- **A Superior Heating & Air Exclusive—State of the Art Technology**
- **State, Local, ARB, HOH & or POA Approved Installations**
- **Engineered exclusively for HVAC —No other product like it**
- **Up to 32 SEER – One of the most efficient systems available**
- **Lowers power consumption—saves energy & money**
- **Pays for itself— Installation Price Qualifies for 55% in Tax Credits**

The Hotter it Gets…The Better it Works!™

MAR 2013

SuperiorSolar
Solar Heating & cooling

Introducing… Superior Solar

Solar Thermal Heating & Air Conditioning
is the combination of a
state-of-the-art high-efficiency
2-stage air conditioning
system integrated with
a Proprietary Solar Thermal Collector Panel,
creating
the most energy-efficient
Heating &Air Conditioning System
available today!

The Hotter it Gets…The Better it Works!

What is Solar Thermal Air Conditioning?

The key element is the integrated

Solar Thermal Collector!

Our Solar thermal collector **does not** generate electricity, It uses the air conditioning & heating system's refrigerant, which in turn reduces the required work load of the compressor.

This then lowers the overall power consumption of the system, saving energy and money.

The Hotter it Gets…The Better it Works!

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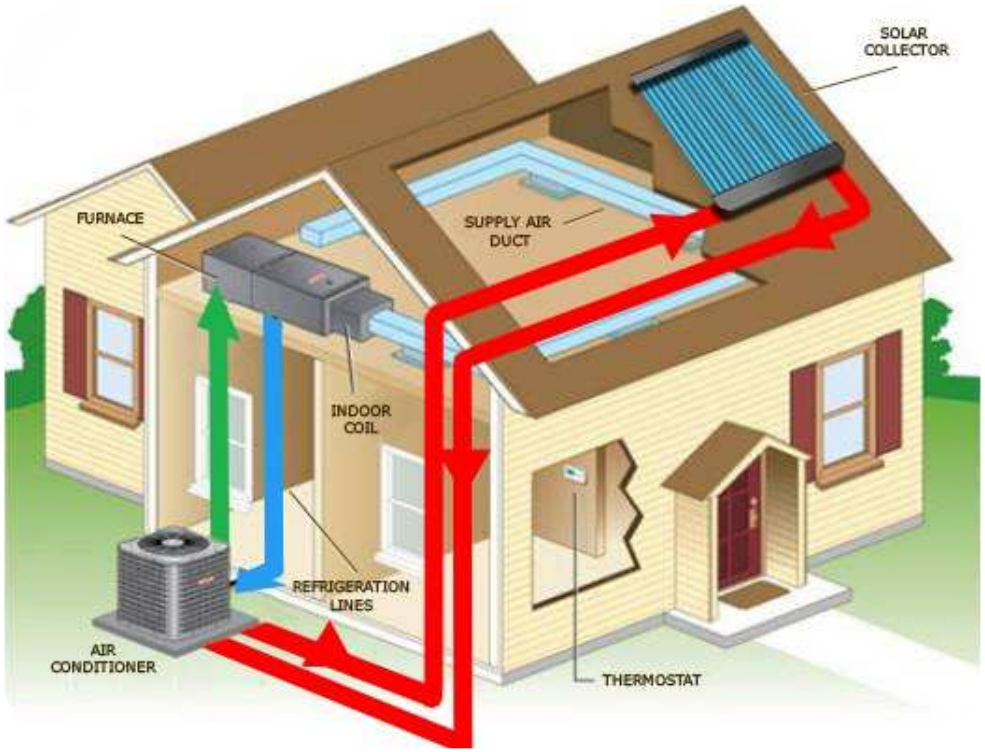
How Does Solar Thermal A/C Work?



- Refrigerant arrives at the compressor as **cool, low-pressure** gas
- Compressor squeezes Refrigerant creating energy and raising it's temperature
- Refrigerant will now leave compressor as **hot** gas and flow first into the solar panel and then into the condenser.
- The solar panel increases the temperature's difference and helps maintain better humidity control.
- Gas enters condenser coil and begins cooling and returns to a liquid state.
- Liquid enters the evaporator and pressure declines and begins to evaporate as gas.
- Heat is extracted from the air surrounding it which separates the molecules from liquid to gas.
- As the gas leaves the evaporator, it has returned to compressor in its original state.

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How Does Solar Thermal A/C Work?

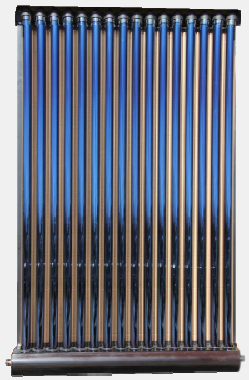
The Outdoor Section of the A/C unit contains a 2-stage compressor which uses the most electricity of the whole system!

