

LREMC Experiences with Sandy Grove Middle School



Lumbee River Electric Membership Cooperative

A Touchstone Energy® Cooperative 

Lumbee River EMC Background

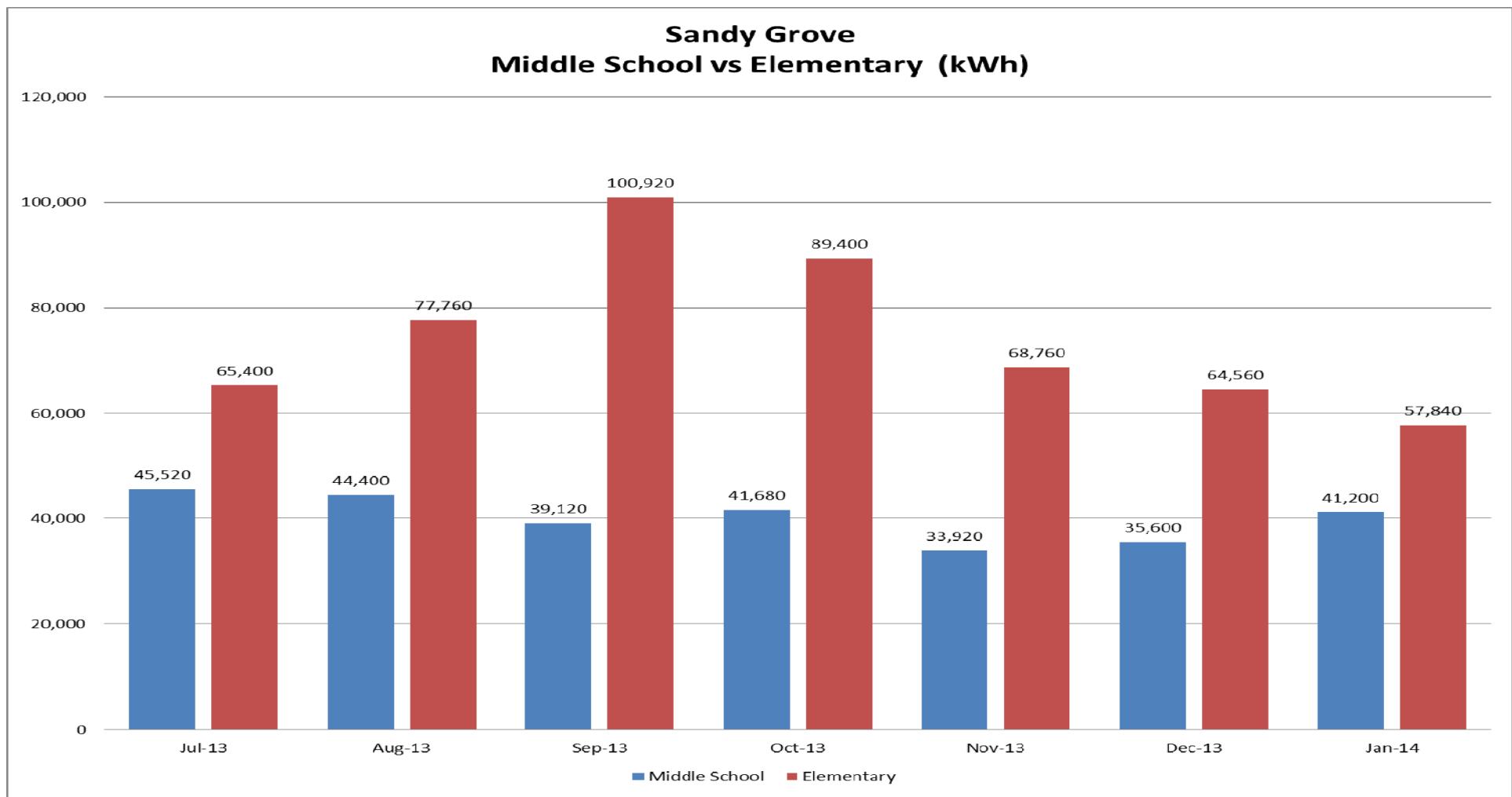
- A “grass roots” electrical cooperative founded in 1940
- Serves Cumberland, Hoke, Robeson, and Scotland Counties
- ~56,716 **Members** and ~58,012 Meters
- ~5,672 miles of energized line
- ~\$124.8M in revenue in 2013 (Unaudited)
- Not for Profit, return margins to members over time



