

CONFIDENTIAL INFORMATION

File No. ET-2018-0132

Ameren Missouri Charge Ahead Quarterly Report

Electric Vehicle Charging – Corridors and Local Charging Incentive Program

Report for December 2021

This report comprises the sixth quarterly report on the subject case and topics. The report includes this narrative document as well as two associated Excel spreadsheet files, a table of EV registration data, and an update on the WattTime pilot. Note the due dates for the quarterly reports for each portion of Charge Ahead are as follows:

Corridors	Initial report due 30 days after the anniversary date of the tariff effective date, or June 26, 2020. Subsequent reports will be provided on a quarterly basis.
Local	Within 90 days of the end of each program quarter. Given the program began on January 13, 2020, the due date is roughly the end of December.

Ameren Missouri has combined these reports since the subject matter is related and for ease of production and review by interested stakeholders.

Corridor Charging Program (Background)

Ameren Missouri pursued a competitive bid "reverse auction" approach to procuring one or more vendors to work with Ameren Missouri business customers to set up the corridor charging per the approved program tariff. The pricing component requested how much incentive from Ameren Missouri would be needed to accomplish the proposed projects to set up the specified charging in designated communities throughout the Ameren Missouri territory. In-person interviews were held with the two top proposals. After interviews, LilyPad EV was unanimously confirmed as the best choice for the Charge Ahead Corridors project. LilyPad EV, along with partners ChargePoint and Sachs Electric have been working with customers in the designated communities outlined in the case. A total of 11 companies and/or partnerships were solicited for 2020, and the \$4 million incentive budget accommodated three more sites (Eureka, Ironton and Sikeston) in 2021, which resulted in a total of 14 corridor locations. Note that the tariff allowed for 8-15 sites.

Ameren Missouri's assessment that incentives of up to \$360,000 per site may be necessary was relatively accurate. While the costs for each site will vary based on unique site conditions and line extension requirements, the rough average is about \$290,000 per site. LilyPad EV, in their bid, provided an estimate per site that was based on certain reasonable assumptions. As the design for each site is finalized with the business customer and the line extension costs are determined in detail, a final cost for each site is developed.

Each site has the same configuration of charging equipment. Two ChargePoint CPE-250s, each having the capability to provide up to 62.5kW of power and that paired can provide up to 125kW, and two CP-4001 Level 2 chargers providing 6.6kW each. Any modern EV can charge at these stations.

Education and Outreach

We're actively raising awareness of the Corridor Charging Program with education and outreach efforts. To-date, our marketing activities have included the following efforts:

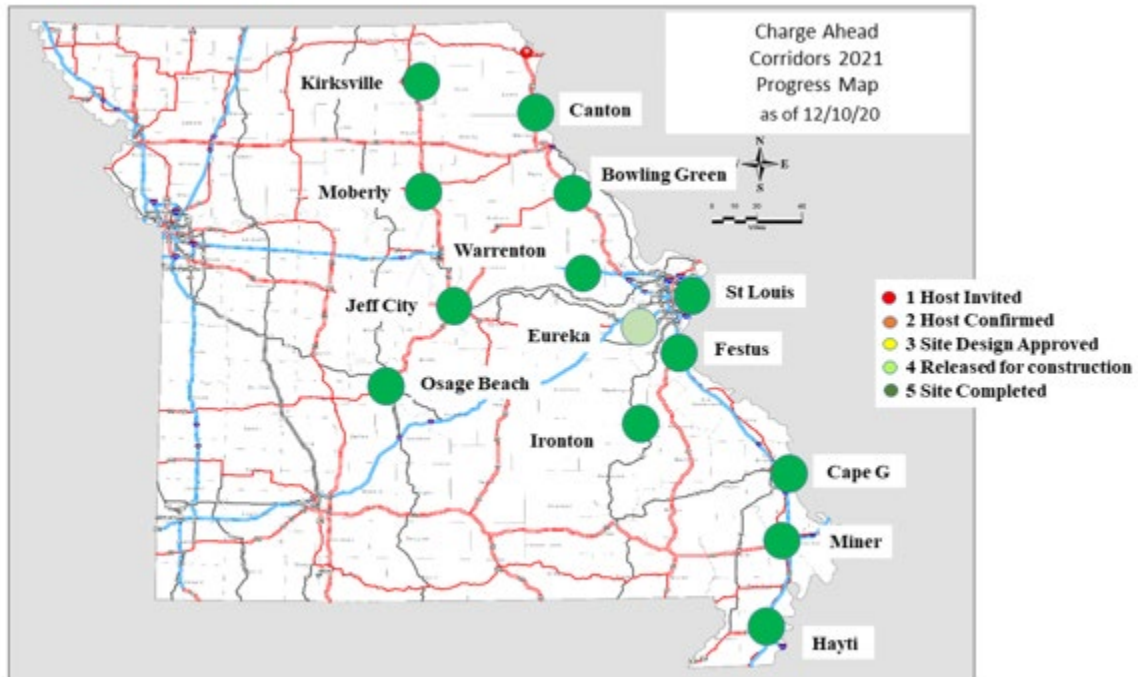
- Earned media (TV news, print publications, radio interviews) and social media (Twitter, Facebook, etc.)
- Outreach to municipalities, business and professional associations through newsletters and speaking opportunities
- Outreach through Key and Regional Account Executives
- Developed a Corridor Charging Program brochure provided with third quarterly report in December 2020 and available at the Ameren Missouri EV Website page (linked below). This is updated as Ameren Missouri developments are completed as well as those occurring through the MDNR VW Trust process: <https://www.ameren.com/missouri/residential/electric-vehicles/resources>