Copeland 2-stage Compressor

=

The Copeland 2-stage compressors run in 2nd stage during very hot days to supply cooling. High efficiency 2-stage A/C Units from 2 to 5 tons normally operate from 18 to 40 amps in second stage.

The 2-stage compressor in **1st stage** normally operates at 65% of BTU capacity. When the compressor engages 2nd stage the compressor is now operating at 100% of the compressors BTU capacity.



Solar Cool Solar Panel

+

Copeland 2-stage Compressor

=

The Solar Panel takes the compressor running in **1st stage** at 65% of its BTU capacity and brings the **SYSTEM** to **100%** of the systems capacity without an increase in amp draw.

Units with a Solar Panel added stay in 1st stage longer and operate between 5 to 12 amps. The rest of the system operates NORMAL as if the system was in 2nd stage.

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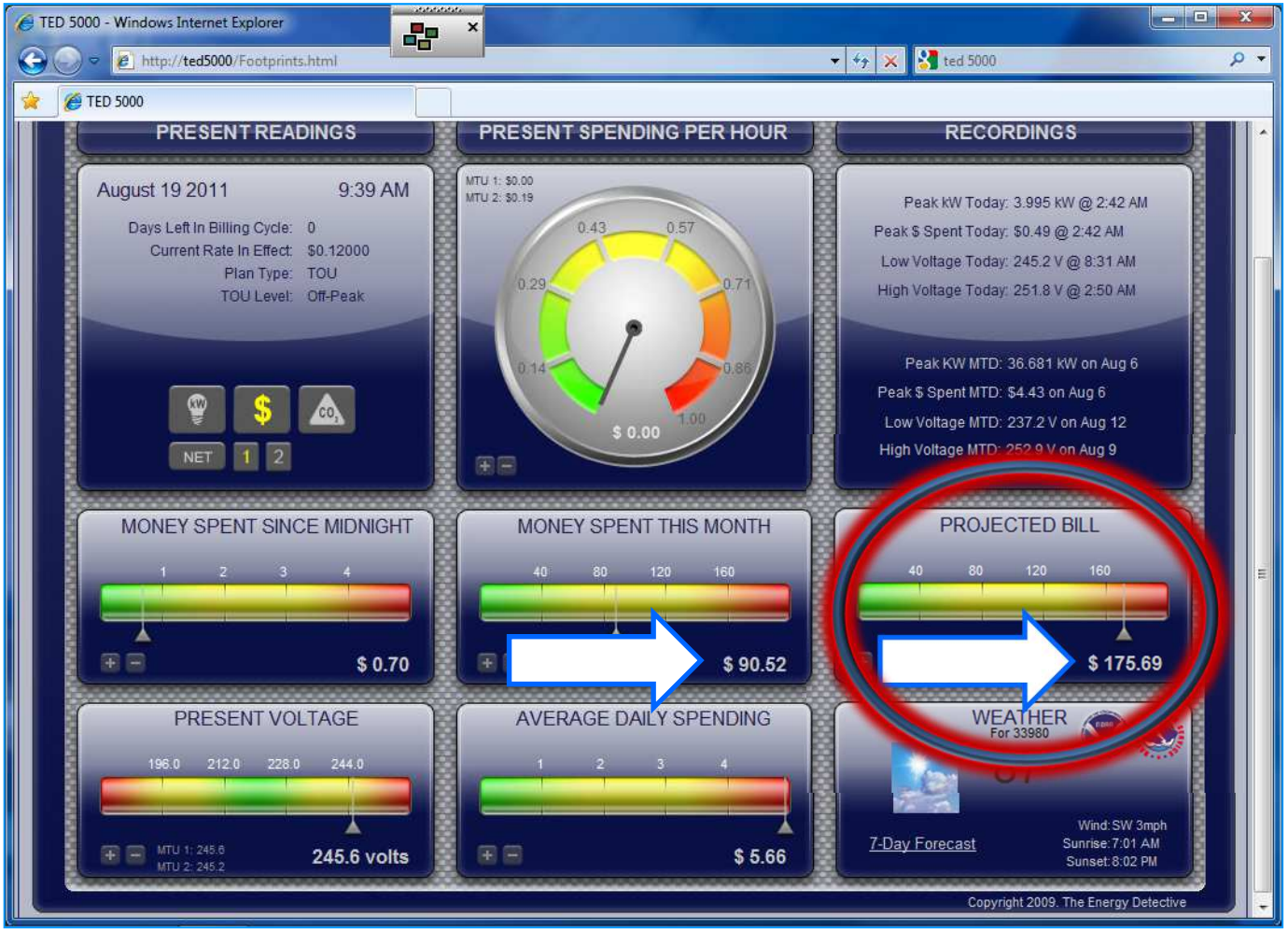
Ted 5000 Data

Actual Example data of Typical 3 Ton 12 SEER

The TED 5000 "The Energy Detective" from Energy Inc. is an energy monitor program that interface's with Google's *PowerMeter* software to give the consumer their in-home real-time electricity usage from anywhere.



