

**CONFIDENTIAL INFORMATION**

**File No. ET-2018-0132**

**Ameren Missouri Charge Ahead Quarterly Report**

**Electric Vehicle Charging – Corridors and Local Charging Incentive Program**

**Report for September 2022**

This report comprises the ninth 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.

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 the third quarterly report in December 2020 and available at the Ameren Missouri EV Website page. 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

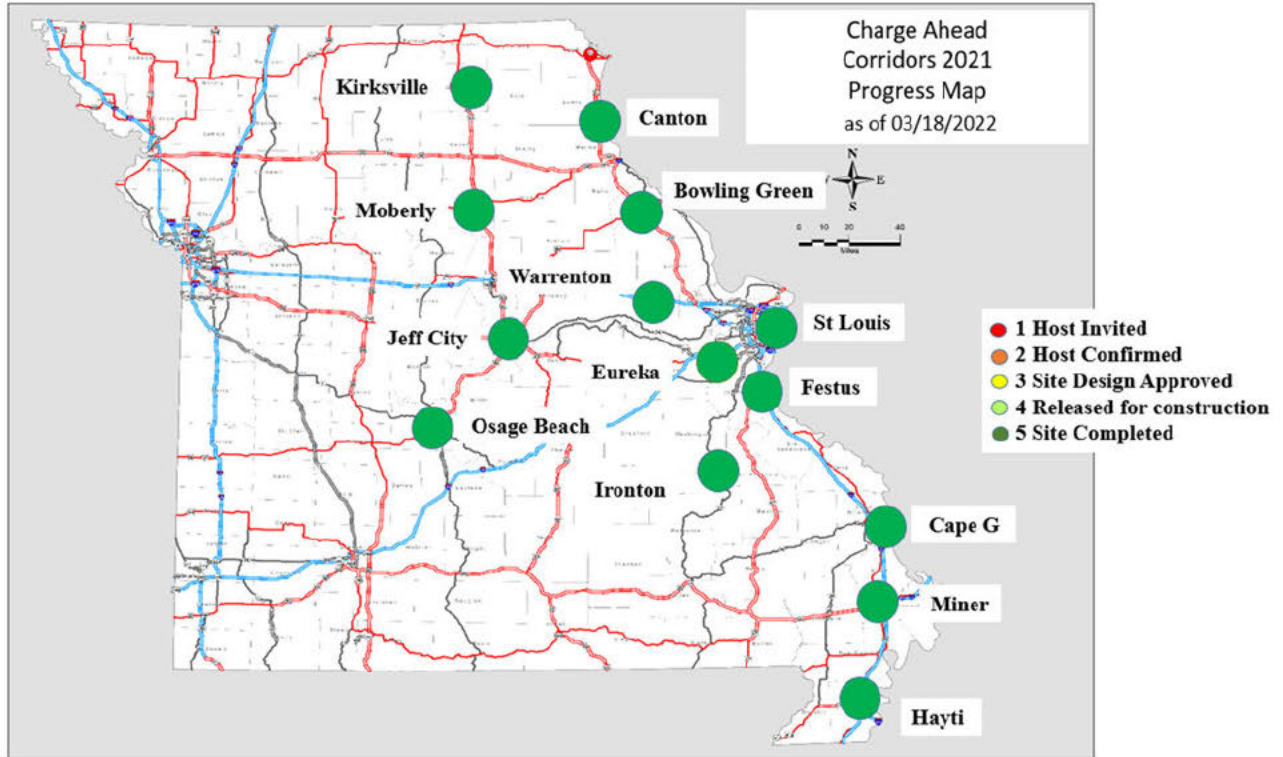
The table below contains basic project information, including site status and costs. Program costs have been on-target with assumptions made in development of the program. The cost for the 14 sites developed through the Charge Ahead – Corridor program is \$3,656,063 which is under the \$4,000,000 budget allocated for this program. The 14<sup>th</sup> site in Eureka represents the most recent site.

