Nebraska Community Energy Alliance
Electric Vehicle Infrastructure Report
November 2021 Edition

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NEBRASKA COMMUNITY ENERGY ALLIANCE

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This report includes the following documents:

- Project Executive Summary
- Project Description and Summary savings
  - Introduction
  - Data Analysis
    - Unique User Data (Commercial and Utility/Residential)
    - Economic and Environmental Savings (Commercial and Utility/Residential)
- Appendices
    - Appendix A : Detailed Economic Analysis- Commercial.
    - Appendix B : Detailed Economic Analysis- Utility/Residential.
    - Appendix C : Detailed Environmental Emissions Data Analysis – Commercial and Utility/Residential.
    - Appendix D : Detailed Greenhouse Gas Calculations.
    - Appendix E : Detailed Analysis for Charging Stations- Monthly Detailed Data- November 2021.

Executive Summary

The mission of the Nebraska Community Energy Alliance (NCEA) is to build and promote advanced technologies for housing and transportation that save energy, reduce CO_2 pollution and cut costs, (http://www.necommunity.energy/mission/). NCEA believes that demonstrating these technical advances at the local level is the best way to accelerate the market in Nebraska. Establishing the economic and environmental benefits of advanced technologies, such as electric vehicles and smart charging stations, at this level will serve the mission of the NCEA and the mission of the Nebraska Environmental Trust (NET), a grant funder. NET offers funding under the Air Quality category, requiring CO2 emissions reductions and economic benefits in return for funding this category. NCEA, in compliance with grant requirements, publishes monthly electric vehicle charging data from the NET-funded projects.

NCEA is in the sixth phase of building a statewide charging infrastructure for electrified transportation through the award of its fifth grant from NET. When completed, an estimated total of 55 electric vehicles (EVs), nine compressed natural gas vehicles (CNG), one refueling CNG station, 92 Level-2 ChargePoint™ networked charging stations, and 7 DC fast charging stations will be deployed across Nebraska. In addition, in partnering with Omaha Public Power District (OPPD), Nebraska Public Power District (NPPD), and Fremont Municipal Utility, as part of a rebate program, an additional 293 EVs, 670 ChargePoint™ Home charging stations and 60 ChargePoint™ networked charging stations will be deployed.

Data for the commercial charging infrastructure for the participating members in all five grants has been collected since 2014, while data from the residential charging infrastructure has been collected since 2018. This data is processed and analyzed on a monthly basis. The results are compared to that of conventional-fuel vehicles (CVs), diesel vehicles (DVs), and ethanol (E85) fuel vehicles to develop the economic and environmental savings. Table A shows the total calculated savings.

Table A: Total Economic and Environmental Benefits for Participating Members in all Six Grants.

	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
		CO2	CO	SO2	NOx	CH4	VOC
Savings Excluding Residential Rebate Program	$135,997	523,073	9,425	(695.59)	(587.76)	(3.91)	445.00
OPPD_ Residential Rebate Program Savings	$889,600	2,743,780	47,280	(7,207.10)	(3,275.70)	(149.12)	2,907.69
NPPD_ Residential Rebate Program Savings	$78,354	253,170	3,829	(138.51)	(274.95)	(3.02)	229.51
Fremont_ Residential Rebate Program Savings	$9,255	30,210	508	(63.21)	(24.76)	(4.14)	32.02
Total Saving	$1,113,206	3,550,234	61,041	(8,104.41)	(4,163.16)	(160.18)	3,614

In addition to the data from the participating members, data from other existing stations in Nebraska is collected and analyzed since 2013. Tables B-J provide a summary of analysis on all collected data. There are some discrepancies between each month's data. This is due to data availability for newly installed and/or activated charging stations and timing when new installed stations start to report and or commercial/residential stations not being connected to the network for a period of time.

Table B: Cumulative Charging Infrastructure Usage and Benefits for all Participating Commercial Charging Stations.

