

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

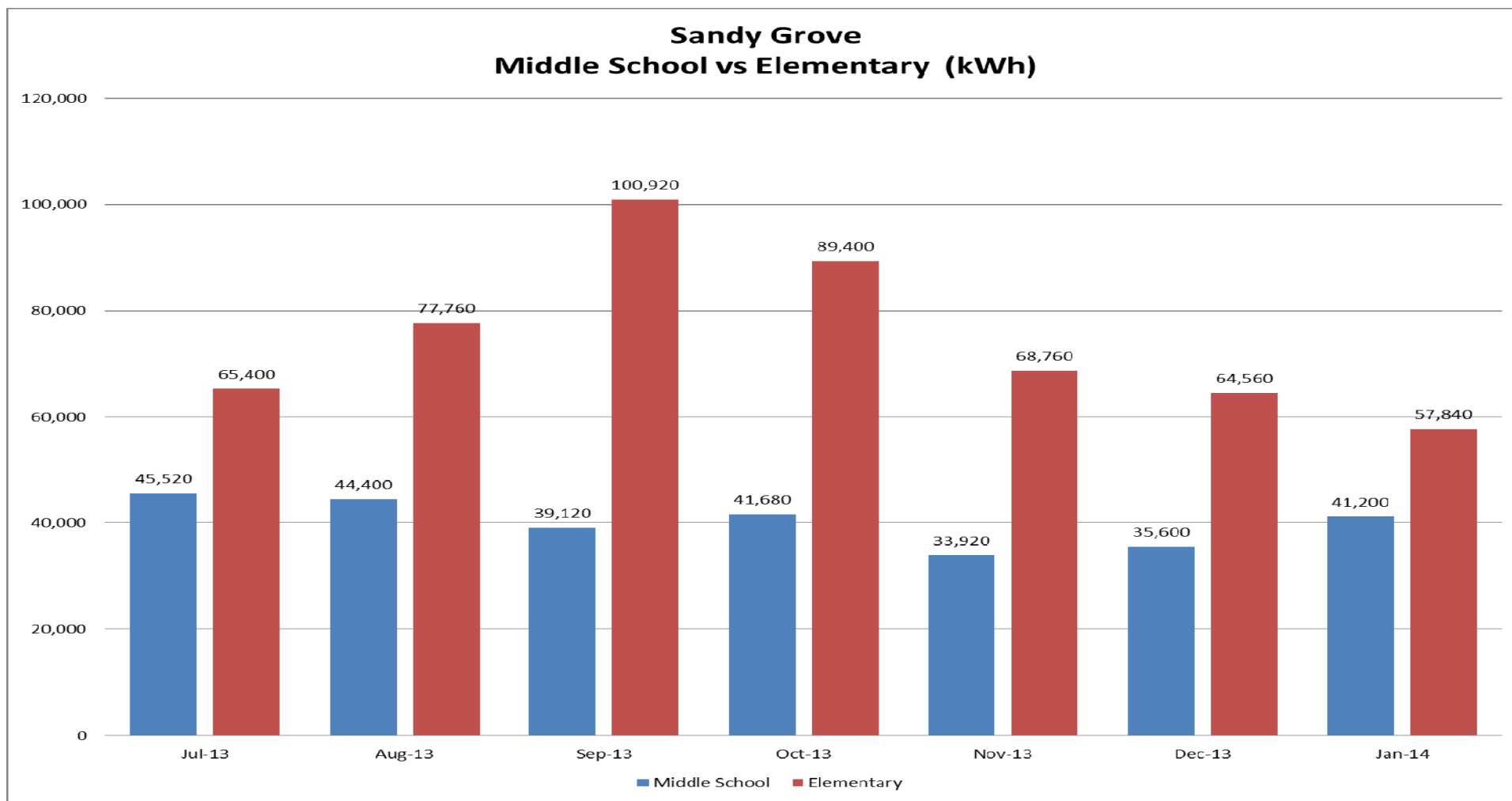


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Sandy Grove Middle has consistently used less electricity than nearby Sandy Grove Elementary.