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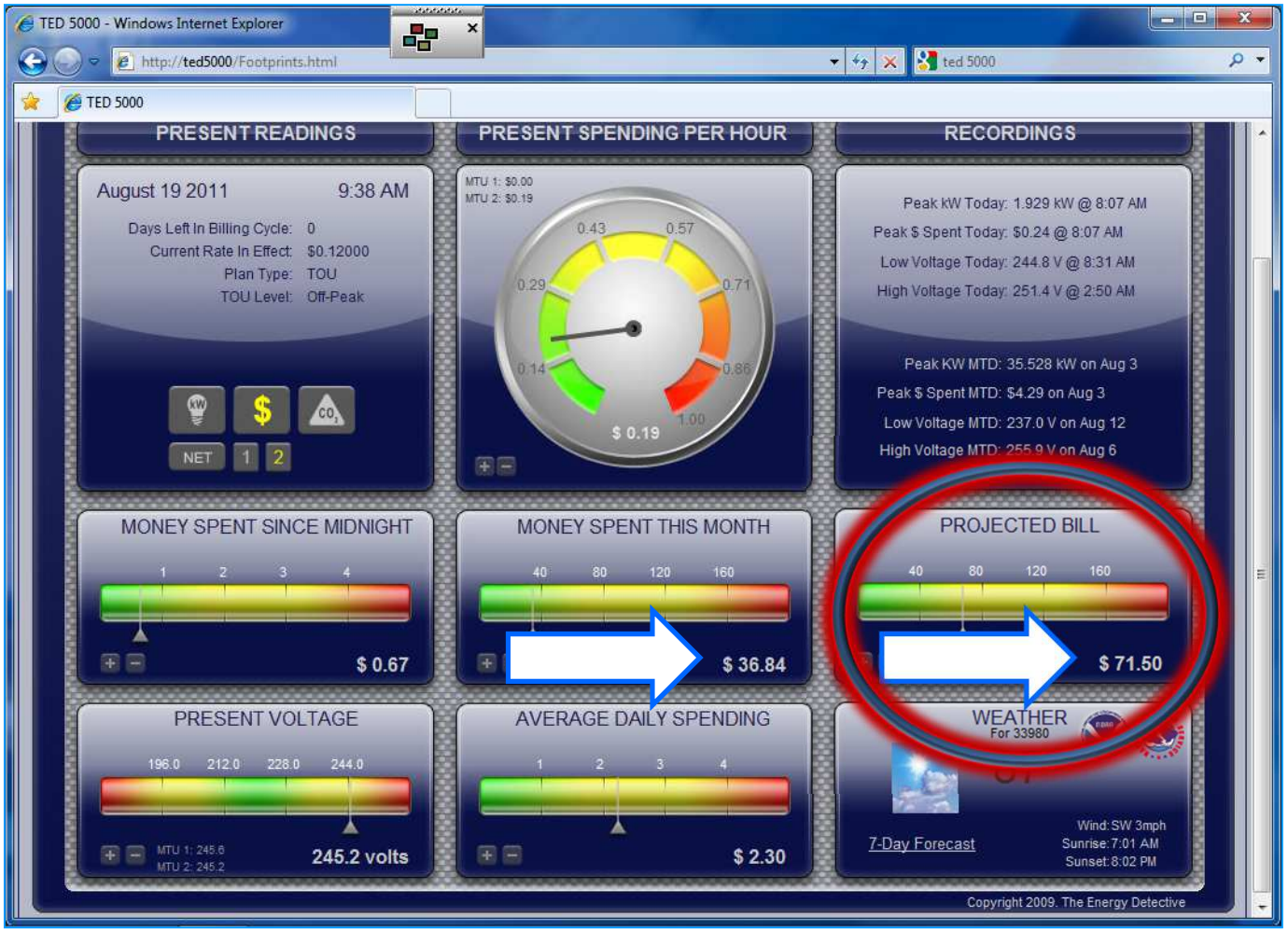
Ted 5000 Data