Costs

The table below contains basic project information, including site status and costs. Program costs have been on-target with assumptions made in development of the program. The cost for the 14 sites that will be developed through the Charge Ahead – Corridor program will be just under the total \$4,000,000 budget allocated for this program. The 14th site in Eureka represents the final site.

****Table Confidential in its
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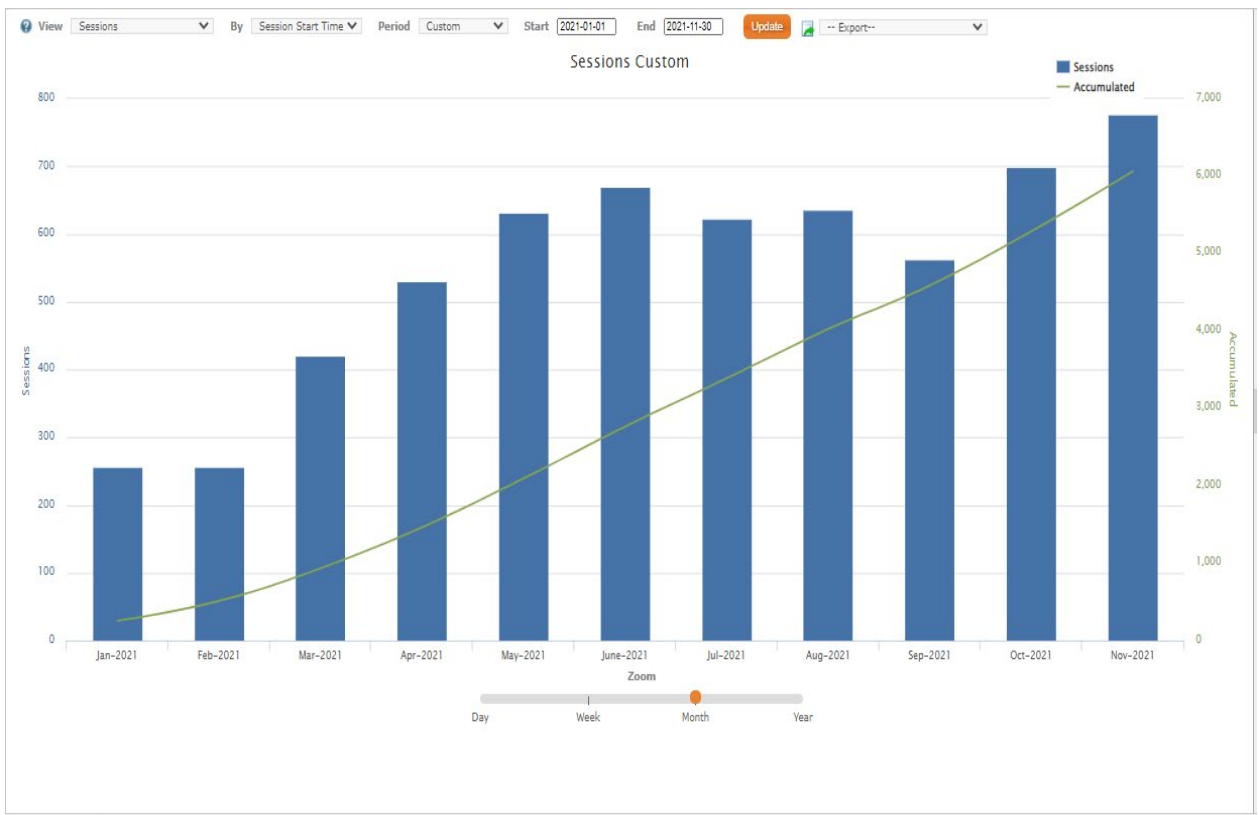
Charge Ahead Corridors – Progress Map



