

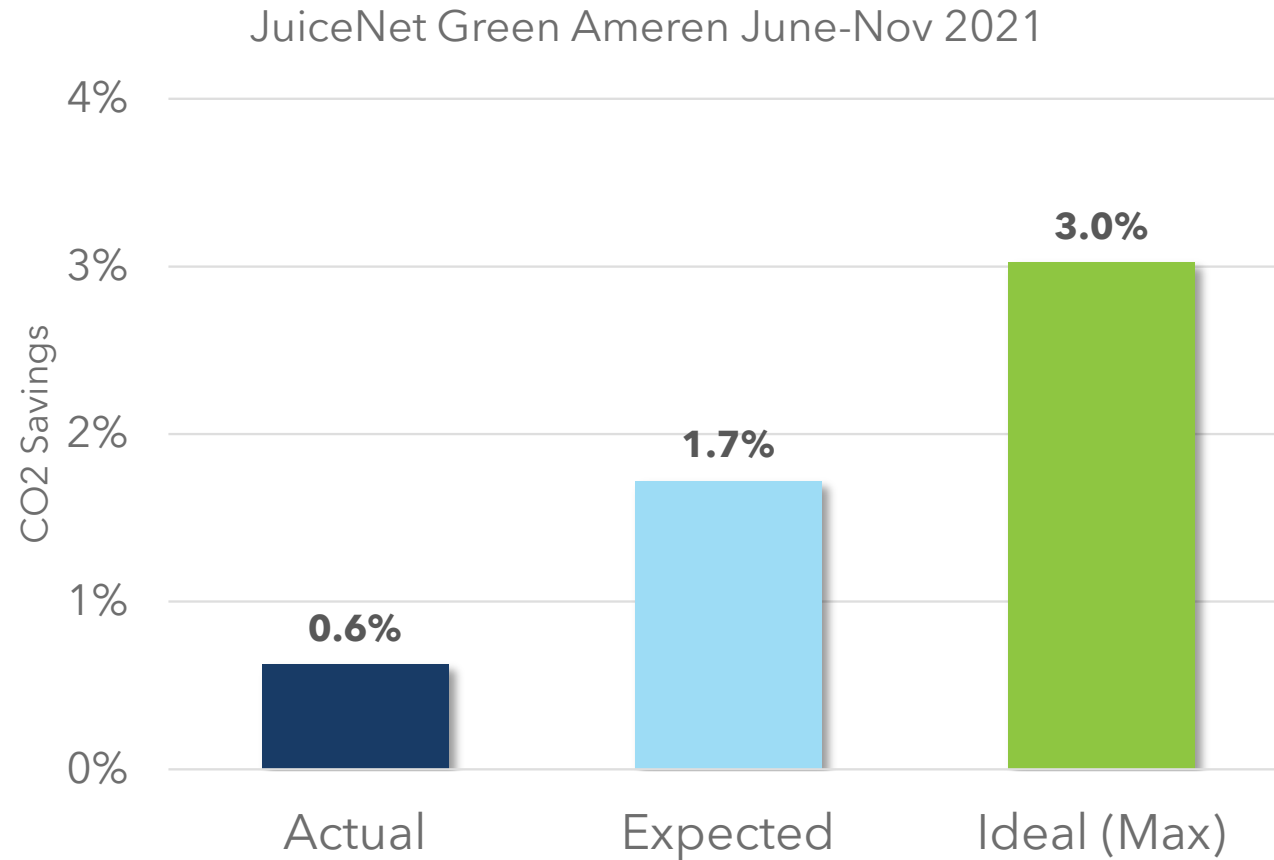
Ameren Pilot for EV Charging with Automated Emissions Reduction