Charging Station Location	Number of Charging Ports	Number of Charging Sessions	Energy Usage (kWh)	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
					CO_2	CO	SO_2	NOx	CH_4	VOC
Allen Schools	2	1,199	12,562	$4,549	23,797	485.66	(29.08)	(5.47)	1.29	16.96
Auburn Board of Public Works	4	712	4,776	$1,932	9,108	98.90	(6.11)	2.30	(0.21)	5.99
Aurora	3	263	1,361	$577	1,577	27.91	(3.70)	(5.17)	(0.10)	1.69
Ashland	3	1,160	11,989	$4,239	15,438	265.56	(37.78)	(14.26)	(0.08)	14.81
Bellevue	4	1,295	12,080	$3,959	25,594	571.21	(33.69)	18.47	1.87	16.91
B & R Stores	9	645	7,216	$3,211	3,390	145.19	(18.73)	(11.08)	(1.64)	9.03
Central City	2	33	522	$163	1,264	31.44	(1.18)	1.59	0.13	0.78
Central Community College	8	466	2,971	$1,318	3,444	60.93	(8.07)	(11.29)	(0.21)	3.68
Dakota County	2	423	5,451	$2,057	8,295	148.88	(14.03)	(12.60)	0.09	6.96
Ferguson House, Lincoln office of NCEA	2	640	5,531	$2,076	8,953	190.78	(6.57)	(9.24)	0.56	7.28
Fremont	4	1,575	24,695	$9,009	28,656	481.79	(60.27)	(24.09)	(3.93)	30.41
Gothenburg	-		0	$720	6,020	155.11	(5.30)	8.68	0.64	3.56
Gretna	5	2,764	26,787	$10,084	32,165	632.14	(76.58)	(27.94)	(1.15)	29.15
Hastings	2	162	1,456	$574	1,207	34.19	(3.77)	(0.62)	(0.04)	1.83
Holdrege	2	132	1,261	$484	1,941	36.67	(3.15)	(2.39)	0.04	1.63
Kearney	8	2,970	27,250	$10,582	40,108	681.61	(67.97)	(66.34)	0.42	34.40
LES	12	2,372	38,297	$14,491	49,265	990.47	(25.67)	(146.90)	2.53	48.00
Lexington	4	1,008	11,749	$4,020	19,024	354.29	(28.95)	(19.76)	0.58	15.21
Lincoln	30	8,163	89,741	$35,434	105,572	2,059.91	(64.82)	(371.58)	5.18	110.74
Lincoln Public Schools	7	756	5,964	$2,636	8,658	123.19	(5.11)	(2.01)	(0.21)	7.42
MCC	15	2,508	27,625	$10,610	32,867	549.39	(85.95)	(40.82)	(1.47)	33.79
Nebraska City	7	2,410	25,457	$10,712	59,326	809.92	(42.55)	30.78	1.59	33.59
Norfolk	2	47	675	$217	1,157	14.40	(1.11)	(11.98)	0.01	0.84
Nebraska Safety Center at UNK	2	50	249	$95	322	5.06	(0.65)	(0.87)	(0.01)	0.31
NP Dodge	3	137	3,190	$1,109	3,627	63.69	(9.56)	(4.68)	(0.22)	3.92
NPPD	23	1,666	21,933	$9,009	31,842	453.09	(18.79)	(7.37)	(0.76)	27.28
Minden	3	49	372	$153	431	7.62	(1.01)	(1.41)	(0.03)	0.46
OPPD	4	4,963	27,890	$9,210	53,965	1,182.66	(82.55)	28.50	3.58	38.17
City of Omaha	22	1,288	16,133	$6,662	19,405	330.03	(43.25)	(59.68)	(0.97)	19.98
Omaha Zoological Society	4	687	5,978	$2,411	6,206	120.36	(16.66)	(8.54)	(0.53)	7.38
Papio-Missouri NRD	2	2,514	24,330	$9,262	29,638	482.37	(77.10)	(36.42)	(1.24)	29.70
Seward	9	1,008	14,016	$4,724	24,004	464.77	(33.93)	(15.69)	1.06	18.42
South Sioux City	11	3,790	47,928	$16,682	82,669	1,586.62	(116.11)	(45.41)	3.63	62.92
UNMC	4	535	5,165	$2,053	5,410	103.91	(14.49)	(7.40)	(0.45)	6.38
UNO	8	3,072	27,254	$10,026	32,931	542.74	(86.24)	(39.40)	(1.20)	33.28
Valley	2	226	1,862	$633	2,986	59.92	(5.70)	(0.16)	0.12	2.42
Wayne	2	164	2,262	$1,889	8,787	64.17	(5.13)	(39.86)	0.25	2.85
Total	236	51,852	543,976	$207,568	789,049	14,416.52	(1,141.31)	(960.12)	9.12	688.12

Table C: Analysis for DC Fast Chargers and all Level 2 Charging Stations.