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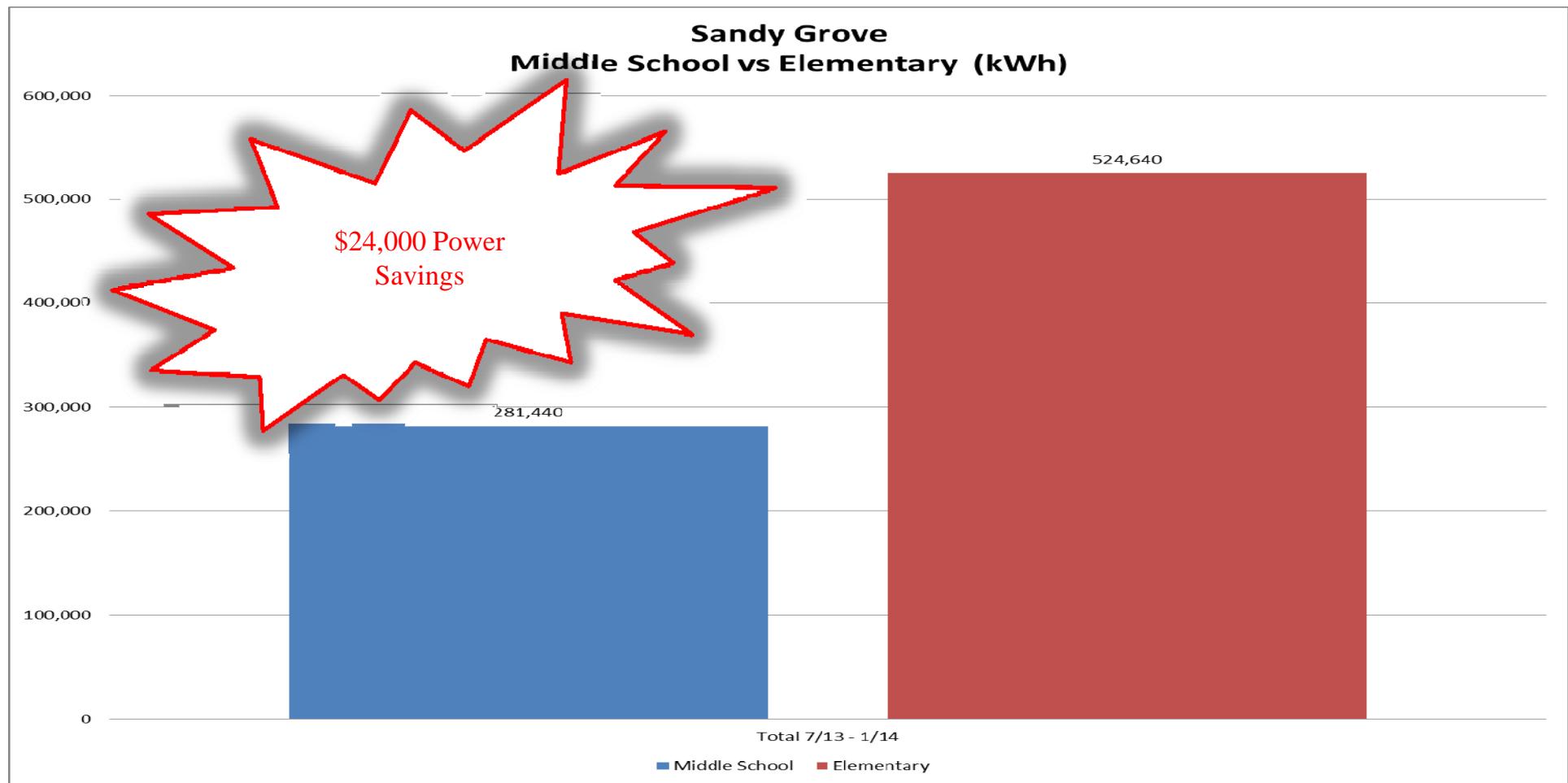
Sandy Grove Middle has consistently used less electricity than nearby Sandy Grove Elementary.



