



**SUSTAINABLE™  
FUTURE**

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# Sustainable Future, LLC

Reducing Carbon Emissions  
For the City of Oak Ridge  
September 4, 2008

# Who we are

- Licensed, local Solar Contractor for East Tennessee
- We have been in Business since 2005
- Have created on only net Zero Energy House (ZEH) in the area.



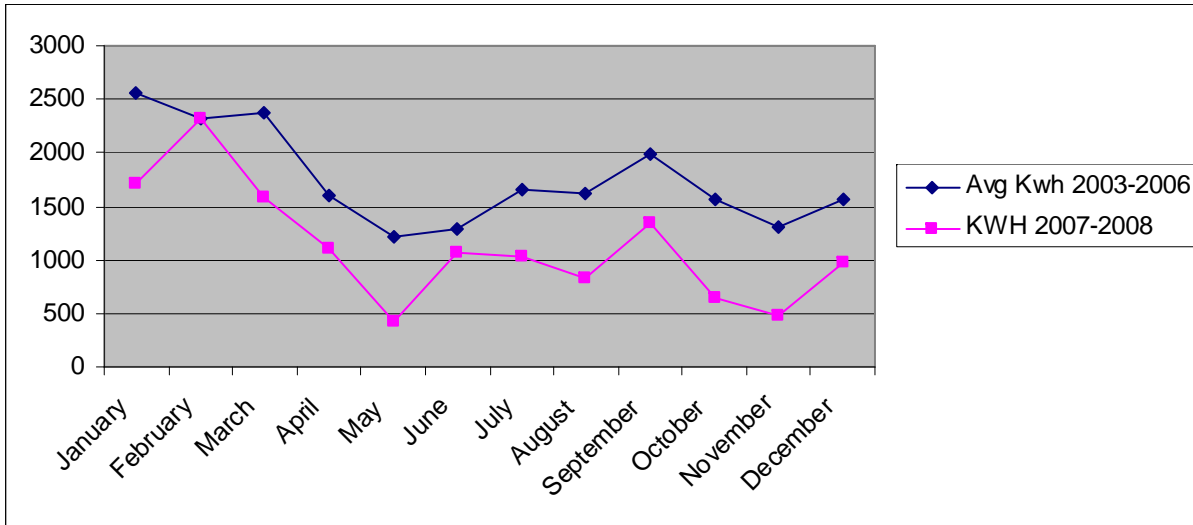
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# What We Do

- Help our customers move toward net Zero Energy and thereby reduce their carbon emissions!
- We do this by:
  - Educating our customers
  - Reducing plug loads
  - Reducing heating/cooling loads
  - Replacing old devices with more efficient ones
  - Repurpose waste energy
  - Installing solar hot water systems
  - Installing solar electric (photovoltaic) systems



# Kerry's Utility Reductions



# David's Renovation to ZEH



← Fall 2005

Winter 2006 →

Winter 2007



Spr. 2008



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# David's Zero Energy Home (ZEH)

**HUB**

**HARRIMAN UTILITY BOARD**  
P.O. Box 434  
HARRIMAN, TN. 37748

DATE BILLED: 8/29/2006  
NET BILL: -134.69  
PAY GROSS AFTER: 9/13/2006  
GROSS BILL:

ACCOUNT NUMBER: [REDACTED]

DUE DATE DOES NOT APPLY TO PAST DUE BALANCE

RETURN THIS PORTION WITH PAYMENT

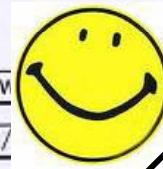
ACCOUNT NUMBER	ACCOUNT NAME	SERVICE ADDRESS	BILLING DATE
[REDACTED]	[REDACTED]	[REDACTED]	8/29/06

DESCRIPTION	MULT	METER NUMBER	DATE FROM	DATE TO	DAY	PRIOR READING	CURRENT READING	USAGE	AMOUNT
ELECTRIC	1	21012	07/19	08/17	29	1682	2050	328	34.35
SECURITY LIGHT	1		07/18	08/18	31				9.16
CO GENERATION	1	21012	07/19	08/17	29				55.20
ELECTRIC	1	20952	07/19	08/17	29	2070	2030		123.00
CREDIT BALANCE									

NO OTHER NOTICE WILL BE SENT

TOTAL DUE NOV -134.69

TOTAL DUE AFTER 9/13/



Note negative balance!



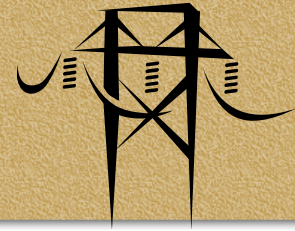
# Oak Ridge Government

- City buildings include schools, library, civic center, municipal pool, fire stations, etc.
- With motivated people, simple awareness of energy use can drop 10% or more.
- 30%+ reductions are possible through building improvements and use of renewable energy



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# Big Impact



- What's the big deal? Can 10% make a difference?
- Preliminary #s (thanks Athanasia!) from OR Schools ONLY: 14,390,569 kilowatt hours per year. At 8 cents per kilowatt hour, this is an annual utility bill of \$1,151,245 – which will go UP. A 10% reduction would save over \$100,000 in the schools alone and over 1,400,000 lb of coal not burned.



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# What about 30%

- \$20,299 Library
- \$16,528 Municipal Building
- \$51,944 Central Services Complex
- \$ 3,670 Scarborough Center
- \$ 3,272 Animal Shelter
- \$95,713 Total per Year



# Some Pilot Options

- Load reductions with education/incentives
- Load reductions with policy phase outs
- Residential Programs so people can track their progress & relative progress
- Load reductions with progress kwh pricing
- Building audit and usage with recommendations.



# Thanks for your interest

- Visit:  
<http://SustainableFuture.Biz>  
for more information
- David Bolt  
865.603.0520 cell  
dwbolt@SustainableFuture.biz



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