**Charge Ahead Corridors – Sites Status and Costs Table (CONFIDENTIAL)**

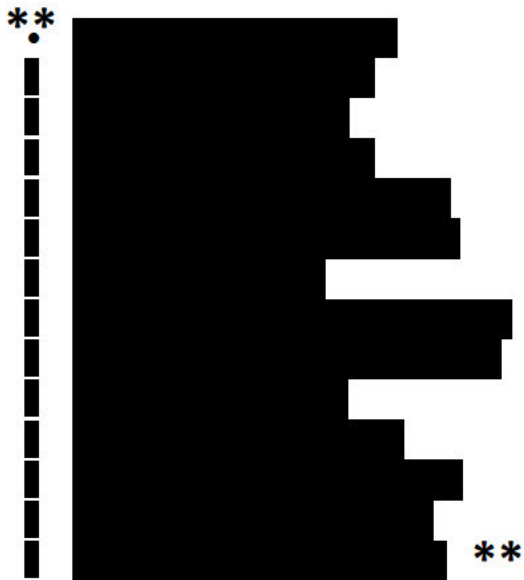
Location	Customer-Host	Status	Cost	Line Extension	Construction Allowance	Price to Charge (set by Customer-Host)
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Warrenton		Completed Dec 2019	\$272,202	\$18,324	\$7661	L2 Free; DC \$.25/kWh
St. Louis		Completed Jun 2020	\$307,897	\$27,808	\$7661	L2 \$.20/kWh; DC \$.25/kWh
Moberly		Completed Jun 2020	\$287,966	\$16,366	\$11,539	L2 \$.23/kWh; DC \$.25/kWh
Festus		Completed Aug 2020	\$313,153	\$25,719	\$7661	L2 Free; DC \$.25/kWh
Canton		Completed Aug 2020	\$275,815	\$14,261	\$11,539	L2 \$.22/kWh; DC \$.25/kWh
Hayti		Completed Aug 2020	\$267,207	\$5543	\$11,539	L2 \$.22/kWh; DC \$.30/kWh
Cape Girardeau		Completed Oct 2020	\$304,385	\$12,141	\$11,539	L2 Free; DC \$.25/kWh
Jefferson City		Completed Oct 2020	\$289,274	0	0	L2 \$.20/kWh; DC \$.25/kWh
Osage Beach		Completed Oct 2020	\$333,060	\$38946	\$11,539	L2 \$.22/kWh; DC \$.25/kWh
Bowling Green		Completed Jul 2020	\$308,708	\$21,557	\$11,539	L2 \$.22/kWh; DC \$.25/kWh
Kirksville		Completed Dec 2020	\$268,925	\$9021	\$11,539	L2 \$.22/kWh; DC \$.25/kWh
Minor		Completed Oct 2021	\$100,000	\$8,464	\$11,539	L2 \$.25/kWh; DC \$.30/kWh
Ironton		Completed Nov 2021	\$241,030	\$13,275	\$11,539	L2 \$.25/kWh; DC \$.30/kWh
Eureka		Completed Dec 2021	\$239,472	\$14,261	\$11,539	L2 \$.25/kWh; DC \$.30/kWh