2021-Q4 Update



Preliminary Results: Sept - Nov 2021

Total CO2 Savings Summary



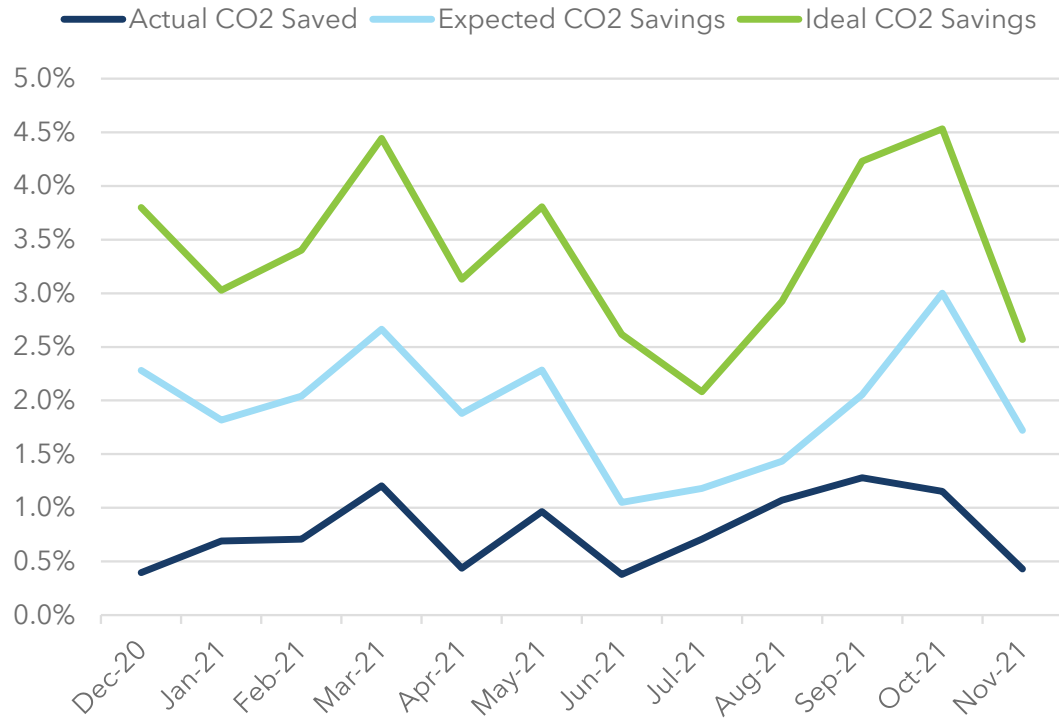
"Expected" means the performance that could be achieved under the circumstances and constraints. This accounts for the WattTime emissions forecast performance and JuiceNet Green algorithm/options. In this case "Expected" is set to the best performing user during this period corrected for average session flexibility of all users.

Performance Results

Metric	Value
Highest Actual Savings in a Session	7.4%
# of Sessions	1212
CO2 saved	131 lbs

Performance Trends

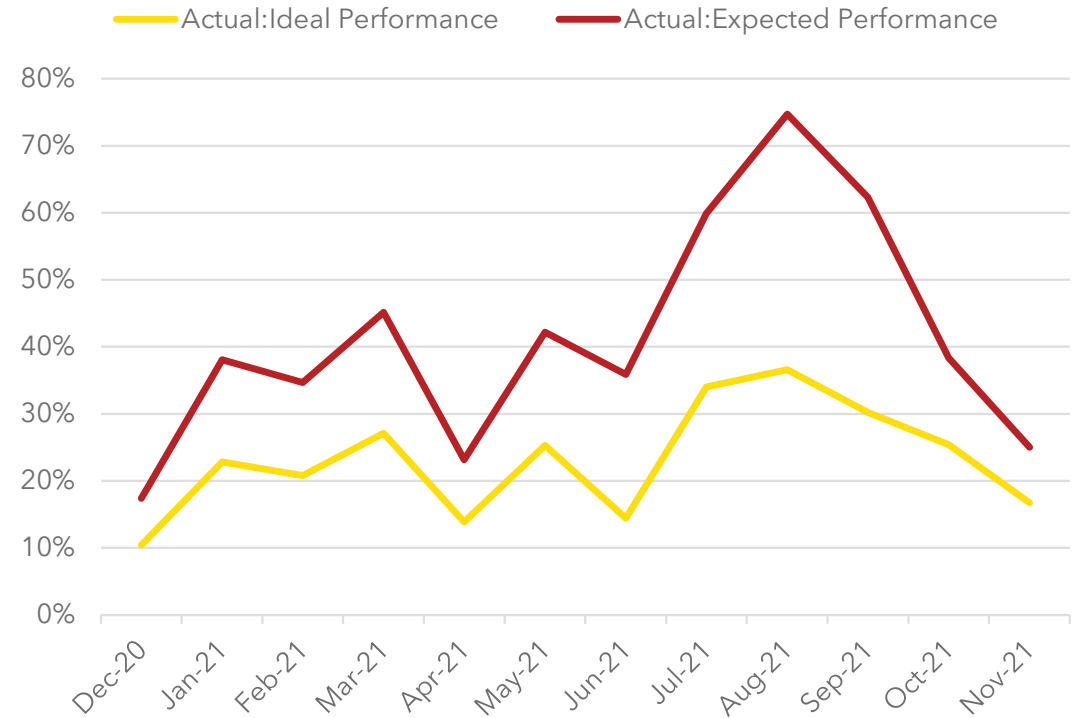
Ameren JuiceNet Green Pilot Performance



Performance increased from June to September as disengaged users dropped out of the program. Performance decreased after that as new enrollees were added

"Ideal CO2 Savings" represents the best-case savings opportunity, i.e. perfect forecast.