The charts below show the **revenue, energy, and number of sessions** by month for the following locations:

- Warrenton Schnucks (Light Blue)
- Moberly Ayerco (Orange)
- St Louis Luimere (Grey)
- Festus Schnucks (Yellow)
- Hayti Travel Center (Royal Blue)
- Dierberghs Osage Beach (Green)
- Canton Ayerco (Blue)
- Bowling Green Ayerco (Dark Orange)
- Cape Girardeau Schnucks (Dark Grey)
- Kirksville Ayerco (Gold)
- Jeff City Marriott (Dark Blue)
- Breaktime Sikeston (Dark Green)
- Save A Lot Ironton (Light Blue)

More usage reporting will be developed for the additional sites in subsequent quarterly reports. Note the Revenue is in dollars and Total Energy is in kWh.



The charts below represent the "Uptime" in 2021 Q3 for the following locations:

Ayers Oil Co

Station Name	Total Energy (kWh)	Total Sessions	Total Fees (\$)	Gasoline Saved (Gal)	GHG Savings (kg)	Charging Hours	Occupied Hours	Uptime (%)
AYERCO AYERSBWLGRN DC1	563	41	\$ 126.68	71	236	13	14	100.00%
AYERCO AYERSBWLGRN DC2	811	56	\$ 178.77	102	341	19	21	100.00%
AYERCO AYERSBWLGRN L2	18	15	\$ 0.00	2	8	4	4	100.00%
AYERCO AYERSCANTON DC1	351	16	\$ 78.87	44	147	7	8	96.99%
AYERCO AYERSCANTON DC2	645	26	\$ 145.11	81	271	16	17	100.00%
AYERCO AYERSCANTON L2	53	8	\$ 10.56	7	22	17	26	100.00%

Crawford Oil

Station Name	Total Energy (kWh)	Total Sessions	Total Fees (\$)	Gasoline Saved (Gal)	GHG Savings (kg)	Charging Hours	Occupied Hours	Uptime (%)
CRAWFORD OIL CRAWFORDHAYTID1	768	42	\$ 207.30	96	322	16	17	100.00%
CRAWFORD OIL CRAWFORDHAYTID2	359	27	\$ 97.00	45	151	8	9	100.00%
CRAWFORD OIL CRAWFORDHAYTIL2	96	12	\$ 18.52	12	40	16	17	100.00%

Marriott

Station Name	Total Energy (kWh)	Total Sessions	Total Fees (\$)	Gasoline Saved (Gal)	GHG Savings (kg)	Charging Hours	Occupied Hours	Uptime (%)
H3 QOZB MARRIOTTJC DC1	1,292	81	\$ 290.60	162	542	30	35	100.00%
H3 QOZB MARRIOTTJC DC2	1,364	75	\$ 306.99	171	573	36	56	91.78%
H3 QOZB MARRIOTTJC L2	747	88	\$ 133.79	94	314	187	221	100.00%

Lumiere

Station Name	Total Energy (kWh)	Total Sessions	Total Fees (\$)	Gasoline Saved (Gal)	GHG Savings (kg)	Charging Hours	Occupied Hours	Uptime (%)
LUMIERE PLACE LUMIERESTL DC1	1,367	63	\$ 307.55	172	574	39	50	100.00%
LUMIERE PLACE LUMIERESTL DC2	964	49	\$ 216.92	121	405	30	44	54.69%
LUMIERE PLACE LUMIERESTL L2	183	28	\$ 32.94	23	77	30	48	100.00%

Schnucks

Station Name	Total Energy (kWh)	Total Sessions	Total Fees (\$)	Gasoline Saved (Gal)	GHG Savings (kg)	Charging Hours	Occupied Hours	Uptime (%)
SCHNUCKS SSC 50 CORPORATE 1	54	3	\$ 0.00	7	23	9	10	100.00%
SCHNUCKS SSC 50 SCHNUCKCAPE L2	284	69	\$ 0.00	36	119	81	85	99.98%
SCHNUCKS SSC 50 SCHNUCKSCAPEDC1	1,431	84	\$ 321.99	180	601	34	36	100.00%
SCHNUCKS SSC 50 SCHNUCKSCAPEDC2	1,139	74	\$ 256.39	143	479	27	29	94.25%
SCHNUCKS SSC 50 SCHNUCKSFES DC1	652	48	\$ 146.80	82	274	17	17	100.00%
SCHNUCKS SSC 50 SCHNUCKSFES DC2	2,931	138	\$ 659.43	368	1,231	71	74	100.00%
SCHNUCKS SSC 50 SCHNUCKSFES L2	1,059	151	\$ 0.00	133	445	201	255	100.00%
SCHNUCKS SSC 50 SCHNUCKSWAR-DC1	1,324	80	\$ 297.81	166	556	30	31	96.99%
SCHNUCKS SSC 50 SCHNUCKSWAR-DC2	684	50	\$ 153.83	86	287	16	17	100.00%
SCHNUCKS SSC 50 SCHNUCKSWAR-L2	691	53	\$ 0.00	87	290	134	198	100.00%