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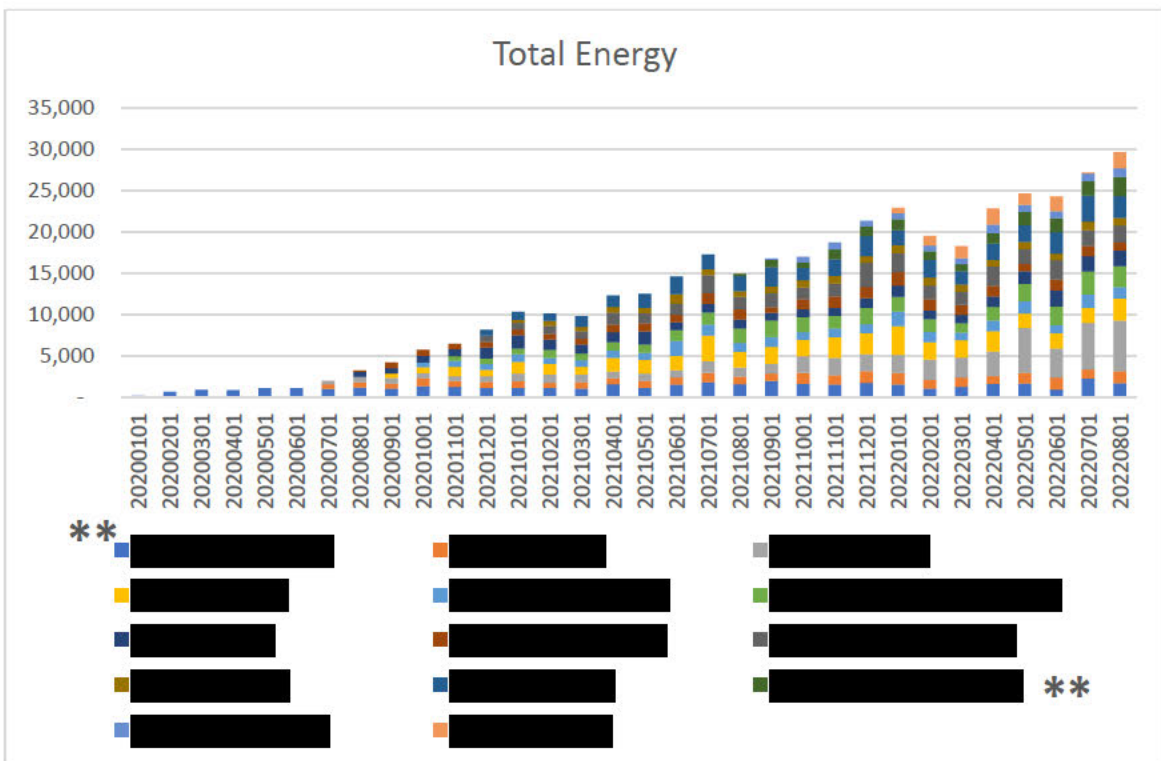
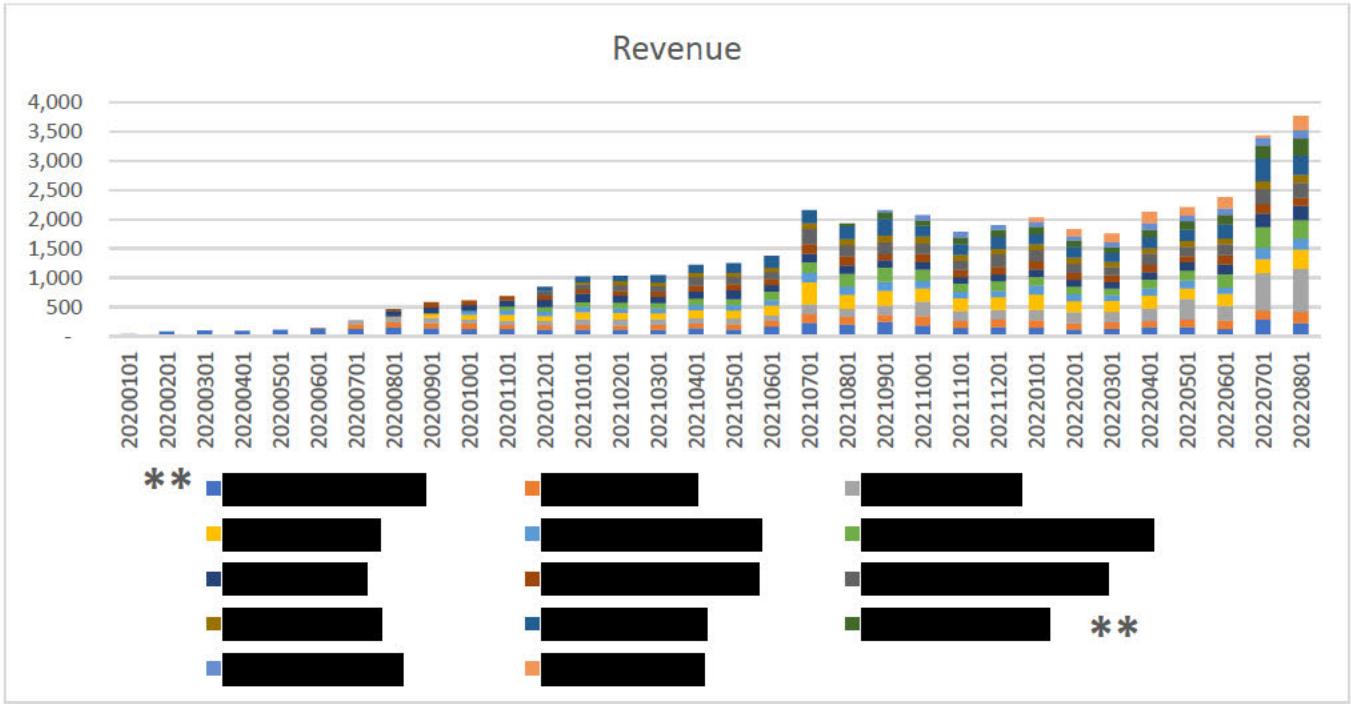
**Charge Ahead Corridors – Progress Map**