Ameren JuiceNet Green Pilot Performance

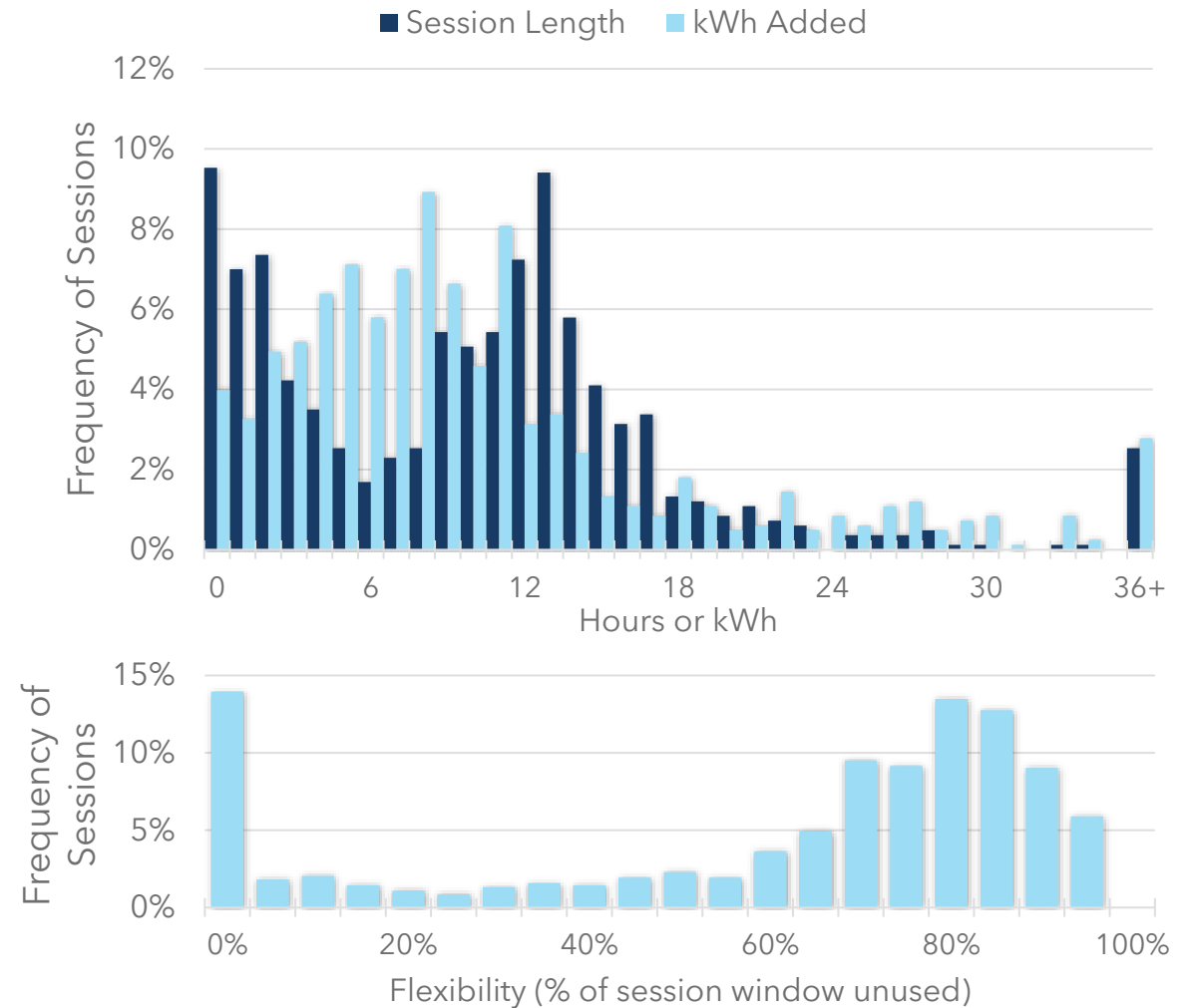


The relative performance of actual savings compared to ideal and expected peaked in August and declined since.

Charging Activity Summary: Sept - Nov 2021

Charging Activity Summary

Population	33
# of Sessions	831
Plug-IN Time (most frequent)	5:00 PM to 6:00 PM
Plug-OUT Time (most frequent)	7:00 AM to 8:00 AM
Avg Session Length	10.9 Hours
Avg Charge Duration	2.2 Hours
Avg Flexibility	80%
Avg Charge Rate	5.0 kW
Avg Energy Added	11.1 kWh
Avg Miles Added	37 Miles