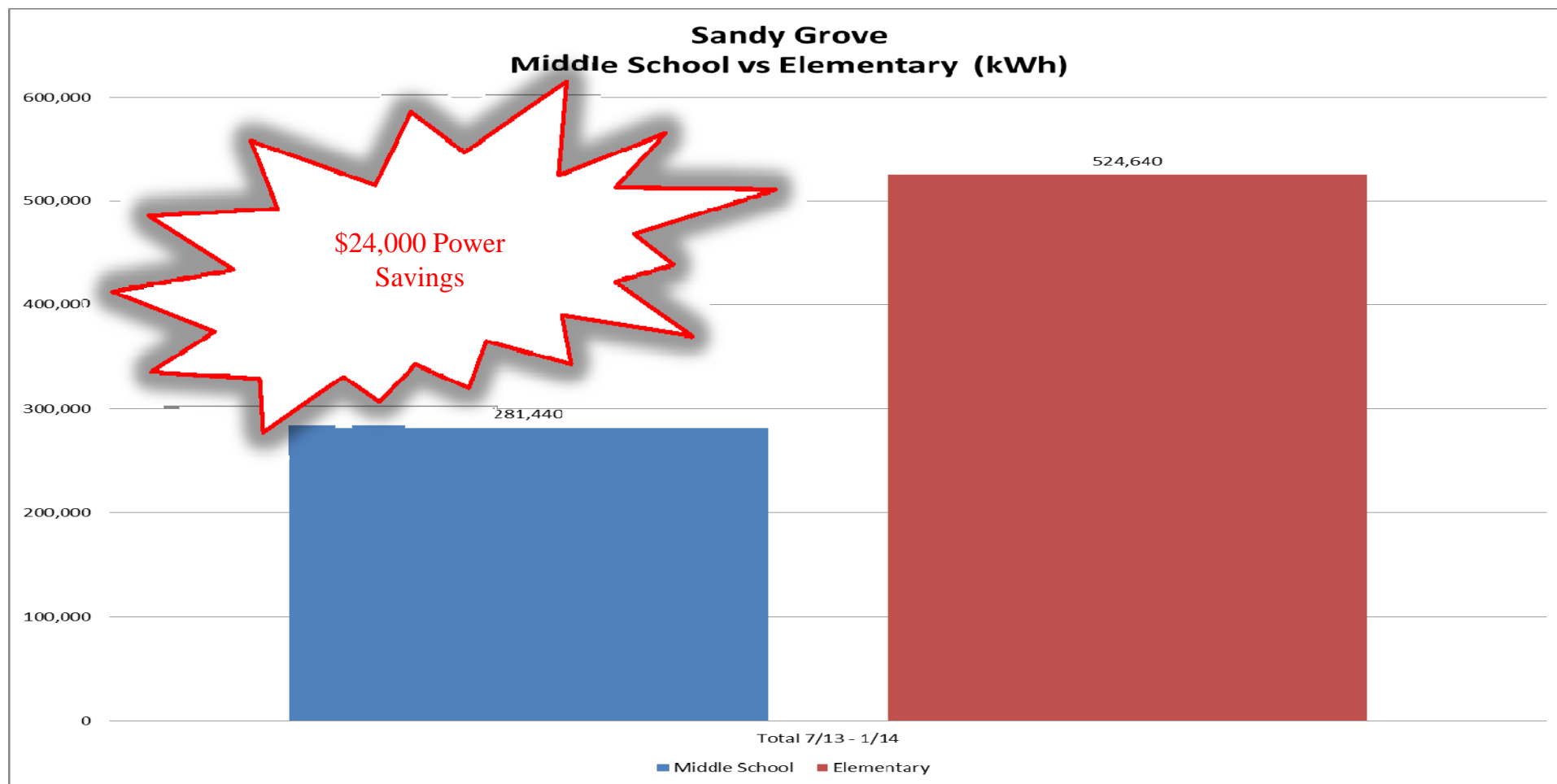


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Sandy Grove Middle is approximately 53.6% more energy efficient as compared to Sandy Grove Elementary.