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



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 following reports are not included in this filing but will be included in future reports:

- Utilization Factor Report
- Uptime Report

**Direct Revenues from Corridors**

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

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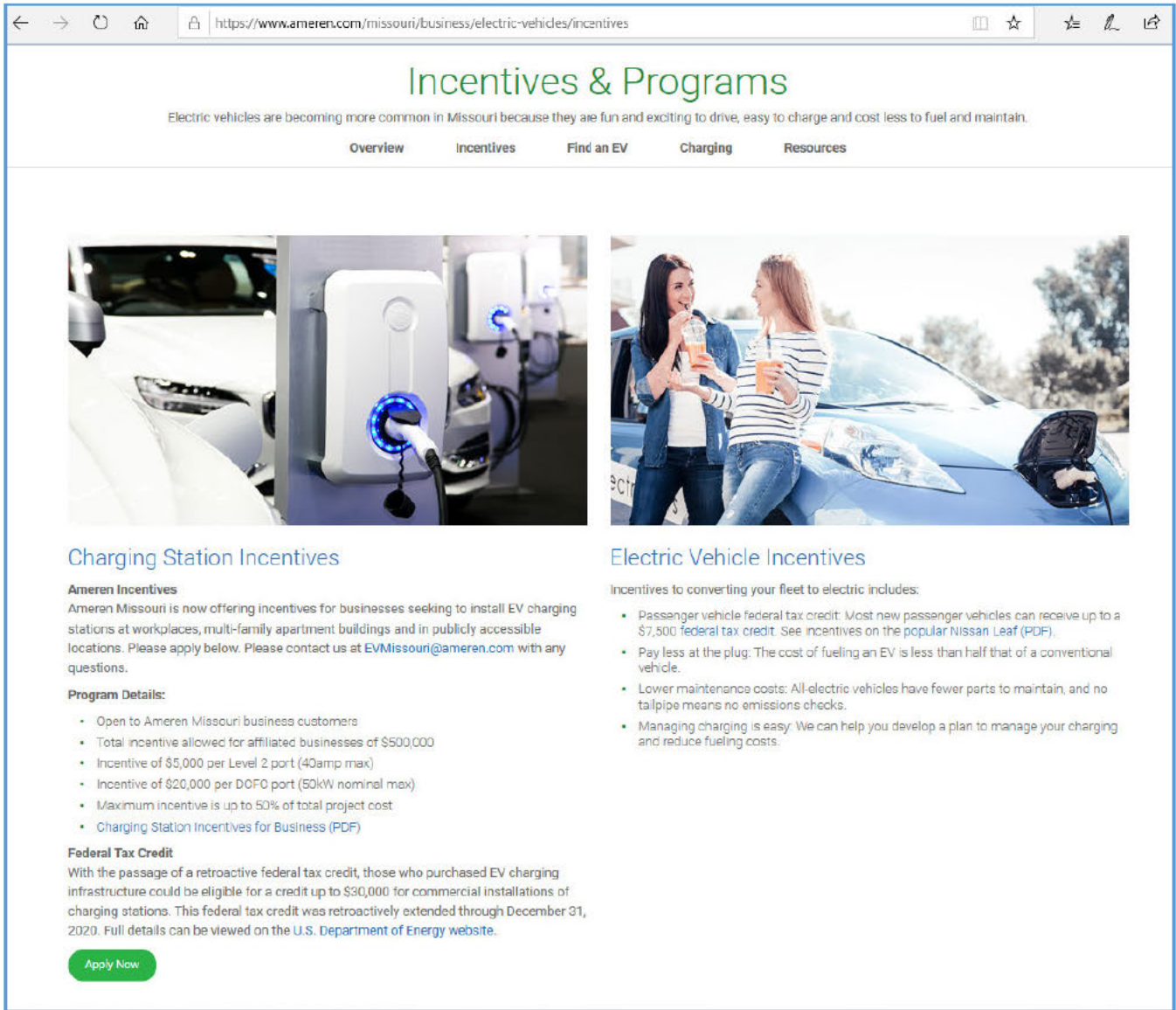
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Revenue														
20200101	33													
20200201	78													
20200301	96													
20200401	92													
20200501	110													
20200601	138	4												
20200701	129	79	64											
20200801	148	89	87	15			96	27						
20200901	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	49		
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	
20211201	154	131	167	215	111	163	116	129	219	90	202	119	79	
20220101	143	130	175	265	152	148	130	141	187	107	168	127	82	74
20220201	111	109	190	187	121	134	111	125	151	105	184	112	76	121
20220301	128	112	176	187	98	116	104	120	140	92	155	92	85	148
20220401	153	102	221	218	125	150	125	128	193	91	185	124	116	197
20220501	156	128	356	176	139	173	142	103	160	104	184	148	98	146
20220601	121	147	249	206	107	229	170	157	191	95	237	166	109	191
20220701	288	149	643	238	197	349	234	169	247	139	390	221	132	38
20220801	223	193	738	331	186	317	243	136	259	133	328	294	143	247
20220901	212	126	568	490	196	325	201	172	312	106	349	241	145	