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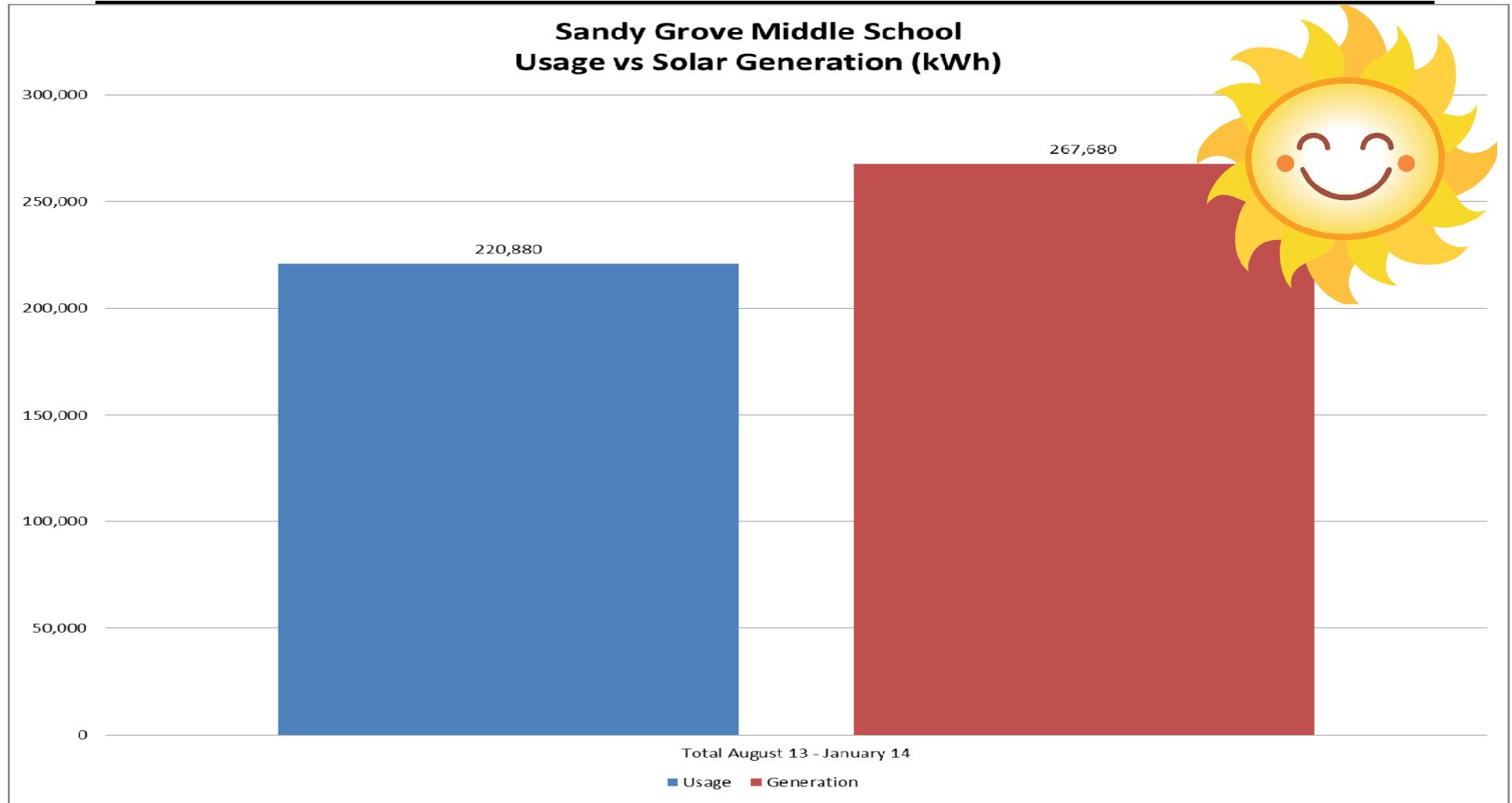
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Sandy Grove Middle is approximately 53.6% more energy efficient as compared to Sandy Grove Elementary.