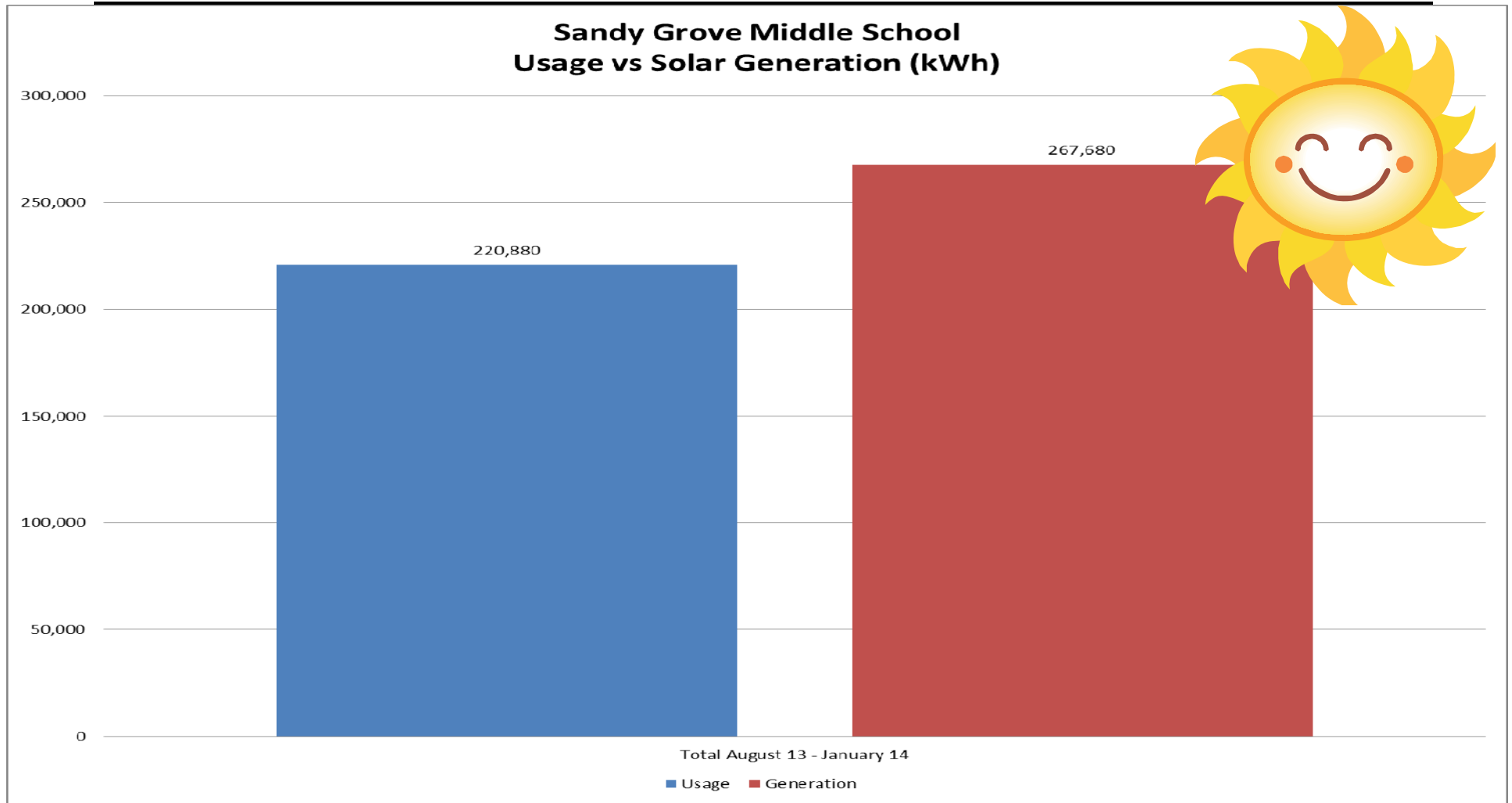


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Our total usage data shows that Sandy Grove Middle has generated more power than consumed.