Actual Example data of Superior Solar 3 Ton System

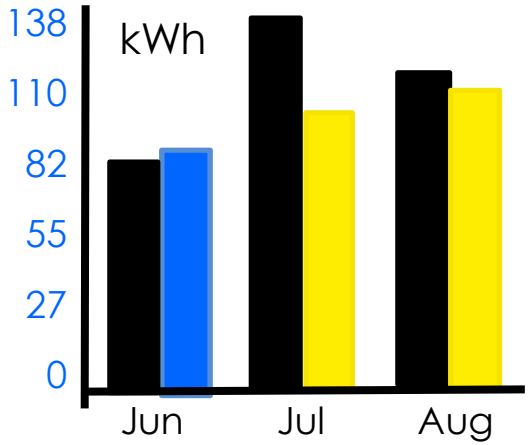
MTD
$90.52-36.84=60% savings against a 12 Seer unit.

Projected Month
$175.69-$71.50= $104.19

How much against a 7 or 8 Seer you are replacing???



The Hotter it Gets…The Better it Works!



Average Electricity Use per Month

"Ashby" RESIDENCE

APS BILL SUMMARY POST SUPERIOR SOLAR INSTALL

Phoenix, AZ

2010 ■ 2011 ■

SUPERIOR SOLAR System in service ■

Monthly Comparison of Electricity Usage	2010	2011	**TOTAL**
JULY			*2010 VS 2011*
Average Outdoor Temperature	97	96	
Your Total use in kWh	4425	2457	**-1968**
Percentage of On-peak Use	23%	19%	**4%**
Your Billed Demand	10.1	6.1	**-4.0**
Your Average Daily Cost	$13.87	$9.34	**-$ 4.53**
AUGUST			
Average Outdoor Temperature	94°	96°	
Your Total use in kWh	3349	2656	**- 693**
Percentage of On-peak Use	22%	19%	**3%**
Your Billed Demand	9.5	5.9	**- 3.6**
Your Average Daily Cost	$12.61	$9.38	**-$ 3.23**

July SAVINGS with SUPERIOR SOLAR=

33%!

August SAVINGS with SUPERIOR SOLAR=

25.6%!

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Savings

What cost benefit does upgrading to a better rated SEER unit provide?

A/C UPGRADE SAVINGS CALCULATOR

Percentage of Monthly Savings on Your Heating and Air Conditioning Bill

NEW UNIT'S SEER RATING

EXISTING UNIT'S SEER RATING	13	14	15	16	17	18	19	20	21	22	23	24
6	44%	48%	51%	54%	56%	59%	61%	63%	66%	69%	71%	73%
7	38%	42%	46%	49%	52%	54%	57%	59%	62%	65%	67%	69%
8	32%	36%	40%	44%	47%	50%	52%	55%	58%	61%	64%	66%
9	26%	31%	35%	39%	42%	45%	48%	51%	54%	57%	60%	62%
10	20%	25%	29%	**33%**	37%	41%	44%	46%	49%	52%	55%	**58%**
11	13%	19%	24%	28%	32%	36%	39%	42%	45%	48%	50%	52%
12	7%	13%	18%	23%	27%	31%	35%	38%	41%	44%	47%	51%
13		6%	12%	17%	22%	26%	30%	33%	36%	39%	42%	46%

What is a SEER Rating?

Measuring the efficiency of your current system can be done by finding the SEER rating or **(Seasonal Energy Efficiency Ratio)** rating usually labeled on your compressor or in a reference guide.

EX: If your existing A/C Unit is at a "10" SEER Rating and you upgrade to a "16" SEER rated unit…your saving per month would be approximately

58% with the Superior Solar System!

The Hotter it Gets…The Better it Works!

Matching Residential Products

2-Ton through 5-Ton Split Systems

2-Ton through 5-Ton Packaged Units

FEATURES:

- 2 Stage Compressor
- Solar Panel system included
- Standard Thermostat
- Variable Speed Fan
- Heating Options Include Heat Pump, Gas, Dual Fuel, and Gas Pack

The Hotter it Gets…The Better it Works!

Matching Commercial Products

3-Ton through 5-Ton Packaged & Split Systems – Available Now!

FEATURES:

- 2-Stage Compressor
- Solar Panel System and Install Kit
- Standard Thermostat

7.5-Ton through 25-Ton Packaged Units – Coming in 2014!