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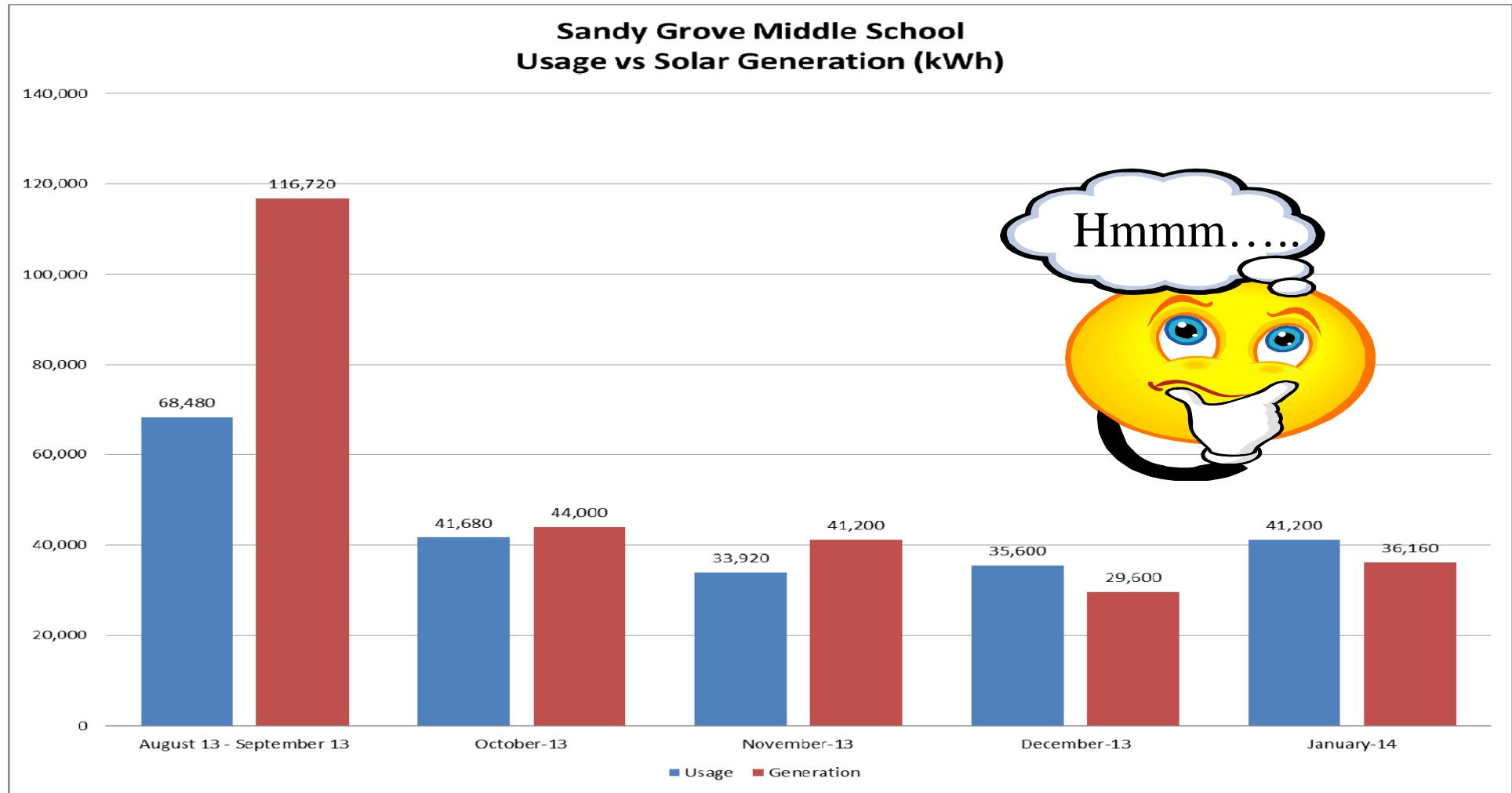
Our total usage data shows that Sandy Grove Middle has generated more power than consumed.