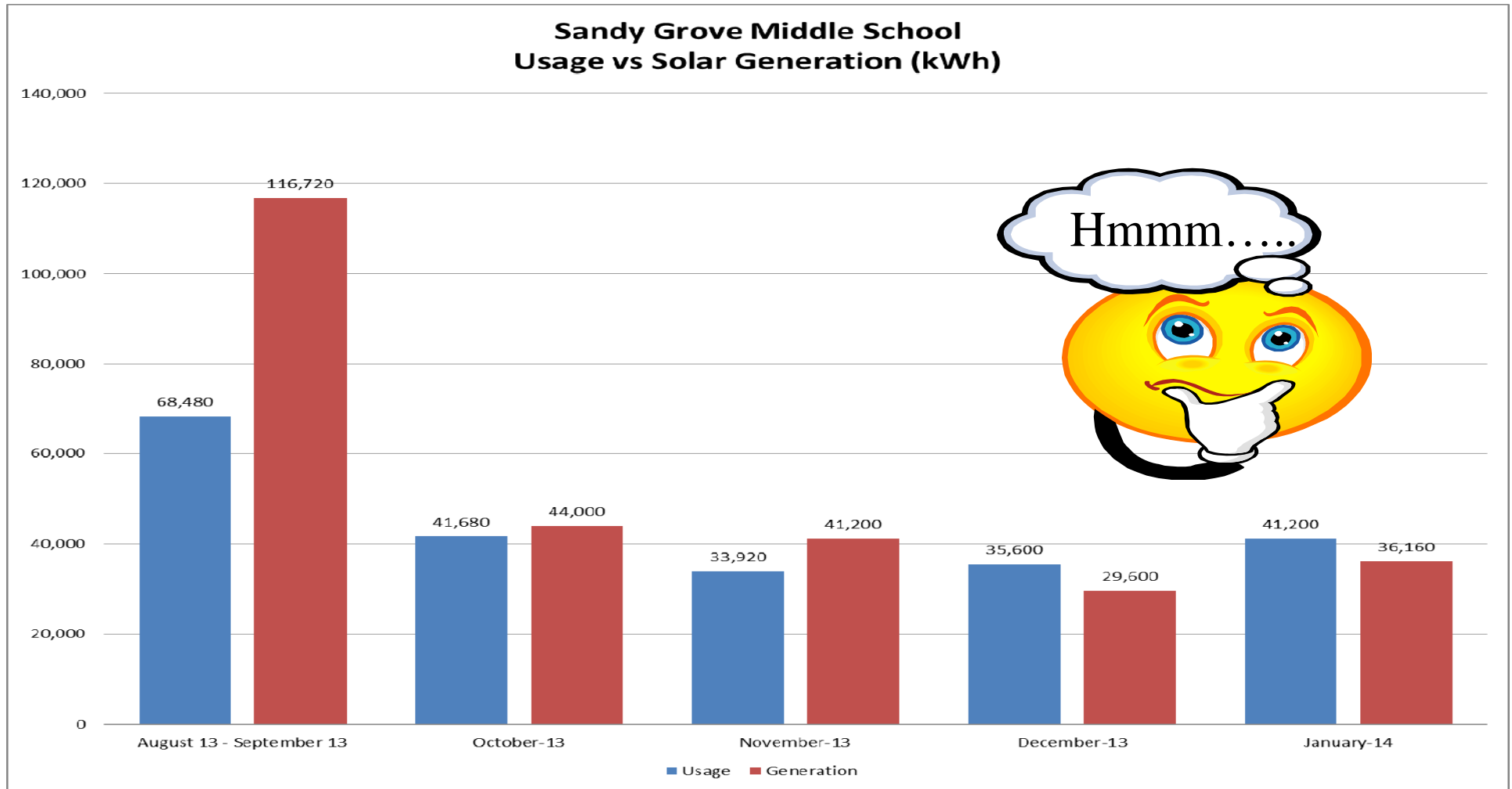


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Our monthly usage data shows that Sandy Grove Middle has a mixed record on electricity production.

