Final Report: Business solutions incentive pilot program case ET-2021-0020

Final report filing requirements

- Program information, by type of equipment (TRU, High Capacity Lift Trucks):
    - Physical address, account number, and account billing schedule, as well as (as applicable) locations of the participating customers' affiliated entities also participating in the incentive program;
    - Incentives paid; and
    - Equipment power levels;
- Direct load/revenues by location for separately metered program measures;
- Estimated direct load/revenues by location for program measures that are not separately metered, with work papers;
- Total administrative cost breakdown including a detailed description of advertising and education activities to date; and
- To the extent allowed by the available equipment and associated data, an analysis of any correlation of equipment usage with customer billing demands, system coincident peak loads as well as non-coincident peak loads, including equipment impact on customer loads during peak and off-peak periods.
    - Within 30 days of the Commission's approval of this *Stipulation*, Ameren Missouri will communicate to Staff, OPC, and Renew Missouri the technical capabilities and associated costs related to the capture of equipment load data and customer load data.
    - Based on that information, the Company, Staff, OPC, and Renew Missouri will determine what data, if any, can and will be provided to Staff, OPC, and Renew Missouri.
    - If the acquisition of equipment that facilitates retention of charging data exceeds the cost of similar equipment by more than $50, the Signatories will support a reasonably revised tariff increasing the incentives by an amount in the range of $50 - $500, with the overall budget remaining the same.

Program

This pilot program was approved for a $1.9M budget with a 20% limit for administrative and marketing expenses. The pilot is targeted to promote electrifying of the following off-road equipment:

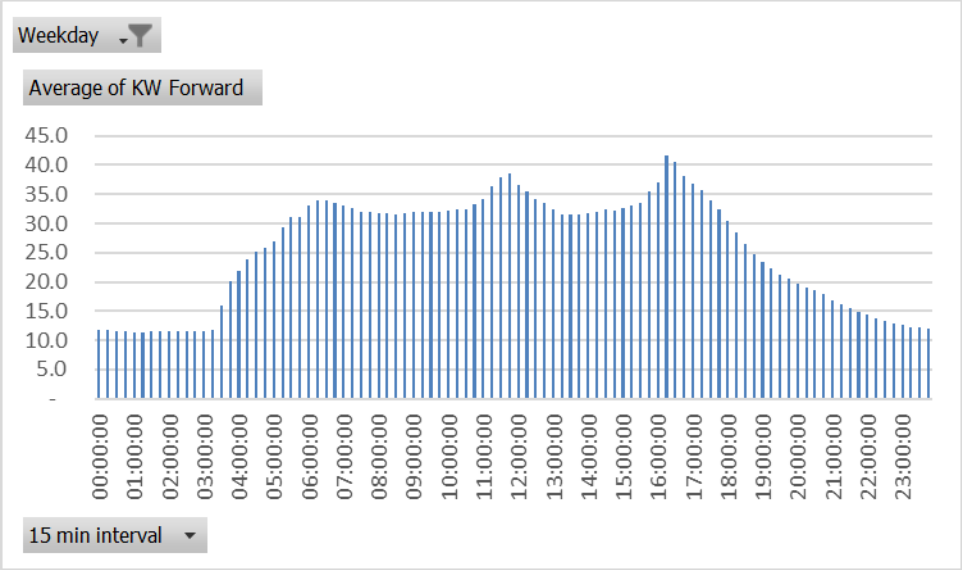
- Electric Truck Refrigeration Units (ETRU)
- Class I High Capacity Electric Lift Trucks with a capacity greater than 6,000 pounds (HCLT)

Participating customers

Two incentives were paid for High Capacity Lift Trucks to one customer. Confidential details about the customer can be found in Appendix A marked confidential per 20 CSR 4240-2.135(2)(A)1.

Correlation of Equipment usage

The HCLT chargers for this customer are not separately metered therefore no direct load/revenues are available. The customer also chose not to purchase telematics or charge management. A chart of average hourly loads, for their entire account, and analysis can be found below.



The company operates from 5:00 – 15:30 weekdays with a half hour lunch. Opportunity charging occurs during the lunch break around noon which corresponds to the increase in usage between 11:30 and 12:30. HCLTs are plugged in and begin charging at the end of the day in the 15:00 – 16:00 range. The highest average daily peak usage ends at 16:15 at 41.7 kW, about 10 kW higher than the daily operating load of around 32 kW. This peak demand would coincide with the company's monthly billing demand. Without the separately metered data for the chargers or the telematics from the HCLT it is difficult to ascertain the exact amount of kW that the charging increases monthly billing demand. Another complexity is that the company has additional lower capacity lift trucks that may be charging during the same time periods as the HCLT.

The time of summer system peak in 2023 occurred between 16:00 and 17:00. For this application of electric HCLT charging there is likely some effect on system peak demand from the charging. It is not a large impact and definitely this data is not statistically significant to say that all HCLT deployments would impact system peak as it is only 1 application of a single shift operation. Without the separately metered data for the chargers or the telematics from the HCLT it is difficult to determine the exact amount of kW that the charging increases annual system demand. Another complexity is that the company has additional lower capacity lift trucks that may be charging during the same time periods as the HCLT.