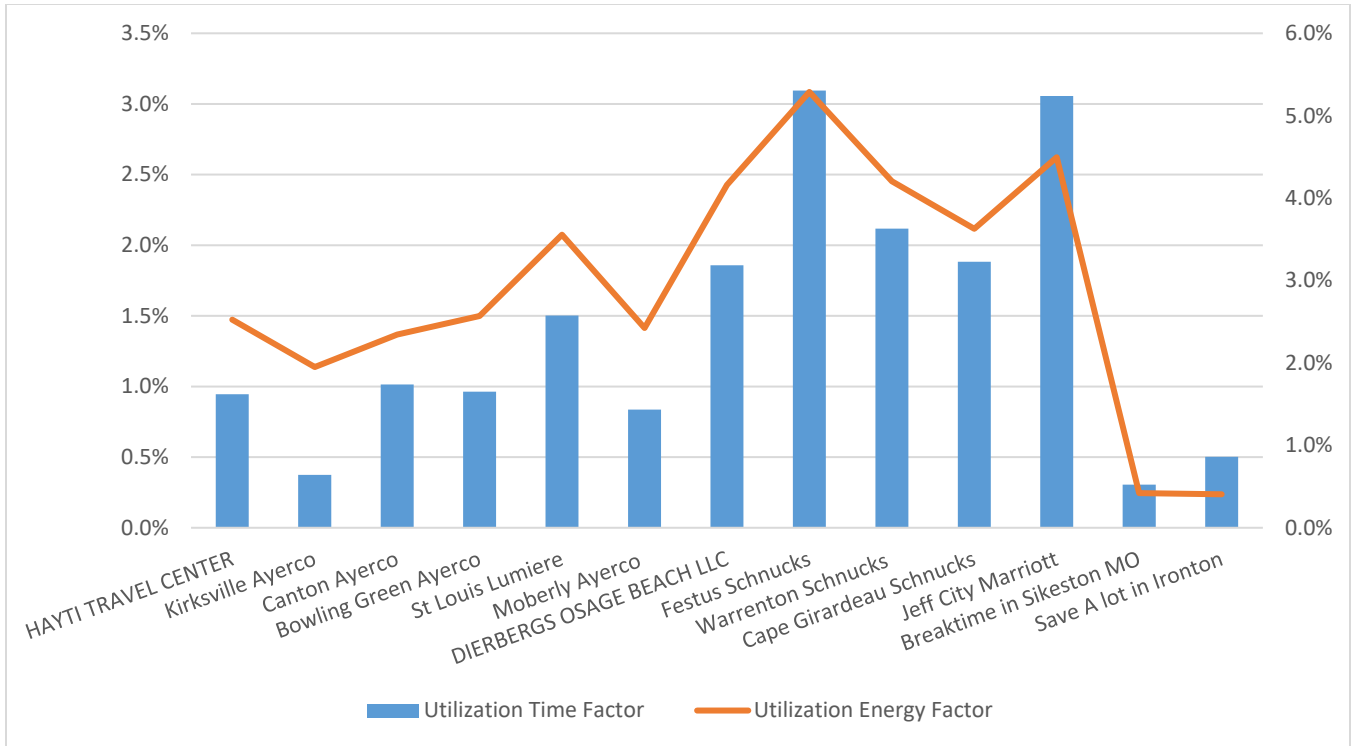
Warrenton Oil

Station Name	Total Energy (kWh)	Total Sessions	Total Fees (\$)	Gasoline Saved (Gal)	GHG Savings (kg)	Charging Hours	Occupied Hours	Uptime (%)
FASTLANE FLMOBERLY DC1	337	19	\$ 75.72	42	141	8	8	93.48%
FASTLANE FLMOBERLY DC2	828	34	\$ 182.39	104	348	17	18	100.00%
FASTLANE FLMOBERLY L2	34	16	\$ 6.48	4	14	6	6	100.00%