Commercial Charging Station Type	Number of Charging Ports	Number of Charging Sessions	Energy Usage (kWh)	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
					CO2	CO	SO2	NOx	CH4	VOC
Level 2 Charger	226	49,631	504,085	$191,509	746,279	13,589.22	(1,033.50)	(895.91)	12.74	638.61
DC Fast Charger	10	2221	39,891	$16,059	42,769	827.30	(107.80)	(64.21)	(3.6222)	49.5075
Total	236	51,852	543,976	$207,568	789,049	14,416.52	(1,141.31)	(960.12)	9.12	688.12

Table D: Detail Usage and Benefits for the DC Charging Stations.

Participating Members	Number of Charging Stations	Number of Charging Sessions	Energy Usage (kWh)	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
					CO2	CO	SO2	NOx	CH4	VOC
Ashland (DC)	1	607	7,715	$2,751	10,109	175.31	(24.32)	(8.67)	0.00	9.55
Gretna (DC)	1	801	16,519	$6,505	17,077	332.71	(45.88)	(23.58)	(1.48)	20.41
Aurora (DC)	1	45	1174.973	$501	1,362	24.10	(3.19)	(4.47)	(0.08)	1.46
South Sioux City (DC)	1	173	3,065.57	$1,284	3,554	62.88	(8.33)	(11.65)	(0.22)	3.80
B & R Stores (DC)	3	393	6,841.02	$3,044	3,214	137.64	(17.76)	(10.50)	(1.56)	8.56
Kearney (DC)	2	60	1,773.88	$783	2,057	36.39	(4.82)	(6.74)	(0.13)	2.20
Auburn (DC)	1	142	2,801.33	$1,190	5,397	58.28	(3.50)	1.40	(0.16)	3.53
Total	10	2221	39,891	$16,059	42,769.49	827.30	(107.80)	(64.21)	(3.62)	49.51

Table E: Cumulative Charging Infrastructure Usage and Benefits for the OPPD Rebate Program from Apr`2018 to November 2021.

Commercial Charging Station Type	Number of Charging Ports	Number of Charging Sessions	Energy Usage (kWh)	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
					CO2	CO	SO2	NOx	CH4	VOC
2018	128	10,487	119,050	$49,141	179,364	2,567	(457)	(204)	(3)	159
2019	112	45,921	547,841	214,065	809,407	11,583	(2,063)	(919.2)	(11.7)	715.5
2020	127	48,022	611,578	196,752	762,276	12,464	(1,984)	(939)	(33)	768
Jan`2021	12	5,033	72,011	$24,165	69,934	1456.76	(190.39)	(101)	(7.40)	89.26
Feb`2021	18	5,726	84,955	$31,407	82,573	1720.05	(224.80)	(119.26)	(8.73)	105.39
Mar`2021	28	6,788	87,513	$35,332	84,169	1753.29	(229.14)	(121.56)	(8.90)	107.43
Apr`2021	15	7,079	96,924	$38,303	91,666	1909.46	(249.55)	(132.39)	(9.69)	117.00
May`2021	0	7,203	97,245	$41,570	94,518	1968.86	(257.31)	(136.51)	(10)	120.64
Jun`2021	0	6,929	91,880	$39,056	89,289	1859.95	(243.08)	(128.96)	(9.44)	113.96
Jul`2021	5	6,476	89,288	$39,070	86,784	1807.76	(236.26)	(125.34)	-9.18	110.76
Aug`2021	16	7,038	95,987	$42,187	93,295	1943.40	(253.99)	(134.74)	-9.87	119.08
Sep`2021	18	7,042	95,453	$41,751	92,776	1932.59	-252.57	-134.00	-9.81	118.41
Oct`2021	10	7,875	107,931	$47,961	104,853	2184.15	-285.45	-151.44	-11.09	133.83
Nov`2021	2	7,528	103,520	$48,330	100,617	2095.92	-273.92	-145.32	-10.64	128.42
Total	484	178,892	2,297,632	$889,600	2,743,780.05	47,279.67	(7,207.10)	(3,275.70)	(149.12)	2,907.69

Table F: Cumulative Charging Infrastructure Usage and Benefits for the NPPD Rebate Program from Mar`2018 to November 2021.