The 15 minute interval data is found in spreadsheet titled AMI Interval Meter Readings HCLT customer.xlsx

Since there is no separately metered data, the estimated annual revenue range is $3,157.12 - $3,867.18 as shown below.

	To	Number Of Days	Seasonal Assumption	Low Incremental Revenue	High Incremental Revenue
10/02/2022	10/31/2022	29	W	$ 226.53	$ 301.73
08/31/2022	10/02/2022	32	S	$ 391.52	$ 516.80
08/02/2022	08/31/2022	29	S	$ 354.81	$ 480.09
07/04/2022	08/02/2022	29	S	$ 354.81	$ 492.40
06/02/2022	07/04/2022	32	S	$ 391.52	$ 579.36
05/03/2022	06/02/2022	30	W	$ 227.73	$ 274.90
04/03/2022	05/03/2022	30	W	$ 205.59	$ 205.59
03/03/2022	04/03/2022	31	W	$ 199.71	$ 199.71
02/02/2022	03/03/2022	29	W	$ 173.15	$ 173.15
01/04/2022	02/02/2022	29	W	$ 173.15	$ 183.71
12/01/2021	01/04/2022	34	W	$ 236.84	$ 237.97
10/31/2021	12/01/2021	31	W	$ 221.76	$ 221.76

Expenditure Review

Category	Vendor	Amount (As of 4/1/2024)
Incentives		$5,000
Administration (Portal)	Applied Energy Group	$87,868
Education and Marketing	Reach Strategies	$31,169

Lift truck hauling and Maintenance	JNI Hauling/ Laciny Bros.	$39,140
Total		**$163,177**

Detailed cost data can be found in spreadsheet "off road spend 7.18.24".

Administration

The Applied Energy Group expenses are for the build out of the application portal and ongoing monthly hosting fees. This portal was cancelled when it was realized that the number of incentive applications could be handled manually. If we are able to receive an extension for this program we would process all incentive applications manually.

Education and Marketing

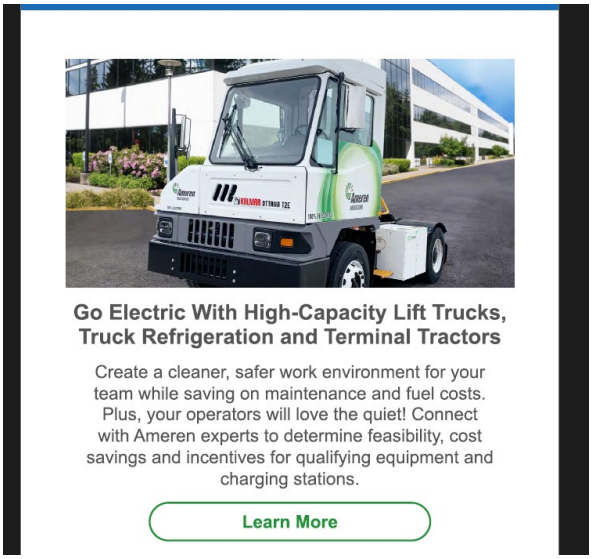
Reach Strategies is the marketing partner for the program and helped design marketing and education materials as well as overall marketing strategy guidance.

Activities include:

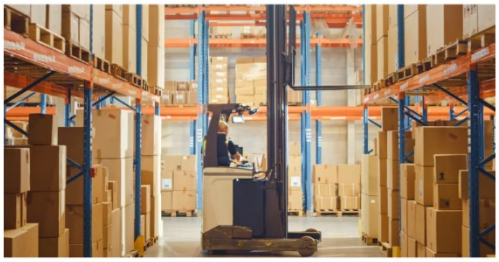
- 2 informational brochures created. (attached)
- Consultative selling approach which includes a discussion on how charging behavior can impact the economics of the equipment including impacts of time of day rate structures.
- Our consultative process has been received positively by our customers in helping to reach a decision of next generation fleet options. Cost analysis of fuels, maintenance and emission reductions prove vital in today's landscape of sustainable requirements. Affirming our findings through technology demonstrations provides decision making confidence otherwise unavailable.
- Below are links to Ameren's website pages applicable to the program.
    - https://www.ameren.com/missouri/business/electric-vehicles/incentives
    - https://www.ameren.com/missouri/business/electric-vehicles/commercial-vehicles-equipment/fleet-equipment-incentives
    - https://www.ameren.com/missouri/business/electric-vehicles/commercial-vehicles-equipment
    - https://www.ameren.com/missouri/business/electric-vehicles/commercial-vehicles-equipment/truck-refrigeration
    - https://www.ameren.com/missouri/business/electric-vehicles/commercial-vehicles-equipment/forklifts-lift-trucks
- HCLTs and eTRUs were included in quarterly newsletters to business customers and also pay-per-click ads focusing on the equipment and consultative support. Examples of the quarterly newsletter articles are shown below.