## 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:



The screenshot shows a web browser window with the URL <https://www.ameren.com/missouri/business/electric-vehicles/incentives>. The page title is "Incentives & Programs" and the subtitle is "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." The navigation menu includes "Overview", "Incentives", "Find an EV", "Charging", and "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](mailto: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 DCF0 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 August 2022 for total administrative and educational costs is approximately **\$586,044** and includes the following costs:

- AEG administrative costs \$234,262
- Reach Strategies marketing costs \$320,126
- Marketing Collateral \$1,596
- EV Registration Data \$7,850
- Contractor Support Role for Portal Management \$11,340
- Watt Time Pilot \$10,870

## **Education and Outreach Activities**

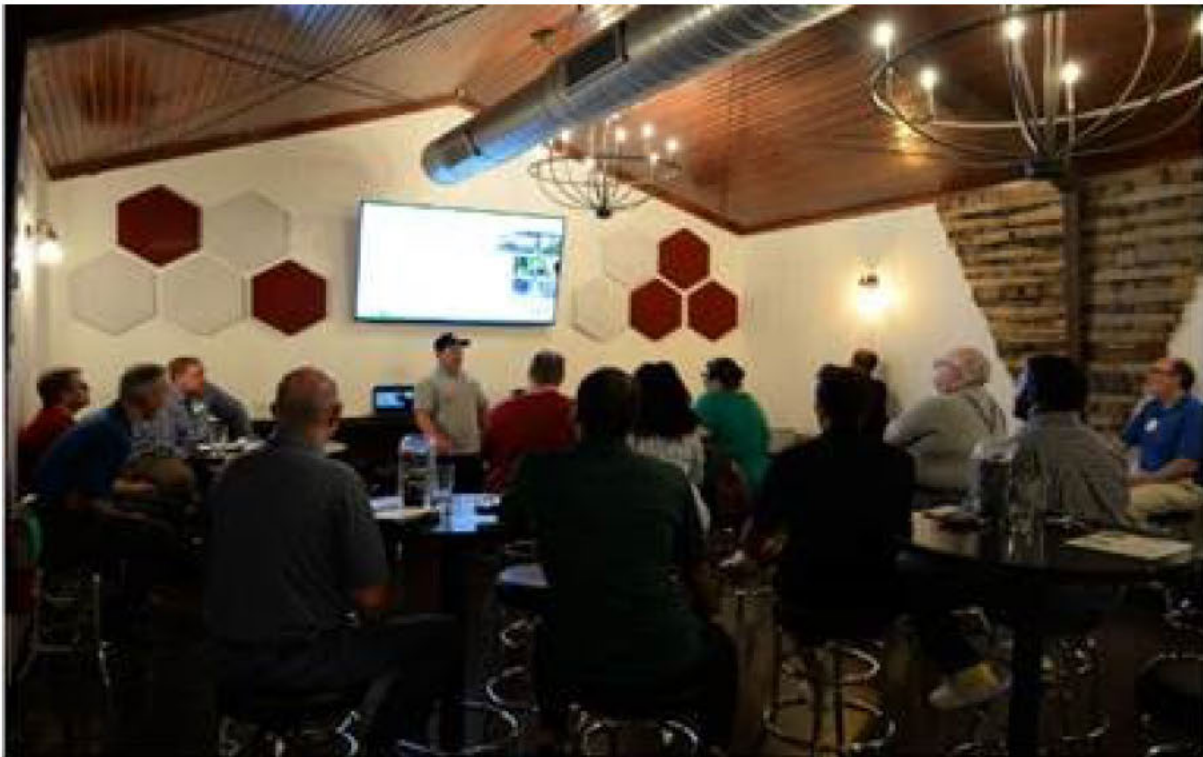
We're actively raising awareness of the Local Charging Incentive Program with education and outreach efforts. Currently, our marketing activities include the following:

- 2022 Auto Show
- In Person Community Events (Ford Show, STL Zoo)
- Virtual Community Events – EV 101: An Introduction to Electric Vehicles
- Virtual Community Events – EV 201: Finding the EV for You
- Charge Ahead Orientation webinars; offered twice a month
- 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 and social media marketing to large and mid-size business customers
- Traditional and earned media (TV, print publications, radio) and social media (Twitter, Facebook, etc.)

### Electric Vehicle Partner (EVP) Roundtable

Ameren MO Efficient Electrification Team hosted an EVP Roundtable on July 20, 2022 at Alpha Brewing Company in St. Louis. The theme for the event was, *Getting customers to say "Yes" to EV charging*. This event marked Ameren Missouri's first in-person EVP roundtable event. The roundtable provided EVPs an opportunity to network with fellow EVPs, share their EV charging installation experiences, ask questions specifically related to the EV Charging Incentive Program, and share challenges and solutions to getting customers to say "yes" to EV charging. Derrick Langeneckert, CEO, Alpha Brewing Company, shared the benefits of installing EV charging at his business and provided a tour of his microbrewery operations. This was a great event with much engagement from the attendees.

Case Study - [Alpha Brewery \(pdf\)](#)



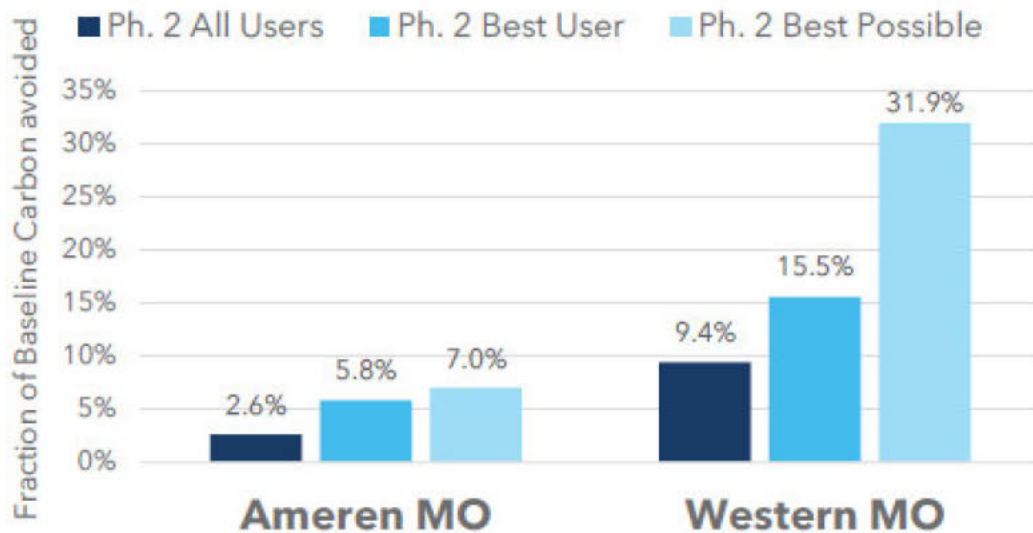
## Automated Emissions Reduction (AER)