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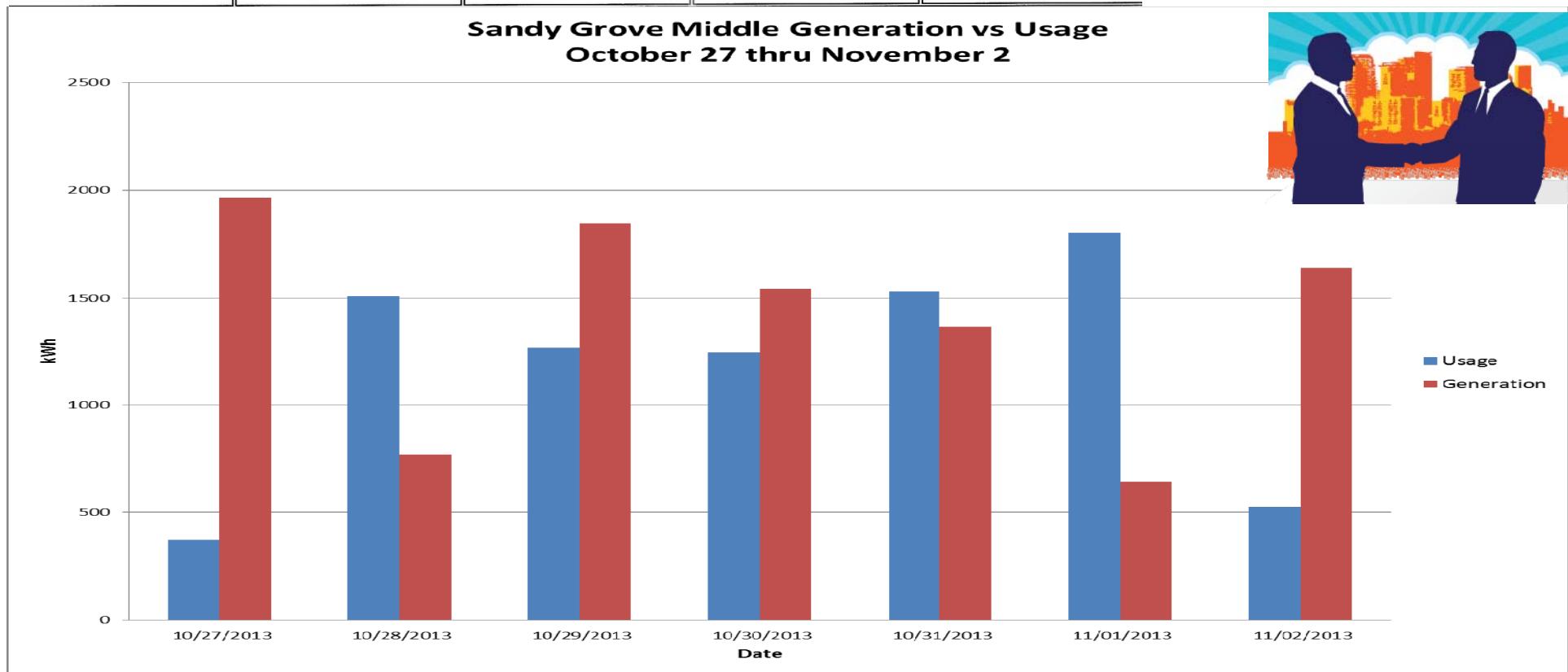
Our monthly usage data shows that Sandy Grove Middle has a mixed record on electricity production.



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Our daily usage data shows there must be a partnership between Sandy Grove Middle and LREMC.