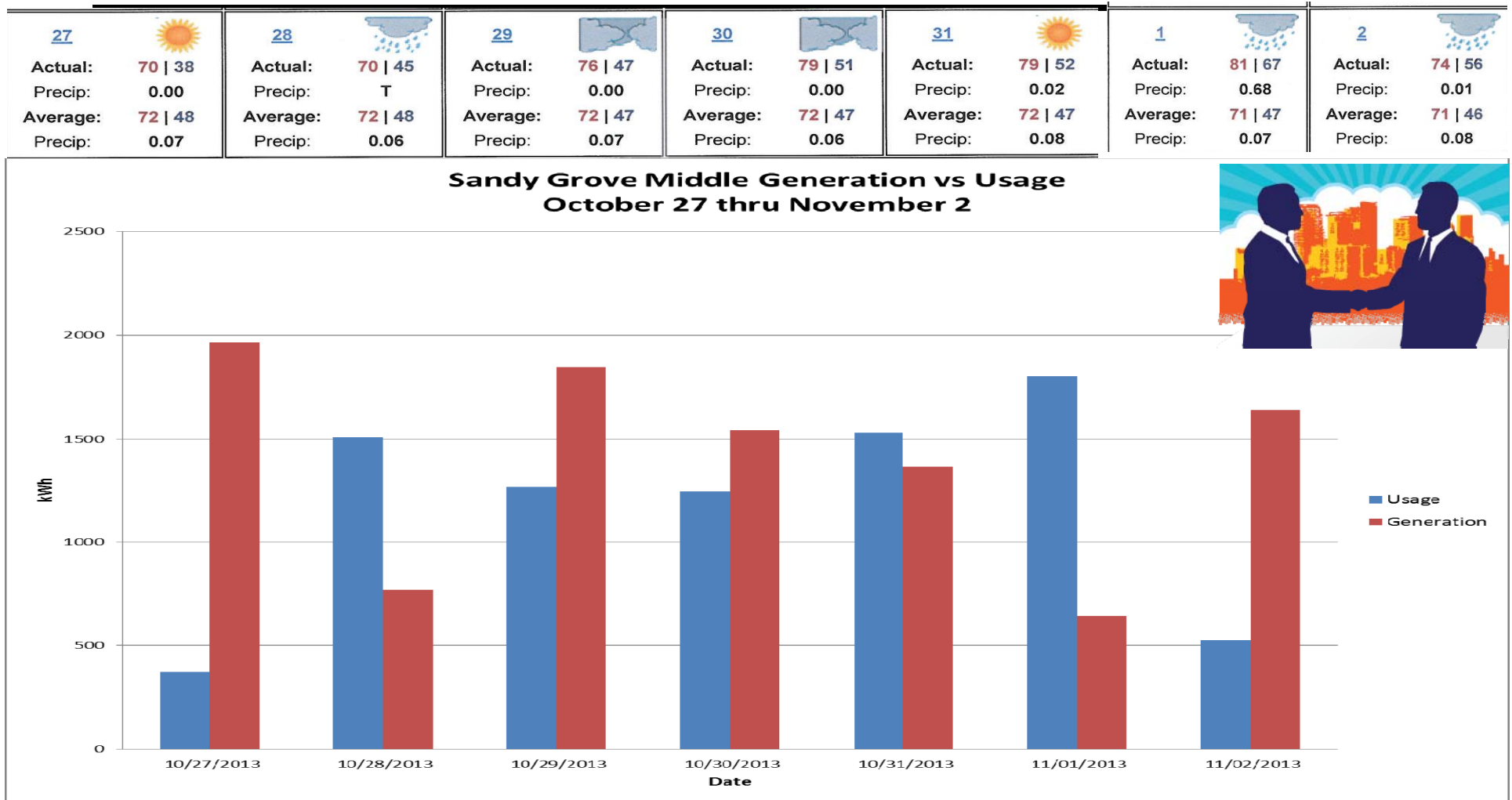


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Our daily usage data shows there must be a partnership
between Sandy Grove Middle and LREMC.

