




ENERGY ALABAMA

Energy Solutions for Recycling
March 21, 2016

 fb.com/energyalabama  @energyalabama



Inherently Efficient



Less energy than supplying virgin materials

Inherently Efficient




2005 = 988,489,000 million BTUs
or 10,721,139 homes

Inherently Efficient



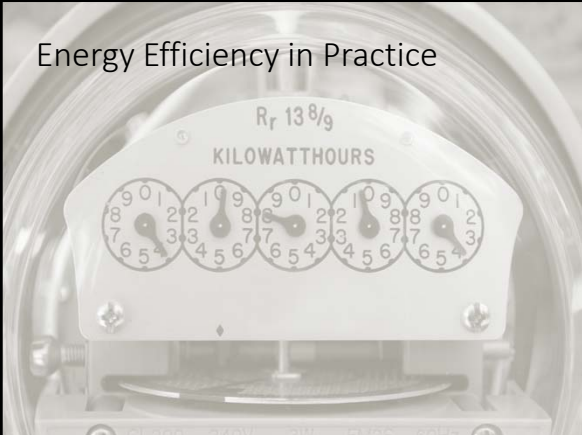
Paper = 50% reduction

Inherently Efficient



1 lb steel = 26 hours

Energy Efficiency in Practice



R_r 13 ⁸/₉
KILOWATTHOURS

Portfolio Manager

Finish your application for ENERGY STAR Certification

ENERGY STAR Score (1-100)

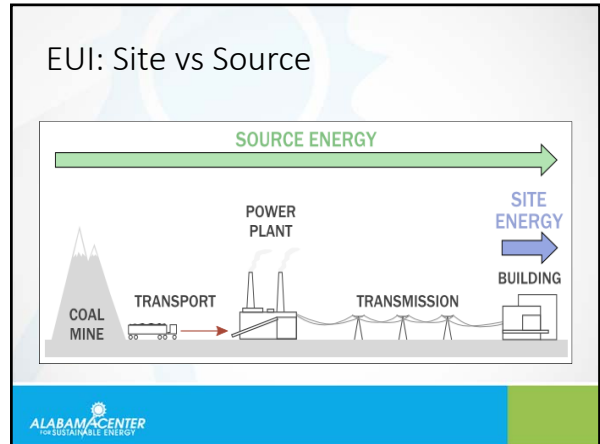
Current Score: 77

Baseline Score: 2

Avion Solutions HQ
 4905 Research Drive NW, Huntsville, AL 35805 [Map It](#)
 Portfolio Manager Property ID: 3930059
 Year Built: 2011

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ALABAMA CENTER FOR SUSTAINABLE ENERGY



- ### Baseline
- Energy Star Score – 2
 - Source EUI – 432.9 kBtu/ft²
 - Site EUI - 137.9 kBtu/ft²
 - Energy Cost - \$73,518.45
 - GHG Emissions 577.9 Metric Tons CO₂
- ALABAMA CENTER FOR SUSTAINABLE ENERGY

Common Upgrades

Setbacks & scheduling = immediate payback

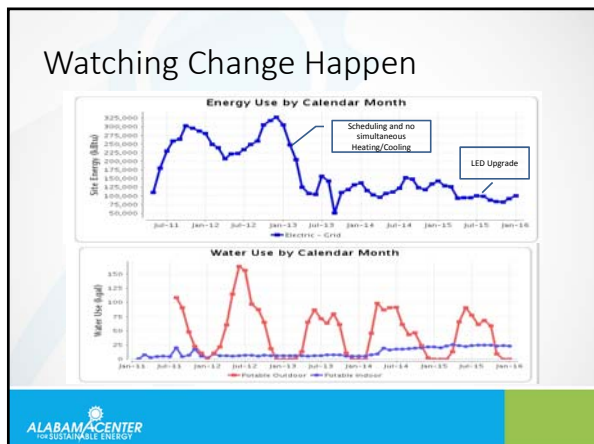
Common Upgrades

HVAC controls = < 1 year payback (usually)

Customized by www.EnergyOptimizer.com

Common Upgrades

LED lighting = ~2 year payback



Comparisons

Baseline (December 2012)	Current (January 2016)
• Energy Star Score – 2	• Energy Star Score – 77 (+3750%)
• Source EUI – 432.9 kBtu/ft ²	• Source EUI – 164 kBtu/ft ² (-61.9%)
• Site EUI - 137.9 kBtu/ft ²	• Site EUI - 52.5 kBtu/ft ² (-61.9%)
• Energy Cost - \$73,518.45	• Energy Cost - \$33,285.57 (-54.7%)
• GHG Emissions 577.9 Metric Tons CO2	• GHG Emissions – 220 Metric Tons CO2 (-61.9%)