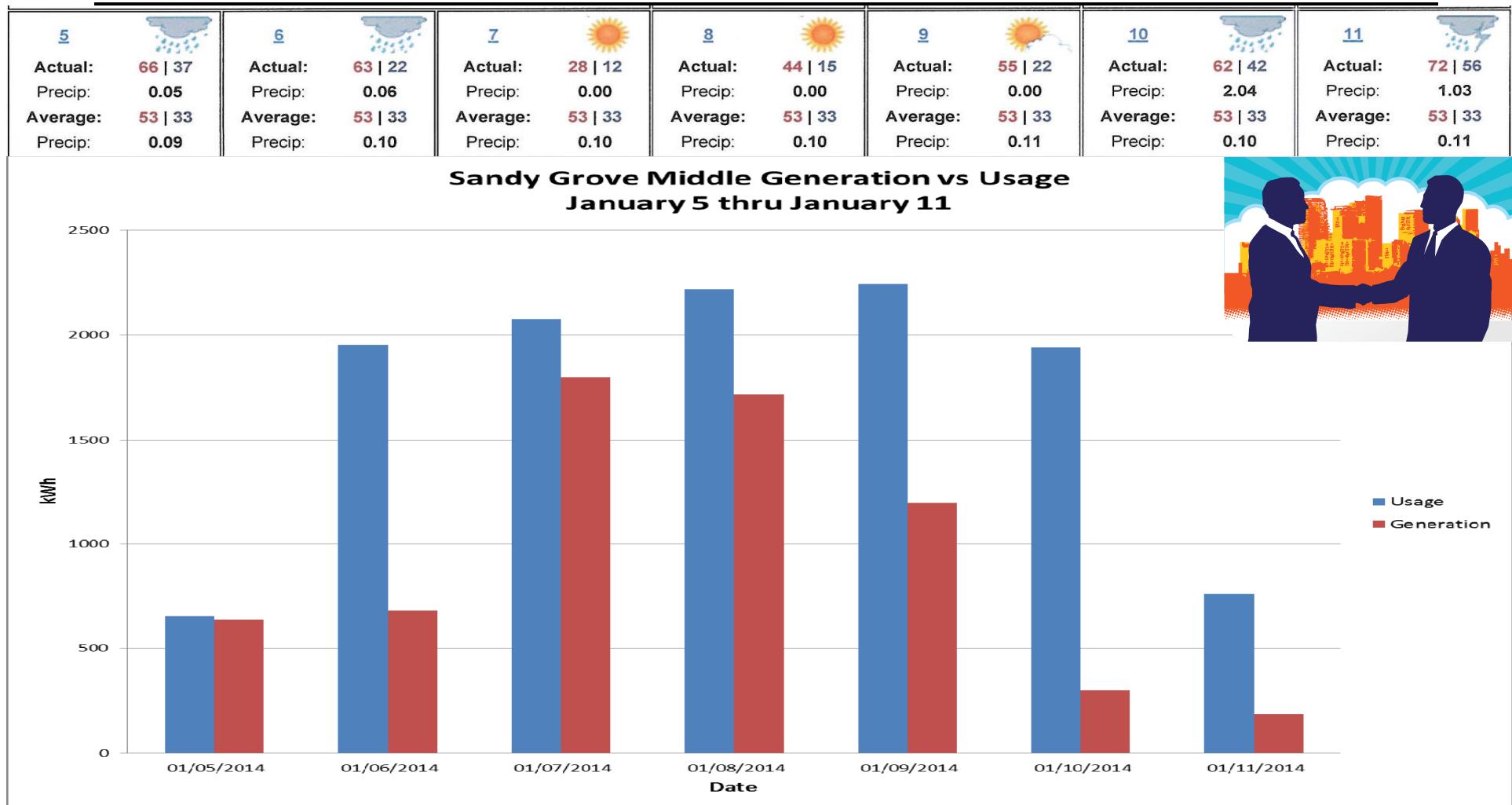
27		28		29		30		31		1		2	
Actual: 70 38		Actual: 70 45		Actual: 76 47		Actual: 79 51		Actual: 79 52		Actual: 81 67		Actual: 74 56	
Precip: 0.00		Precip: T		Precip: 0.00		Precip: 0.00		Precip: 0.02		Precip: 0.68		Precip: 0.01	
Average: 72 48		Average: 72 48		Average: 72 47		Average: 72 47		Average: 72 47		Average: 71 47		Average: 71 46	
Precip: 0.07		Precip: 0.06		Precip: 0.07		Precip: 0.06		Precip: 0.08		Precip: 0.07		Precip: 0.08	