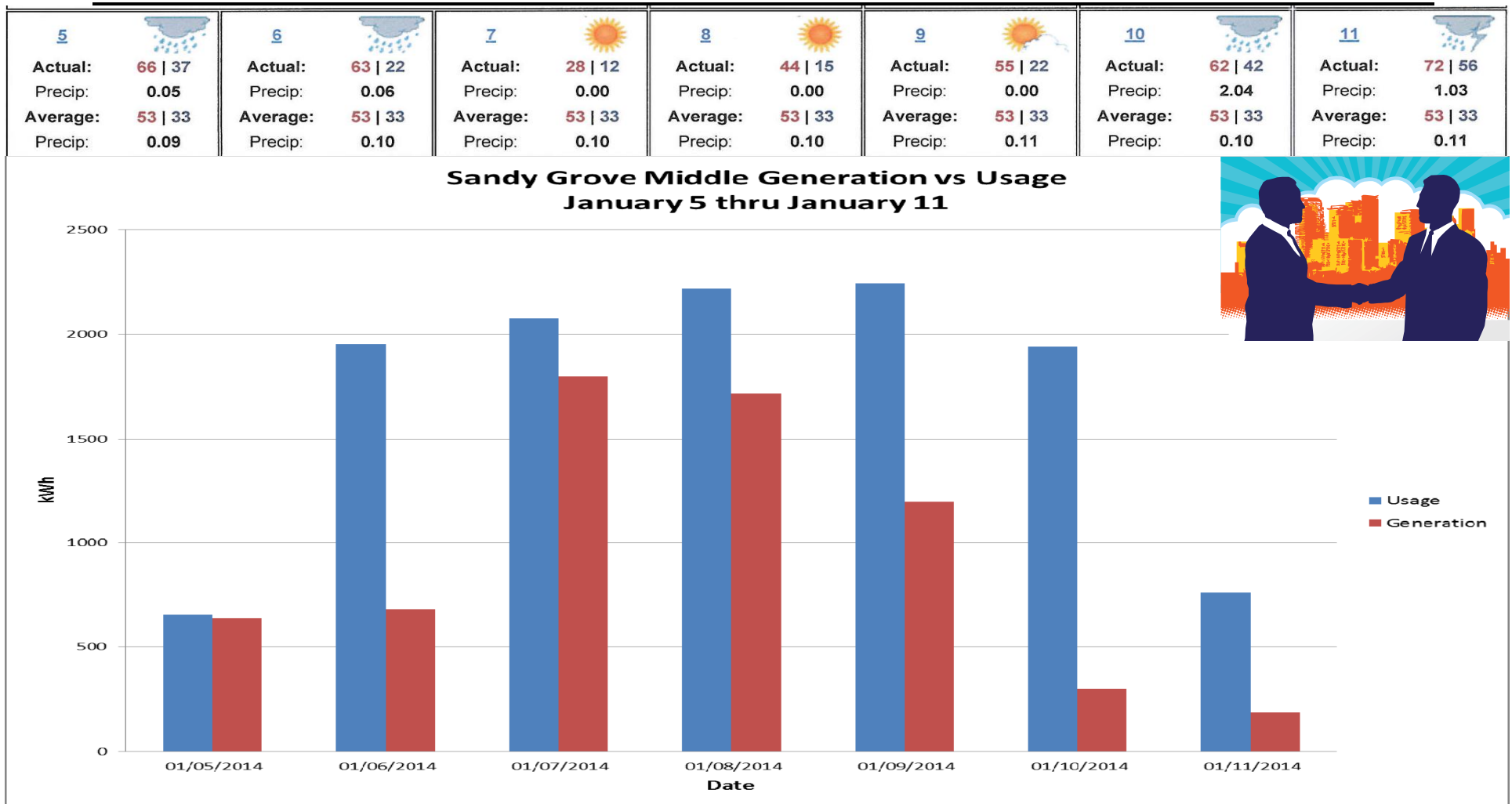


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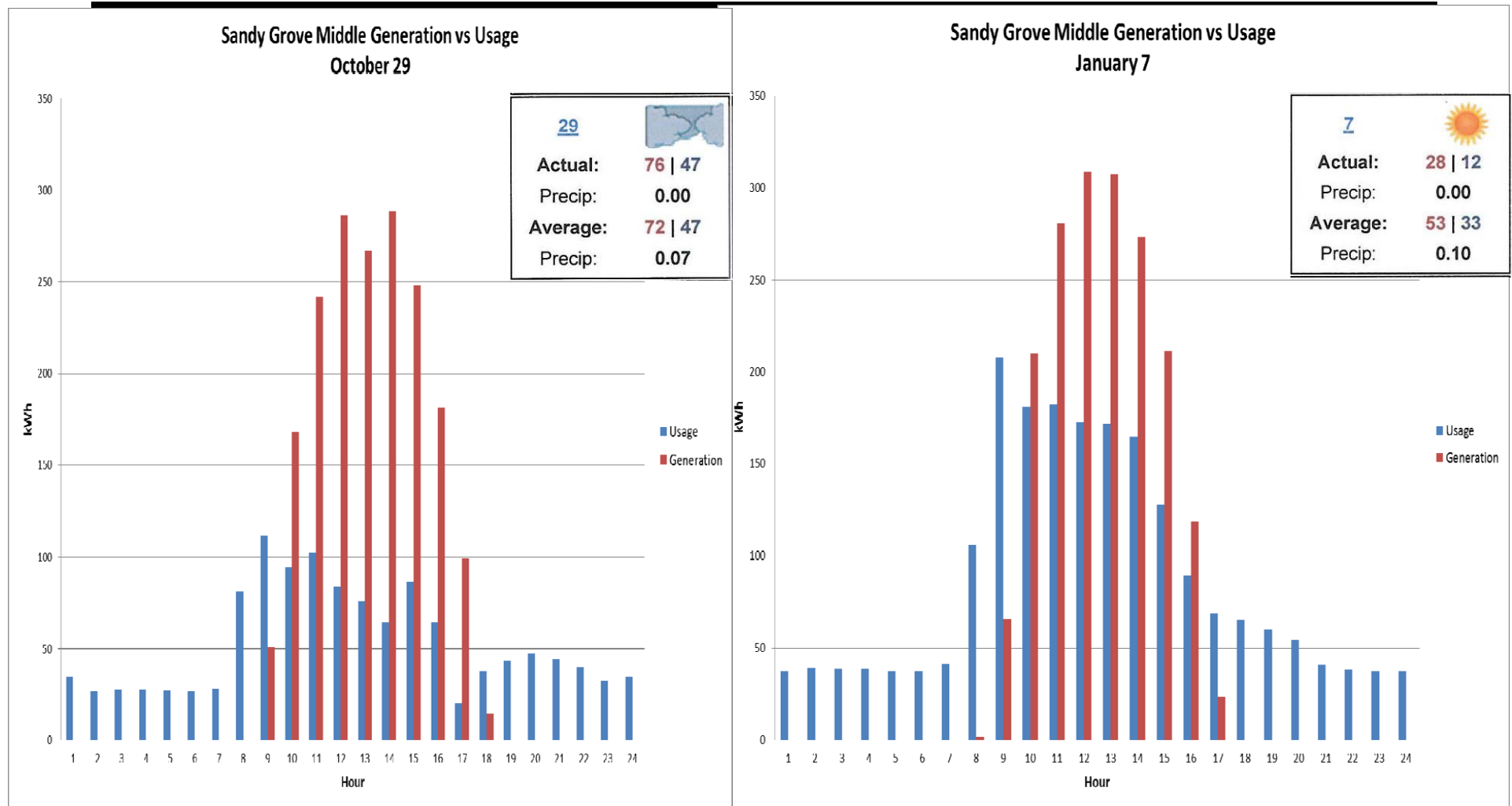


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Our hourly usage data confirms Sandy Grove Middle has “real-time” consumption needs just like the other 56,716 members on the system.