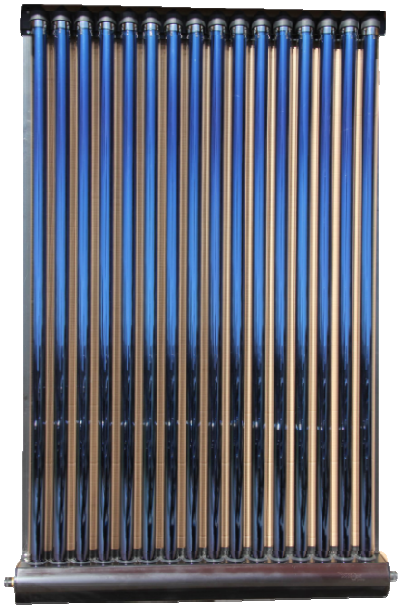
FEATURES:

- Solar Panel mounted on or next to unit
- Digital Scroll Compressor
- Specially Programmed Thermostat for Digital Scroll

The Hotter it Gets…The Better it Works!

Flexible Installation Options

Warranty



Residential:
10 -Year Parts Warranty

Commercial:
5 -Year Parts Warranty

Consumer product registration required for Solar Cool warranty within 60-days of the installation.
See current Warranty Terms and Conditions Registration Form for warranty details.

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Frequently Asked Questions

What can I expect on cloudy days & does it have to face a certain direction?

Efficient, low maintenance evacuated tube collectors produce thermal energy, even on cloudy days and regardless of sun exposure.

Who Installs the Solar panel?

Only Superior Heating & Air is a Authorized dealer/Installer. Any Roof installations will be done by a licensed roofer when necessary.

Where does the solar panel get installed?

Panels can be installed almost anywhere but are typically roof mounted. Because they do not have to be installed facing a certain orientation they can be mounted out of site on the back side of most homes.

How large is the solar panel?

Each HVAC system will require one 4'x6' Solar Collection panel
(no bigger or different looking then a skylight)

What is the life expectancy of a Solar Thermal A/C & Heating system?

The median life expectancy of the solar Panel is 15 years or more.

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Frequently Asked Questions

Am I Allowed to Install a Solar panel on my roof?

In Short, Yes! Most ARB & HOA's approve if installed in a certain manner. 40 States have Solar Access laws in place protecting home & business owners rights to solar access and the use of renewable energy. Getting local approval is always recommended but if dined, rights can be upheld, enforced and over ridden by state solar access laws and solar easement regulations.

Is this technology reliable?

Solar thermal collectors have had 30+ years of success and it was simply combined with modern day HVAC technology to create optimum efficiency and output.

What type of scheduled maintenance is involved with a solar powered A/C unit?

The scheduling of routine maintenance should be the standard preventive check-up which is every year.

Can the solar collectors for the solar A/C be used for heating?

Yes, when configured as a HVAC /Heat Pump System, the unit will provide heat in the winter.

55% Personal Tax Credit & Incentives

2013 Federal Tax Credits & Solar Energy Efficiency Incentives

– Solar Federal Tax Credit is 30% of the entire amount spent on the system

2013 State Tax Credits & Solar Energy Efficiency Incentives

– Solar State Tax Credit is 25% of the entire amount spent on the system

*State credit has a yearly cap but the difference can be taken over 10 years!

Additional Incentives may be available. Check with your utility provider and/or tax professional for more details.

To check for current tax and rebate incentives available in your state, see **www.dsireusa.org**

The above information regarding taxes, tax credits and depreciation is meant to make the reader aware of these benefits, risks and potential expenses. It is not tax advice. Please seek professional advice from a qualified tax advisor to check the applicability and eligibility before claiming any tax benefits or exemptions.

The Hotter it Gets…The Better it Works!

55% Corporate Tax Credit & Incentives

2013 Federal Tax Credits & Solar Energy Efficiency Incentives

– Solar Federal Tax Credit is 30% of the entire amount spent on the system

2013 State Tax Credits & Solar Energy Efficiency Incentives

– Solar State Tax Credit is 25% of the entire amount spent on the system
*State credit has a yearly cap but the difference can be taken over 10 years!

– Deductions of $0.60 per square foot are available to owners of commercial buildings in which individual lighting, building envelope, or heating and cooling systems meet target levels that would reasonably contribute to an overall building savings of 50% if additional systems were installed. The subsystem targets are 20% interior lighting, 20% HVAC & hot water, and 10% building envelope.

Additional Incentives may be available. Check with your utility provider and/or tax professional for more details.

To check for current tax and rebate incentives available in your state, see **www.dsireusa.org**

The above information regarding taxes, tax credits and depreciation is meant to make the reader aware of these benefits, risks and potential expenses. It is not tax advice. Please seek professional advice from a qualified tax advisor to check the applicability and eligibility before claiming any tax benefits or exemptions.

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