The pilot of Automated Emissions Reduction for EVs, as implemented by Enel X with their JuiceNet Green product has ended, attached is the final report.

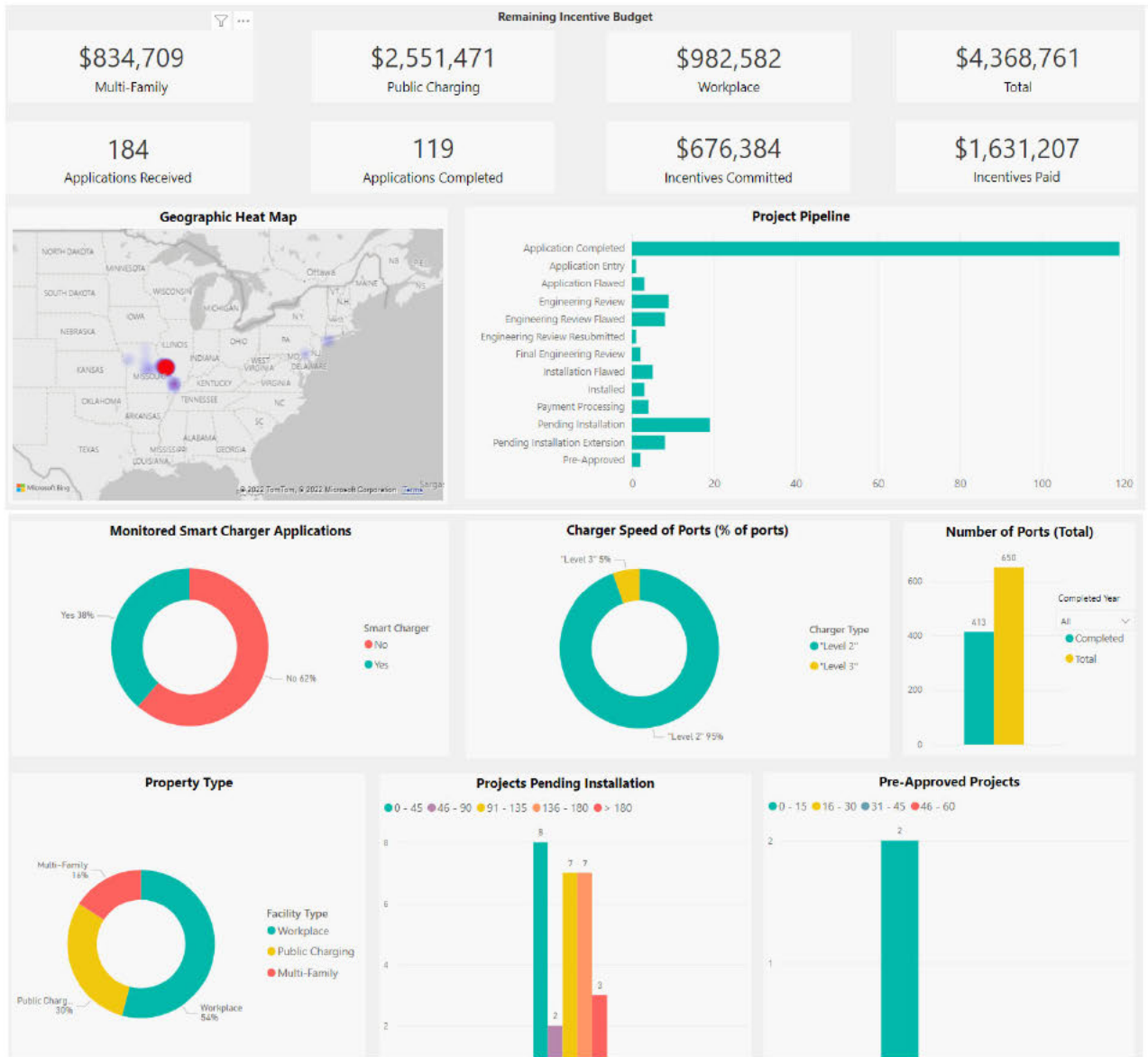
The key take-aways from the pilot evaluation include:

- JuiceNet Green AER technology reduced carbon emissions by 2.6% overall during the evaluation period, a total of 1,953 pounds of CO<sub>2</sub>.
- Carbon reduction varied widely among users, with the best user reducing their induced carbon emissions by 15.5%.
- Some users had trouble with the EV JuiceNet app and many did not use it at all, which negatively affected JuiceNet Green's performance. These are not issues with the AER algorithm, they are specific to Smart Charging with the EV JuiceNet app.
- The carbon reduction opportunity is currently higher in Western MO (Southwest Power Pool) than it is in Ameren Missouri territory (MISO).
- At this time, Ameren Missouri does not plan to pursue further stages of this pilot due to user experience concerns and the modest results.

### Carbon Reduction Performance



# Charge Ahead – Local Incentives Dashboard Statistics Snapshot 10-13-2022



### Smart Charging vs. Basic Charging

For each of the completed projects listed below, the customers identified their charging equipment as a "smart charger" and agreed to monitor their energy usage. Ameren Missouri EV Team is working closely with the charging manufacturer and has reached out to customers to obtain charger utilization details.

Completed Projects	Smart Charging Equipment	Completed Projects	Smart Charging Equipment
**	Siemens/VCSG30GCPUW **		ENEL X JUICE BOX PRO 40
	LilyPad/EV CT4000		ChargePoint CT4021-GW1
	Charge Point/CT4021-GW1		CHARGEPOINT CT4021-GW1
	Leviton/EVR-GREEN 4000		JuiceBox 32
	Charge Point/ CT4021 & CT4025		Charge Point CT4021-GW1
	Charge Point/CT4023-GW1		CHARGEPOINT CT4021
	Siemens/VCSG30GCPUW		ChargePoint CT4013
	Enel x/pro 40 c		EVBox Business Line
	ChargePoint 40amps ChargePoint Home Flex, NEMA 14-50 Plug		EVBox Business Line
	DELTA EVDU25U4CUM, ChargePoint CT-4023		Leviton CPHU2-CPMBX-CPCAP- CPCBX-CPCMK
	Charge Point CPF25		Charge Point CT4021-GW1
	Charge Point CPF50		ChargePoint CT4023, ABB ABB24KW DC
	ChargePoint CT4021		Siemens SI 8EM1310-4CF14- 0GA0 Siemens SI 8EM1310- 5CF14-1GA1
**		**	

**	ChargePoint CT4023	**	Charge Point Ct4021-GW1 Charge Point CPF50-L23
	ChargePoint CPICPF50-L23, ABB CPIABB24W		ChargePoint Home Flex
	Tellus Power UP160J		Juicebox 32
	Blink Advanced IQW2-80U- M1-R2-N-25, ABB TERRA UL54		Leviton CPHU2, Leviton EVR30- R2C
	Blink Blink IQ 200 Smart, Blink IQ 200	**	Siemens (1) SI 8EM13105CF141GA1(PARENT), (1) SI 8EM13105CF140G
**	Charge Point CT4025		

**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 413 installed charging ports (at 128 locations) through 8-31-22, Ameren Missouri estimates a total annual direct load/revenue of \$291,170 to \$389,834 and a total annual direct energy consumed of approximately 4,409,886 kWh.

Please refer to included work papers 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 Q2-2022 that reflects numbers for Ameren Missouri territory. See Power BI visual depiction shown at end of this report.

Attachment, "AMO Charge Ahead – Revenue Workbook 8-31-22," 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 44,891,840 kWh and indirect revenue in a range of \$3,771,508 to \$3,993,719. 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 8/12/22)