Dierbergs

Station Name	Total Energy (kWh)	Total Sessions	Total Fees (\$)	Gasoline Saved (Gal)	GHG Savings (kg)	Charging Hours	Occupied Hours	Uptime (%)
DIERBERGS DIERBERGOSB DC1	417	20	\$ 93.88	52	175	13	16	100.00%
DIERBERGS DIERBERGOSB DC2	182	17	\$ 40.86	23	76	6	7	100.00%
DIERBERGS DIERBERGOSB L2	48	17	\$ 9.42	6	20	19	23	100.00%

The chart below represent the "Utilization Factor" for the following locations:



Direct Revenues from Corridors

This chart represents the monthly direct revenue (dollars) data for the corridor sites listed below.

Revenue	Warrenton Schnuck	Moberly Ayer	St Louis Lumie	Festus Schnuck	HAYTITRAVEL CEN	DIERBERGS OSAGE BEAC	Canton Ayer	Bowling Green Ayer	Cape Girardeau Schnuck	Kirkville Ayer	Jeff City Marrio	Bresktime in Sikeston MO	Save A lot in Ironton
20200101	33												
20200201	78												
20200301	96												
20200401	92												
20200501	110												
20200601	138	4											
20200701	129	79	64										
20200801	148	89	87	15			96	27					
20200901	135	86	91	75			102	92					
20201001	121	96	69	81	66	3	97	79					
20201101	117	79	66	106	76	66	104	71					
20201201	113	77	73	81	80	71	128	74	78		72		
20210101	112	84	94	119	95	76	150	75	85	35	98		
20210201	113	71	99	115	81	97	122	78	96	69	91		
20210301	110	87	97	97	86	89	112	81	97	63	127		
20210401	138	81	90	136	95	106	122	98	141	78	136		
20210501	115	92	95	139	92	104	154	104	121	75	164		
20210601	163	96	94	170	96	144	105	109	121	71	207		
20210701	230	145	174	376	160	184	139	167	264	98	220		
20210801	201	127	142	239	140	216	146	158	189	102	221	43	
20210901	246	120	156	254	153	247	123	101	208	114	285	118	29
20211001	180	163	250	222	130	194	127	141	178	122	184	92	88
20211101	142	117	177	212	116	137	107	128	149	105	182	117	94

Local Charging Incentive Program

The Ameren Missouri Local Charging Station Incentives Program opened on January 13, 2020, and business customers can apply through the program application portal linked to the green "Apply Now" button on the Ameren Missouri EV business incentives Web page:

<https://www.ameren.com/missouri/business/electric-vehicles/incentives>

Incentives & Programs

Electric vehicles are becoming more common in Missouri because they are fun and exciting to drive, easy to charge and cost less to fuel and maintain.

[Overview](#) [Incentives](#) [Find an EV](#) [Charging](#) [Resources](#)

Charging Station Incentives

Ameren Incentives

Ameren Missouri is now offering incentives for businesses seeking to install EV charging stations at workplaces, multi-family apartment buildings and in publicly accessible locations. Please apply below. Please contact us at EVMissouri@ameren.com with any questions.

Program Details:

- Open to Ameren Missouri business customers
- Total incentive allowed for affiliated businesses of \$500,000
- Incentive of \$5,000 per Level 2 port (40amp max)
- Incentive of \$20,000 per DCFC port (50kW nominal max)
- Maximum incentive is up to 50% of total project cost
- [Charging Station Incentives for Business \(PDF\)](#)

Federal Tax Credit

With the passage of a retroactive federal tax credit, those who purchased EV charging infrastructure could be eligible for a credit up to \$30,000 for commercial installations of charging stations. This federal tax credit was retroactively extended through December 31, 2020. Full details can be viewed on the [U.S. Department of Energy website](#).

[Apply Now](#)

Electric Vehicle Incentives

Incentives to converting your fleet to electric includes:

- Passenger vehicle federal tax credit: Most new passenger vehicles can receive up to a \$7,500 federal tax credit. See [incentives on the popular Nissan Leaf \(PDF\)](#).
- Pay less at the plug: The cost of fueling an EV is less than half that of a conventional vehicle.
- Lower maintenance costs: All-electric vehicles have fewer parts to maintain, and no tailpipe means no emissions checks.
- Managing charging is easy: We can help you develop a plan to manage your charging and reduce fueling costs.

Thank you for your interest in this program.

To complete the application process, you will need to enter details regarding the following items:

Your Contact and Business Information

- Business Name
- Address, Phone/Email
- Ameren Missouri Electric account number
- Contact Name
- Contact Address/Phone/Email
- W9
- Payment preference (check or bill credit). Download the [Payment Release Authorization Form](#) if re-assigning incentive payment to the installer.