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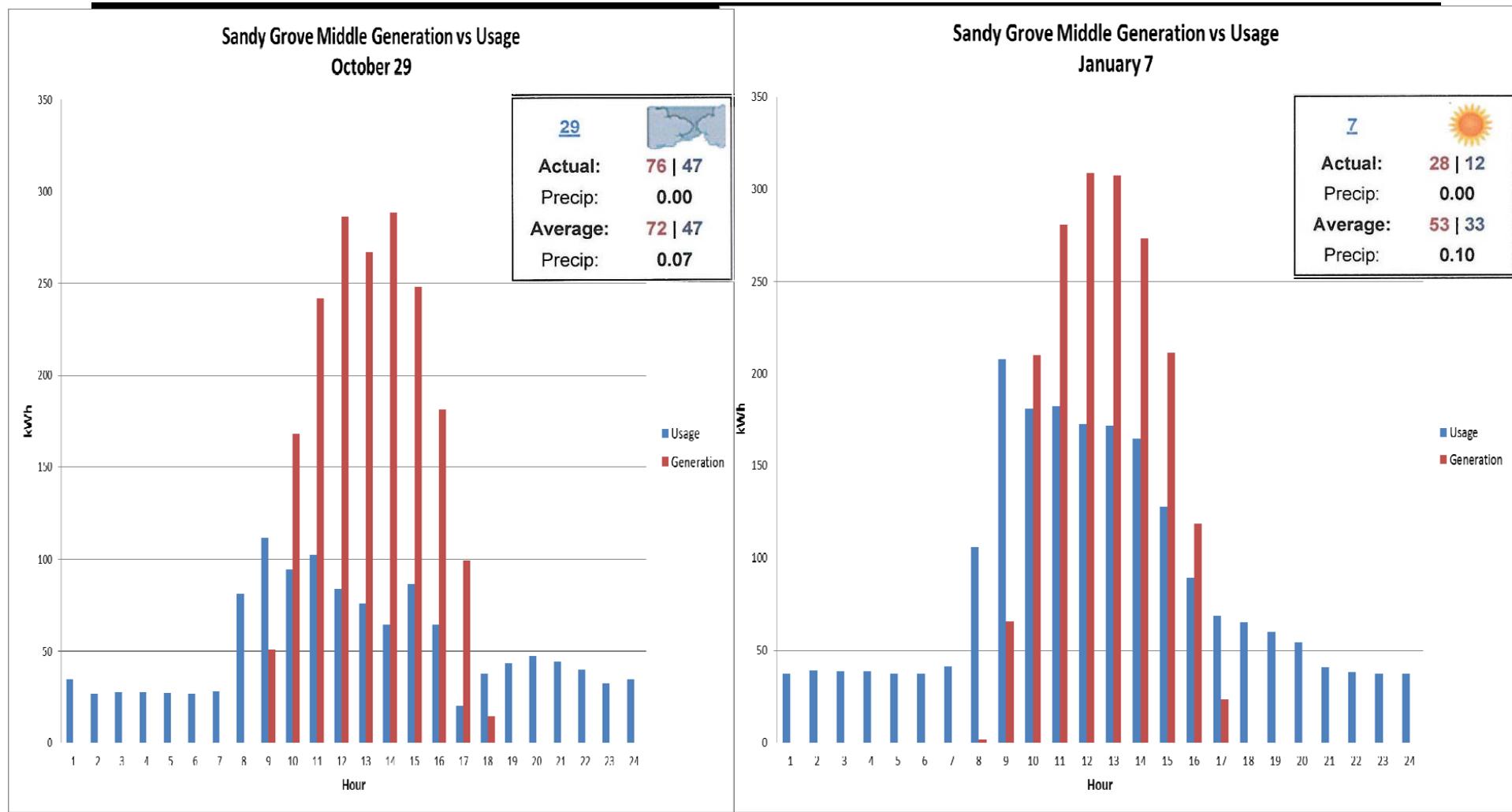
Our daily usage data shows there must be a partnership between Sandy Grove Middle and LREMC.



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Our hourly usage data confirms Sandy Grove Middle has “real-time” consumption needs just like the other 56,716 members on the system.



Our current economic model does not support paying retail rates for renewable energy

Co-Op Financials paying current avoided cost

Revenue per kWh

\$0.105

Total Cost

(\$0.099)

Margins

\$0.006

Co-op Financials paying retail rates for Solar

Revenue per kWh

\$0.105

Total Cost

(\$0.099)

Net Meter Cost

(\$0.035)

Margins

Loss of (\$0.029)

Based on 10% on total kWh usage
it would equate to ~(\$3.5M).



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The market price for solar renewable energy credits has decreased dramatically



- The economics of Solar Power offer two possible components from their utility company, avoided cost for Energy and Renewable Energy Credits (REC's)
- That economic model has changed dramatically due to market forces

2009 Economic Model

Energy	\$.046
REC	<u>\$.150</u>
\$.196 per kWh	

2013 Economic Model

Energy	\$.046
REC	<u>\$.003</u>
\$.049 per kWh	



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Takeaways

- Our data is limited to 6 months.
- Generation Totals vs. Consumption Totals are misleading!
There is a “real-time” need for power that Sandy Grove Middle cannot generate.
- We need to carefully consider changes to our economic model that require undue financial burdens on the majority of our membership while the minority reap the benefits.



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