Commercial Charging Station Type	Number of Charging Ports	Number of Charging Sessions	Energy Usage (kWh)	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
					CO2	CO	SO2	NOx	CH4	VOC
2018	4	869	3,875	1,504	3,512	79.96	(2.82)	(24.80)	0.37	4.67
2019	6	1,664	8,906	3,449	7,704	182.64	(0.23)	(73.37)	0.78	10.66
2020	20	2,406	31,561	10,762	37,006	649.71	(14.55)	(129.31)	0.75	38.56
Jan`2021	2	441	6,851	$2,401	9,945	141.52	(5.8677)	(2.3034)	(0.2383)	8.5223
Feb`2021	2	413	6,144	$2,375	8,919	126.92	(5.2621)	(2.0657)	(0.2137)	7.6427
Mar`2021	1	613	10,697	$4,467	15,529	220.98	(9.1620)	(3.5967)	(0.3721)	13.3070
Apr`2021	2	640	11,325	$4,686	15,983.28	227.43	(9.4295)	(3.7016)	(0.3830)	13.6955
May`2021	7	748	11,900	$5,053	16,637.09	236.74	(9.8152)	(3.8531)	(0.3987)	14.2558
Jun`2021	4	793	13,219	$5,875	19,190.83	273.08	(11.3218)	(4.4445)	(0.4599)	16.4440
Jul`2021	0	855	14,950	$6,774	21,704.11	308.84	(12.8045)	(5.0266)	(0.5201)	18.5975
Aug`2021	1	967	18,192	$8,283	26,410.16	375.80	(15.5809)	(6.1165)	(0.6329)	22.6300
Sep`2021	2	858	16,899	$7,721	24,533.35	349.10	(14.4737)	(5.6818)	(0.5879)	21.0218
Oct`2021	1	1,012	18,440	$8,559	26,770.51	380.93	(15.7935)	(6.1999)	(0.6415)	22.9387
Nov`2021	3	1,005	19,705	$6,444	19,322.47	274.95	(11.3995)	(4.4750)	(0.4630)	16.5568
Total	55	13,478	194,437	$78,354	253,170	3,828.58	(138.51)	(274.94)	(3.01)	229.50

Table G: Cumulative Charging Infrastructure Usage and Benefits for the Fremont Rebate Program from Aug`2019 to November 2021.

Commercial Charging Station Type	Number of Charging Ports	Number of Charging Sessions	Energy Usage (kWh)	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
					CO2	CO	SO2	NOx	CH4	VOC
2019	4	242	4,635	$1,582	5,177.09	86.94	(11.7985)	(6.1574)	(0.7336)	5.60
2020	1	458	9,795	$2,914	11,195.62	188.15	(24.3160)	(10.9402)	(1.5558)	11.97
Jan`2021	0	29	652	$210	781.71	13.15	(1.5307)	(0.4328)	(0.1044)	0.8160
Feb`2021	0	23	600	$200	671.31	11.30	(1.3145)	(0.3717)	(0.0896)	0.7007
Mar`2021	0	35	632	$250	758.73	12.77	(1.4857)	(0.4201)	(0.1013)	0.7920
Apr`2021	0	43	878	$344	1,052.99	17.72	(2.0620)	(0.5830)	(0.1406)	1.0991
May`2021	0	60	1,212	$502	1,452.66	24.45	(2.8446)	(0.8042)	(0.1939)	1.5163
Jun`2021	0	57	1,252	$515	1,501.38	25.27	(2.9400)	(0.8312)	(0.2004)	1.5672
Jul`2021	0	49	1,070	$453	1,282.25	21.58	(2.5109)	(0.7099)	(0.1712)	1.3384
Aug`2021	0	64	1,511	$644	1,811.71	30.49	(3.5477)	(1.0030)	(0.2419)	1.8911
Sep`2021	0	52	1,199	$508	1,437.75	24.19	(2.8154)	(0.7960)	(0.1919)	1.5007
Oct`2021	0	68	1,526	$657	1,829.51	30.79	(3.5825)	(1.0129)	(0.2442)	1.9097
Nov`2021	0	45	1,048	$475	1,257.22	21.16	(2.4619)	(0.6960)	(0.1678)	1.3123
Total	5	1,225	26,010	$9,255	30,209.9306	507.9466	(63.2104)	(24.7583)	(4.1367)	32.0215

Table H: Summary of Monthly and Cumulative Commercial and Utility/Residential Usage for all Participating Stations.

