-axis solar tracking system that allow us to have the maximum amount of solar hours per day and requires very little power to operate.

### Highest Wind Tolerance!

The solar lenses on our towers are rated to withstand up to 90 mph winds. And because our focal point is larger than any other company, vibrations due to wind do not affect our efficiencies.

### Easiest Operation!

Where it takes our competitors an entire room of computers and several highly



### RaPower3 Solar Concentrators and Heat Collectors

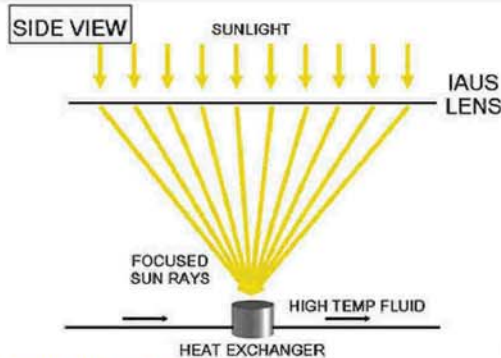
RaPower3's parabolic solar concentrators are adjustable in all directions for easy adjustment to focal point. Our solar lenses focus the sun's heat into the solar concentrator and the heat funnels down to the bottom where our sphere shaped heat collector captures the heat and subsequently pumps the heat to a heat-storage tank or to be used by our jet-propulsion turbines.

Using the heat concentrators with our solar lenses, we can get temperatures well over 2,000 degrees F.

educated engineers to operate their plants, it takes us a single computer to operate an entire field of our towers.

### The Most Environmentally Friendly!

Every acre of land used by our competitors is permanently damaged. Since our technology is raised on towers, any land between the towers remains open for other uses such as grazing or farming and if the plant is ever moved, the land is easily restored. We also do not use up precious water to run and cool our plants as is needed with our competitors.



### Refractive Properties

The diagram shows the sunlight refracting to a large 2" focal point. The reflecting technology of our competition requires a focal point less than a pin head. This requires intricate software technology in the solar field and considerably increases the cost of their operation.

Annual Efficiency Data	SEGS VI	Solar Tres	Dish 10	IAUS
Solar Field Optical Efficiency	53.30%	56.00%	85.00%	83.79%
Receiver thermal efficiency	72.90%	78.30%	90.00%	90.00%
Transient effects	100.00%	100.00%	92.00%	92.00%
Piping loss efficiency	96.10%	99.50%	96.10%	96.10%
Storage Efficiency	100.00%	98.30%	100.00%	100.00%
Turbine power cycle efficiency	35.00%	40.50%	35.00%	43.50%
Electric loss efficiency	82.70%	86.40%	86.00%	86.00%
Power plant availability	98.00%	92.00%	94.00%	96.00%
Annual Solar to Electric Eff	10.59%	13.81%	19.14%	23.94%

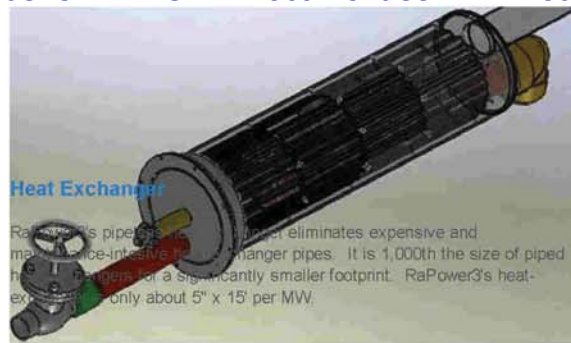
### Efficiency Comparison

RaPower3 uses IAUS technology. The comparison chart to the left shows how RaPower3's solar systems stack up against other well known solar technologies from an efficiency stand point. RaPower3's "Annual Solar to Electric Efficiency" of 23.94% is significantly higher than competing technologies.

Download White Papers [HERE](#).



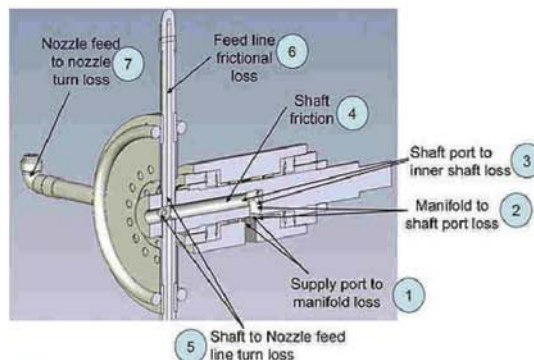




### Jet-Propulsion Turbine

The RaPower3 Bladeless Jet-Propulsion Turbine and Heat Exchanger is designed to run off of any heat-source including geothermal, solar, methane, biomass, solid waste, natural gas, etc. It is 47% efficient and has only two moving parts. It is self-balancing and auto-synching. RaPower3 uses this Jet-Propulsion Turbine and Heat Exchanger in their solar projects.

For more information on the Bladeless Jet-Propulsion Turbine click [HERE](#).



### Jet-Propulsion Turbine

Because it uses small jet-engines or nozzles instead of blades like traditional turbines, it can use impure hard-water without any issues. In fact, brackish water and other types of polluted water can be used in the turbine and as the heated water flashes to steam as it escapes through jet-engine the particulates fall down to the extraction chamber and the steam pushes forward through to the condensation chamber effectively making the turbine as a water distillation plant while it produces power.

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## AGREEMENTS



Lens Purchase Agreement



Operations &amp; Maintenance



Commission Agreement



Policies &amp; Procedures



Distributor Application

## DOCUMENTS



IAUS Tech White Papers



Tax Opinion Letter



Tax Memorandum



RaPower3 History



Millard County Permit

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