Contractor Information (if not self-install)

- Contractor Name
- Contractor Address
- Contact Name
- Contact Address/Phone/Email

Project Information

- Number of ports and charging rate of each
- Equipment Make
- Equipment Model
- Site Plan including electrical diagram and pictures
- Electrical supply details-panel has sufficient capacity/is capacity review needed/additional service on site requested

Estimated Costs

- Equipment (charger, pedestals, cord management etc.)
- Labor
- Site Preparation (trenching/boring, conduit/wiring, concrete/asphalt)
- Battery Storage

Note: Ameren Missouri must pre-approve project prior to construction

Are you ready to begin your application?

[Begin Application](#)

Administrative and Education Costs

The administrative costs associated with the Local Charging Incentive Program include development of the application portal and workflow management system developed by Applied Energy Group (AEG). The education costs include the Auto Show and Watt Time Pilot program. We partnered with Reach Strategies to implement a marketing plan to educate customers and bring awareness to the Local Charging Incentive Program. The cost to-date through December 2021 for total administrative and educational costs is approximately **\$373,341** and includes the following costs:

- AEG administrative costs \$174,912
- Auto Show (event facilitated by Reach) \$64,835
- Auto Show (charging station exhibits) \$9,064
- Reach Strategies marketing costs \$112,370
- Contractor Support Role for Portal Management \$5,040
- Watt Time Pilot \$7,120

Education and Outreach Activities

We're actively raising awareness of the Local Charging Incentive Program with education and outreach efforts. Currently, our marketing activities include the following:

- Virtual Community Events – EV 101: An Introduction to Electric Vehicles
- Electric Vehicle Partners (EVP) Network – monthly training sessions offered to EVPs
- Outreach to municipalities, business and professional associations
- Outreach through Key and Regional Account Executives
- Direct email marketing to large and mid-size business customers
- Traditional and earned media (TV, print publications, radio) and social media (Twitter, Facebook, etc.)

St. Louis Business Expo

The Ameren MO Electrification Team partnered with Reach Strategies to participate in this event. Ameren's newest all electric security vehicle, a Mustang Mach-E, was on display along with several charging station demos at the Ameren Missouri booth. Many great conversations were had regarding EVs, our Charge Ahead - Local incentives, and the benefits of driving electric.



KMOV-TV featured our Charge Ahead – Local Incentives program in [a news story about EVs](#). Bryan Shannon, Business Development Manager, did a great job taking that interview as well as several others that cascaded in from the attached press release. Ameren Missouri will continue to raise awareness of benefits of driving electric and benefits of the Charge Ahead Local Incentives program.

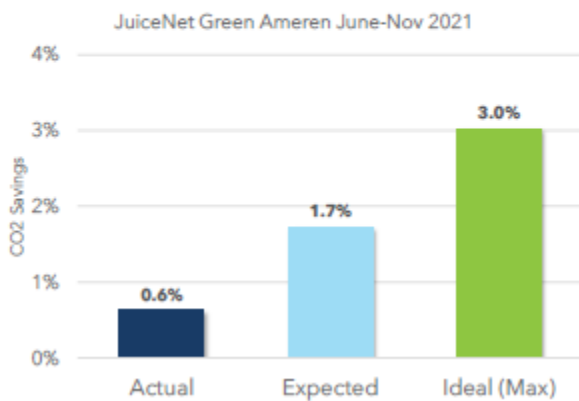


Automated Emissions Reduction (AER)

The small pilot of Automated Emissions Reduction for EVs as implemented by Enel X with their JuiceNet Green product is now 9 months into Phase 2 of the evaluation and was recently expanded. The initial set of 10 users began participating about 18 months ago, which is longer than initially expected. Five users have been willing to extend their participation. Enel X, WattTime, and Ameren Missouri have expanded this pilot to JuiceBox owners in Missouri by offering them free upgrades to JuiceNet Green and a \$50 incentive. Outreach to 270 users kicked off in October, and we currently have 26 new users out of a target of 75. With two more rounds of outreach, we still hope to get much closer to the target, and this larger population will provide a larger sample size for performance measurement. In the period from September to November (with November including a total of 28 users), there were 131 pounds of CO2 avoided by JuiceNet Green. Monthly performance has ranged from 0.4%-1.3% carbon savings, with a highest individual session savings of 7.4%, and the population has achieved 25%-62% of the available opportunity for savings compared to expected.