		Month of November, 2021		Cumulative		Combined Savings	
		Commercial	Residential	Commercial	Residential	Month of November, 2021	Cumulative
Number of Charging Sessions		1,959	5,698	51,852	193,595	7,657	245,447
Energy Usage (in kWh)		24,409	82,960	543,976	2,518,079	107,369	3,062,055
Environmental Benefits: Emissions Reductions (in lbs.)	CO_2	30,651	80,661	789,049	3,027,160	111,313	3,816,209
	CO	500.45	1,611	14,417	51,616	2,112	66,033
	VOC	30.36	98.60	688.12	3,169	129	3,857
Economic Savings		$11,398	$26,776	$207,568	$977,210	38,174	1,184,778

Table I: Summary of Monthly and Cumulative Energy Usage for each individual station.

Community	Station Name	Activation Date	Total Energy Usage	
			Current Month-November (kWh)	Cumulative Since Installation (kWh)
Allen Consolidated Schools	ALLEN SCHOOLS	Jun-16	263.859	12,528
Auburn Board of Public Works	METRO CAFE / STATION 1	Jun-19	64.033	1,572
	METRO CAFE / BWP DC CHARGER	Jan-21	152.549	2,380
	METRO CAFE / BRNVILLE DEPOT	Sep-21	73.619	272
Aurora	DC FAST 1	Jan-21	33.886	1,031
	LEVEL 2	Nov-20		155
Ashland	DOWNTOWN / ACRC QUICK CHAR	Feb-17		7,507
	DOWNTOWN / ACRC PARKING	Feb-17		4,171
Bellevue	1500 Wall Street 2	Oct-14		10,431
	University of Bellevue			0
B & R Stores	RUSS'S MARKET / RUSS MARKET 2	Feb-21	27.86	144
	RUSS'S MARKET / RUSS MARKET 1	Feb-21	169.463	3,196
	RUSS'S MARKET / SUPER SAVER L3	Feb-21	632.196	2,929
	RUSS'S MARKET / SUPER SAVER L2	Feb-21	19.43	145
		Nov-21	0	0
		Nov-21	0	0
Central City	City Hall	Feb-15		304
Central Community College	Columbus RG1		179.556	1,655
	CENTRAL CC / CCC COLUMBUS	Sep-20	8.578	246
	CENTRAL CC / KERNEY CNTR	Jan-21	74.398	471

	CENTRAL CC / CCC - HASTINGS	**Oct-20**	29.669	324
Community	**Station Name**	**Activation Date**	**Total Energy Usage**	
			Current Month-November (kWh)	**Cumulative Since Installation (kWh)**
Dakota County	**COUNTY COURT**	**May-16**	338.251	5,296
Ferguson House, Lincoln office of NCEA	**FERGUSON HOUSE**	**Dec-15**	122.188	5,465
Fremont	**FREMONT MALL 1**	**Aug-18**	876.863	20,393
	DOWNTOWN 1	**Aug-18**	130.854	1,741
Gothenburg				0
Gretna	**OUTLET MALL**	**Jun-16**	62.19	6,833
	GRETNA DC FAST	**Feb-20**	1174.959	15,198
	CITY HALL	**Jun-16**	41.731	3,226
Hastings	**EV CHARGER / HASTINGS MUSEUM**	**Sep-16**	53.709	1,370
Holdrege	**3RD AVE PARKING**	**Nov-15**	209.668	1,122
Kearney	**COK / LEC**	**Sep-20**	74.126	1,926
	COK / CITY HALL	**Jun-16**	175.866	19,667
	COK / YOUNES NORTH	**Apr-21**	189.537	1,275
	COK / YOUNES NORTH2	**Apr-21**	120.884	1,018
	COK / YOUNES SOUTH	**Apr-21**	478.1	2,603