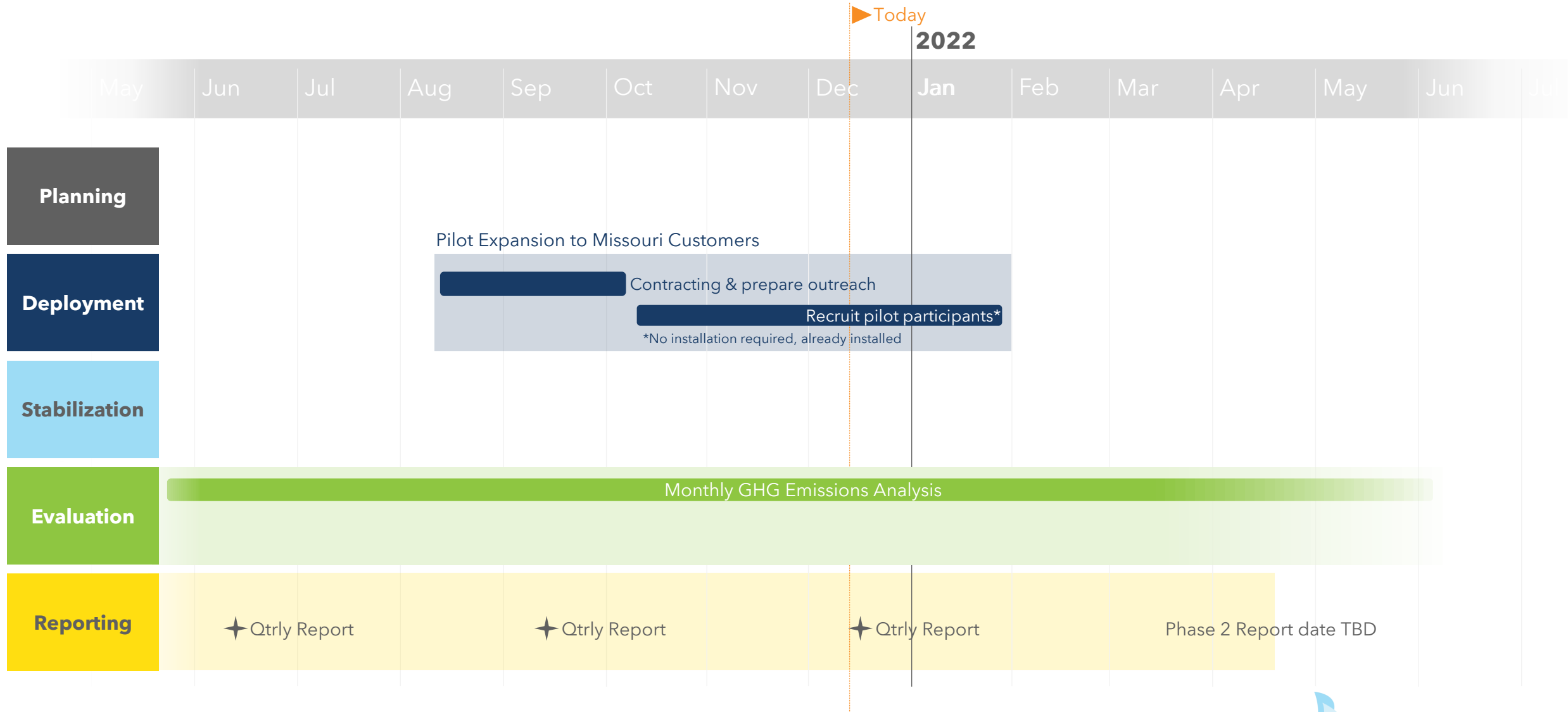


Pilot Expansion Status

Missouri-wide Pilot Expansion (up to 75 users)

- A \$50 incentive was offered to JuiceBox owners in Missouri to participate in the JuiceNet Green pilot expansion
- Landing page: <https://evcharging.enelx.com/missouriutility>
- Enrollment
 - 270 JuiceBox Owners targeted
 - 26 enrollees so far
 - 1 of 3 outreach emails sent

Pilot Timeline (Draft/Proposed)



Discussion of Results and Next Steps

Results Discussion

- We are finding that carbon savings performance varies greatly between various users.
- This performance variation could be due to a number of factors, the major ones including whether the user engages with the app and the usual time of day they charge.
- As the less engaged users from the initial population dropped out of the pilot program the overall performance metrics improved steadily.
- Beyond engagement as a limiting factor, the opportunity for savings is limited by the low variability in the MISO grid regions of interest.

Next Steps

1. **Enel X, WattTime, and Ameren Missouri have expanded this pilot to JuiceBox owners in Missouri. Outreach to 270 users kicked off in October, and we currently have 26 new users out of a target of 75.**
2. Analysis and reporting will continue on a monthly basis, as the phase 2 evaluation continues.
3. Enel X is working on ways to continue to drive performance improvements to JuiceNet Green, both by improving their algorithms and by improving user engagement in the app. An app update is on the roadmap but is not imminent.

Thank You

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