Preliminary Results: Sept - Nov 2021

Total CO2 Savings Summary



Performance Results

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

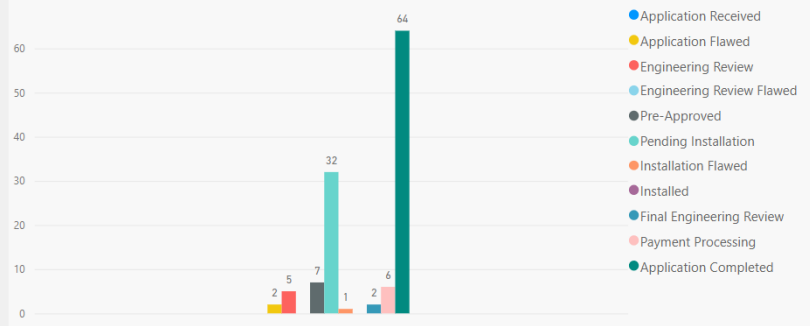
Charge Ahead – Local Incentives Dashboard Statistics Snapshot 12-21-2021

Remaining Incentive Budget

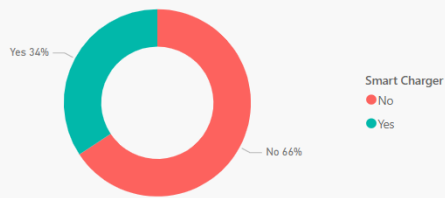
\$915,066 Multi-Family	\$2,713,580 Public Charging	\$1,646,346 Workplace	\$5,274,991 Total
119 Applications Received	64 Applications Completed	\$842,088 Incentives Committed	\$724,994 Incentives Paid

Geographic Heat Map

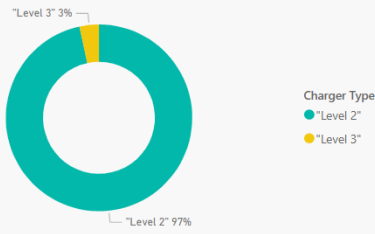
Project Pipeline



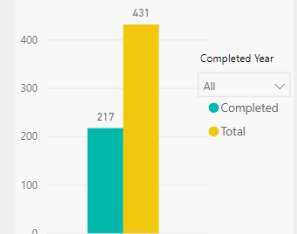
Monitored Smart Charger Applications



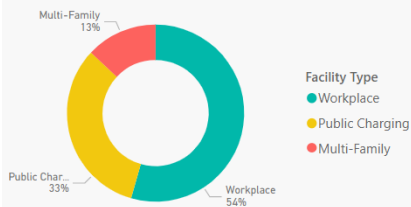
Charger Speed of Ports (% of ports)



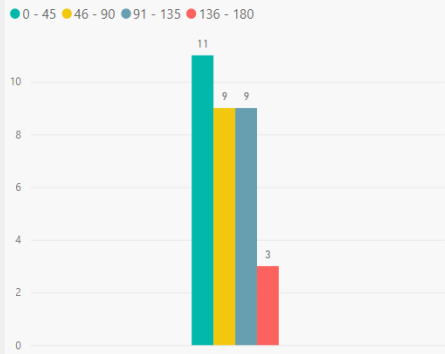
Number of Ports (Total)



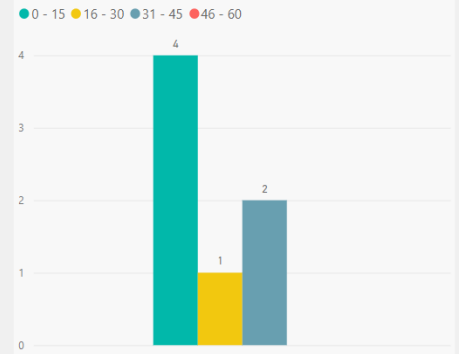
Property Type



Projects Pending Installation



Pre-Approved Projects



Smart Charging vs. Basic Charging

For each of the completed projects listed below, the customers have identified their charging equipment as being a "smart charger" during the application process and that they would be monitoring their charging. Ameren Missouri is actively engaging these customers to collect utilization data. Ameren Missouri will continue to communicate with customers about their data collection.