2022:

June 6th (Specific mention of HCLT link: https://www.ameren.com/missouri/business/electric-vehicles)



September 27th (Specific mention of lift trucks. Link: https://www.ameren.com/missouri/business/electric-vehicles/commercial-vehicles-equipment/forklifts-lift-trucks)



December 7th (Resource article that features all equipment: Here)

Replacing Combustion Power with Electric Pays Off

Your business is very likely to benefit from lower costs, improved safety and increased sustainability when you switch to electric forklifts, terminal tractors or truck refrigeration units. Fuel and maintenance costs go down dramatically without sacrificing performance. Learn how in this informative article.

Read the Article

2023:

September 14th (Specific mention of e-TRU
Link: https://www.ameren.com/missouri/business/electric-vehicles)

Drive Clean with Commercial Electric Vehicles

Whether your business relies on lift trucks, eTRUs, terminal tractors or other vehicles to do business, you can charge toward a sustainable future with clean-powered equipment. Read more in our Resource Center about how switching to electric-powered vehicles reduces maintenance and fuel costs, improves safety and reduces emissions.

Get Started

December 13th (General off road message- link: https://www.ameren.com/missouri/business/electric-vehicles)

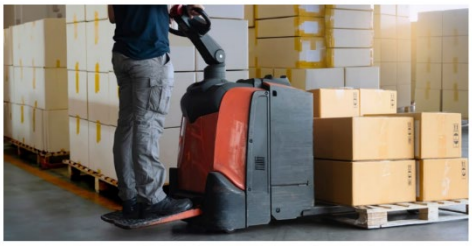
Electric Options Available for Commercial Vehicles and Equipment

Switching to electric-powered vehicles and equipment can help lower your operational and maintenance costs, improve safety and lower emissions. Let us prove it to you. Contact us for free guidance, cost comparisons and to schedule an on-site demonstration.

Get Started

2024:

March 7th (General off road message- link: https://www.ameren.com/missouri/business/electric-vehicles)



Power the Drive Forward in Off-Road Vehicles

See for yourself what an electric future means for your business with off-road vehicles. Our free consultation and report will analyze your current operations and equipment needs, find opportunities for electric equipment and offer cost comparisons and next steps to jump-start your switch. We can even help set up a free demo so you can see electric equipment in action.

Connect With Us

June 6th ((Specific mention of HCLTs and e-TRUs Link: https://www.ameren.com/missouri/business/electric-vehicles/commercial-vehicles-equipment)

Plug In With Electric Commercial Vehicles

Try electric high-capacity lift trucks, eTRUs and electric terminal tractors that cost less to operate. Electric off road vehicles offer better safety due to near silent operation, increased air quality for employees from no emissions and less maintenance and downtime since they have 90% fewer parts than combustion models.

Connect With Us

Hauling and Maintenance

Ameren Missouri purchased a high-capacity lift truck for demonstration purposes in 2022. In 2023 the HCLT was utilized in 15 1–2-week demonstrations at customers who had existing non-electric HCLTs. Demonstrations have continued in 2024 with 5 completed through May 31, 2024.

Lift truck maintenance and hauling includes delivering the HCLT to the demonstrations and the purchase of enclosures for the HCLT chargers and phase converter to protect them during hauling.

Incentives

Overall incentives paid have been minimal for a number of reasons.

- The HCLT demo vehicle was not available until 2023. Several customers have used the demo vehicle and are interested in purchasing but may be early in a lease and do not want to incur the expense of ending the lease early. Others potentially have recently purchased an HCLT and are not ready for another new purchase because the unit has not depreciated enough.
- ETRUs were difficult to engage a distribution or manufacturing partner to help promote the units as the market in the Midwest has not been developed much at all. We now have 2 manufacturers and a distributor that we are working with to promote ETRUs in the market. They have provided demonstration materials and will help identify potential customers.
- The lifespan of a typical tractor trailer is 5-6 years. Trailer manufacturers are only recently building units with the proper connections for an ETRU in the Midwest. Without trailers that can be connected to an ETRU there is no use for the ETRU. Now is the time to begin working with customers to prepare for these trailers hitting the road in greater numbers and help them reduce emissions at their facilities.

Key learnings of the program

HCLT:

- Our consult/demo/report helps educate and encourage electrification but the process to transact to electrification is still a matter of patience. We meet the customers where they happen to be with lease status or recent fleet % upgrade. It's highly unusual to consult and see an immediate status change.
- Customers have displayed appreciation for our unbiased consultative approach. This is supported in every "post consult" interview performed. Very positive responses.

eTRU:

- After initially launching this program, we now see we were approximately 3 years ahead of market readiness.
- Ameren struggled for 2 years to get dealers to commit to partnering in this opportunity.
- Our partners Gateway Truck Refrigeration, Safeconnect and ESL believe the incentive available can make an immediate impact with customer decisions.
- Both manufacturers Safeconnect and ESL have noted the market is beginning to turn in favor of electrifying.

ET-2021-0020

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