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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).



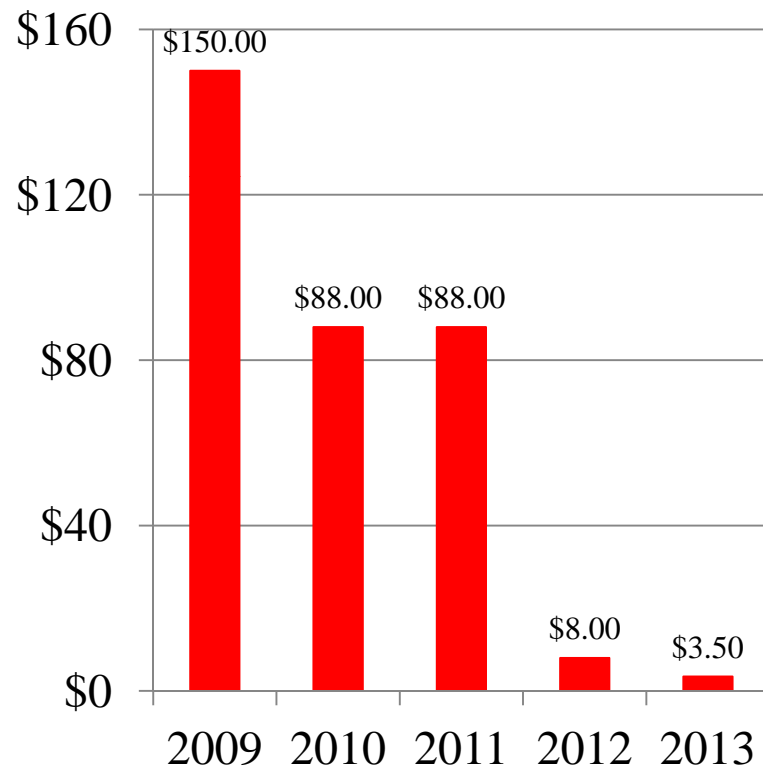
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The market price for solar renewable energy credits has decreased dramatically

LREMC Solar REC prices



- 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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