Completed Projects	Smart Charging Equipment	Completed Projects	Smart Charging Equipment
The Elle on Lockwood	Siemens/VCSG30GCPUW	REEF POINT APARTMENTS, LLC	ENEL X JUICE BOX PRO 40
Logan University	LilyPad/EV CT4000	MOORE FUNERAL HOMES	ChargePoint CT4021-GW1
Brentwood Community Center	Charge Point/CT4021-GW1	CHURCH ON THE ROCK	CHARGEPOINT CT4021-GW1
Norwood Hills Country Club	Leviton/EVR-GREEN 4000	DAMK ENTERPRISES LLC	JuiceBox 32
Centene Community Center	Charge Point/ CT4021 & CT4025	ALPHA BETA BREWERY	Charge Point CT4021-GW1
601 Metropolitan Square	Charge Point/CT4023-GW1	Wireworks	CHARGEPOINT CT4021
Aventura at Wild Horse Creek	Siemens/VCSG30GCPUW		
Advanced Lighting Service	Enel x/pro 40 c		
Thirty One Holdings LLC	Chargepoint 40amps ChargePoint Home Flex, NEMA 14-50 Plug		
LOU FUSZ MOTOR CO	DELTA EVDU25U4CUM, Chargepoint CT-4023		
Hi Pointe Lofts	Charge Point CPF25		
J Eickel Motors dba Bommarito Vw of Hazelwood	Charge Point CPF50		
ISLE OF CAPRI CASINO DBA IOC CAPE GIRARDEAU (Century Casino)	ChargePoint CT4021		
IKEA	ChargePoint CT4023		

Direct Revenues from Local Charging Stations *(see workbook for calculations)*

There have been no Local Charging Incentive Program projects with a dedicated meter. Based on the 212 installed charging ports (at 64 locations) through December 1, 2021, Ameren Missouri estimates a total annual direct load/revenue of \$106,086 to \$152,793 and a total annual direct energy consumed of approximately 1,839,689 kWh.

Please refer to included workpapers for information by location. Please note that the variability relates to an estimate of billing demand. The high end of the range assumes that, for all customers on rates which include a demand charge, the charging demand coincided with customer billing demand in all months. The low end of the range assumes that the charging demand never coincided with the customer billing demand in any month.

Indirect Revenues *(see workbook for calculations)*

Ameren Missouri receives a snapshot of Missouri registrations from IHS MarkIT on a quarterly basis, approximately seven weeks after the end of the calendar quarter. This report includes baseline and current data through Q3-2021 that reflects numbers for Ameren Missouri territory. See Power BI visual depiction shown at end of this report.

Attachment, "AMO Charge Ahead – Revenue Workbook 12-1-21," to this report, contains the EV counts by county and type of EV. Note these counts have been proportioned for the percentage of households served by Ameren Missouri in each county.

Ameren Missouri estimates indirect energy load of 35,636,170 kWh and indirect revenue in a range of \$2,760,335 to \$2,939,396. The variability in revenue range relates to a variable estimate of where charging is occurring (Multifamily, Workplace, or Public).

EV Registration Data as Power BI Visuals (includes snapshot as of 12/1/21)

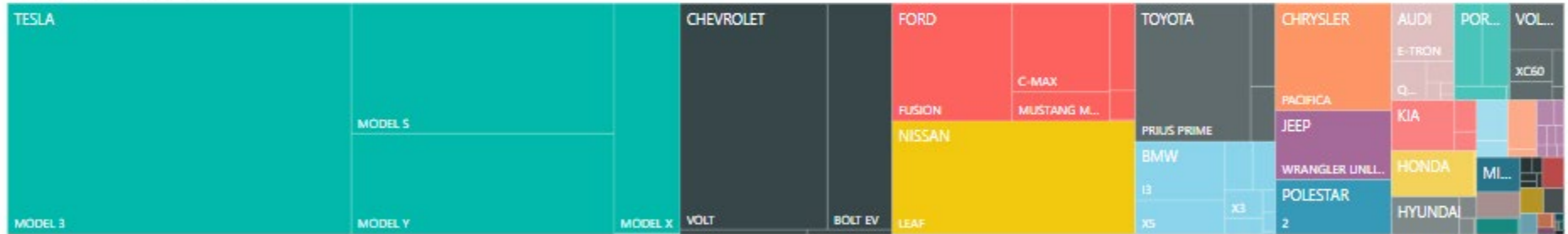
8,713
AMO EV Total

Year	Quarter	Ameren EV Total	Quarterly Change
2021	Qtr 3	8,713	853
2021	Qtr 2	7,860	803
2021	Qtr 1	7,057	412
2020	Qtr 4	6,645	361
2020	Qtr 3	6,284	238
2020	Qtr 2	6,046	222
2020	Qtr 1	5,824	357
2019	Qtr 4	5,467	247
2019	Qtr 3	5,220	515

Ameren EV Total, Ameren PHEV Total and Ameren BEV Total by DATE and STATE



Current EVs by MAKE and MODEL



Ameren PHEV Total Ameren BEV Total