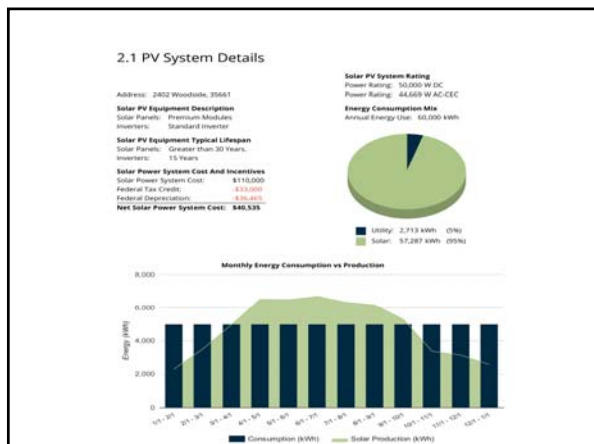
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1. Project Summary

Payment Options	Cash Purchase	Alabama Saves-2 Percent-10 year
Upfront Payment	\$110,000	\$40,293
Monthly Payment	-	\$641
Term	-	10 Years
Total Payments	\$110,000	\$117,261
Rebates and Incentives ¹	\$69,465	\$69,465
Net Payments	\$40,535	\$47,796
30-Year NPV	\$67,544	\$77,818
30-Year Electricity Savings	\$271,190	\$271,190
30-Year IRR	12.13%	31%
30-Year LCOE Utility	\$0.188	\$0.188
30-Year LCOE Utility & PV	\$0.127	\$0.123
30-Year LCOE PV	\$0.027	\$0.031
Payback Period	6.6 Years	1.2 Years

Combined Solar PV Rating
Power Rating: 50,000 W DC
Power Rating: 44,669 W AC-CEC



1. Project Summary

Payment Options	Cash Purchase
Upfront Investment Payment	\$802,126
Total Payments	\$802,126
Rebates and Incentives ¹	\$707,074
Net Payments	\$95,052
30-Year NPV	\$670,762
Year 1 Electricity Savings	\$37,989
30-Year Electricity Savings	\$1,945,530
30-Year IRR	18.8%
30-Year LCOE Utility	\$0.315
30-Year LCOE Utility & PV	\$0.282
30-Year LCOE PV	\$0.007
Payback Period	3.3 Years

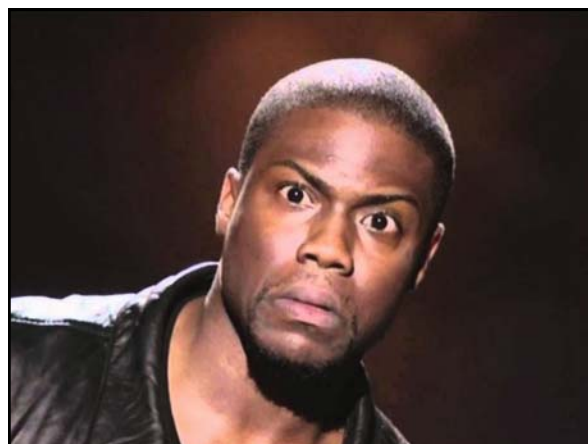
Combined Solar PV Rating
Power Rating: 348,000 W DC
Power Rating: 303,129 W AC-CEC



1. Project Summary

Payment Options	Cash Purchase	Alabama Saves - 2% - 10 Year
Upfront Investment Payment	\$1,850,000	\$555,000
Monthly Payment	-	\$11,916
Term	-	10 Years
Total Payments	\$1,850,000	\$1,984,889
Rebates and Incentives ¹	\$1,105,375	\$1,105,375
Net Payments	\$744,625	\$879,514
30-Year NPV	\$1,882,151	\$2,073,029
Year 1 Electricity Savings	\$127,519	\$127,519
30-Year Electricity Savings	\$6,530,683	\$6,530,683
30-Year IRR	15.61%	69.36%
30-Year LCOE Utility	\$0.181	\$0.181
30-Year LCOE Utility & PV	\$0.157	\$0.156
30-Year LCOE PV	\$0.02	\$0.024
Payback Period	5.6 Years	0.6 Years

Combined Solar PV Rating
Power Rating: 1,000,000 W DC
Power Rating: 871,060 W AC-CEC



GET:

- Solar analysis on your property
- Sustainable energy action alerts
- Heads up on events & parties
- Latest local sustainable energy updates

*by emailing me at:
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