Community	Station Name	Activation Date	Total Energy Usage	
			Current Month-November (kWh)	Cumulative Since Installation (kWh)
LES	HAYMKT GREEN 2 / LES STATION A	Aug-14	554.727	17,723
	HAYMKT GREEN 2 / LES STATION B	Aug-14	230.257	13,445
	HAYMKT GREEN 2 /EAST PRKG #1	May-21	52.916	295
	HAYMKT GREEN 2 /EAST PRKG #2	May-21	176.521	874
	HAYMKT GREEN 2 /EAST PRKG #3	May-21	343.555	1,545
	HAYMKT GREEN 2 /EAST PRKG #4	May-21		103
	HAYMKT GREEN 2 /EAST PRKG	May-21		0
	HAYMKT GREEN 2 / WEST PRKG #1	Jun-21	764.807	3,088
	HAYMKT GREEN 2 / WEST PRKG #2	Jun-21	111.613	295
	HAYMKT GREEN 2 / WEST PRKG #3	Jun-21	13.871	295
	HAYMKT GREEN 2 / WEST PRKG #4	Jun-21	131.981	439

Community	Station Name	Activation Date	Total Energy Usage	
			Current Month-November (kWh)	Cumulative Since Installation (kWh)
Lexington	LEXCHARGE01 / LEXCHARGE02	Feb-15	127.363	3,854
	LEXCHARGE01 / LEX CHARGE 0304	Jan-16	170.34	7,503
Lincoln	CARRIAGE	Dec-16	466.984	2,733
	CENTER	Dec-16	306.076	4,178
	CORNHUSKER	Dec-16	573.237	13,694
	COUNTY LOT	Dec-16	2.122	3,914
	HAYMARKET	Dec-16	230.834	11,359
	LARSON	Dec-16	412.656	12,047
	LUMBER	Dec-16	155.691	11,519
	MARKET PLACE	Feb-18	103.214	3,286
	QUE	Dec-16	387.987	9,860
	UNIVERSITY SQ	Dec-16	774.202	14,706
	GARAGESTATIONS / FLEET 1	Apr-21	175.827	451
	GARAGESTATIONS / HEALTH DEPT	Sep-21	52.296	71
	GARAGESTATIONS / HEALTH DEPT ST2	Sep-21	100.266	221
	GARAGESTATIONS / K ST COMPLEX	Sep-21		57
	GARAGESTATIONS / WASTE WATER STA	Sep-21	183.015	194
Lincoln Public Schools	East HS RG1	Aug-20	89.632	598
	Lincoln HS RG1	Aug-20		424
	LPS Operations RG1	Aug-20	111.443	464
	North Star HS RG1	Aug-20	249.205	2,070
	Northeast HS RG1	Aug-20	24.341	202
	Southeast HS RG1	Aug-20	124.135	722
	Southwest HS RG1	Aug-20	191.263	829
MCC	BLDG 14	Jul-20	0.011	172
	BLDG 20	Jul-20	19.223	294
	EVC	Jan-19	143.538	4,270
	FOC NORTH	Sep-17	53.02	10,068
	FOC SOUTH	Sep-17	459.144	11,338
	MIDDLE LEVEL 2	Jul-21	12.639	21

	NORTH EXPRESS	Jul-21	441.393	1,206
	SOUTH LEVEL 2	Jul-21	28.884	97
Community	Station Name	Activation Date	Total Energy Usage	
			Current Month-November (kWh)	Cumulative Since Installation (kWh)
Nebraska City	DOWN TOWN LOT	Feb-15	360.601	14,403
	CITY HALL	Jan-13	170.767	5,082
	BEST WESTERN	Mar-15	247.801	5,370
	STATION 1	Oct-21	392.66	580
Norfolk	ADMINISTRATION	Apr-21	123.127	675
UNK	NSC RANGE / NSC RANGE 1	Nov-19		222
NP Dodge	NP DODGE / 8601	Sep-20		251
	NP DODGE / 87 DODGE	Oct-19	11.22	2,922
NPPD	NPPD STATION 1 / SCOTTSBLUFF 1	Dec-20	162.163	984
	NPPD STATION 1 / OGALLALA 1	Oct-19		254
	NPPD STATION 1 / NOC 1	Oct-19	3.887	1,840
	NPPD STATION 1 / KOC STATION 1	Dec-19	292.346	955
	NPPD STATION 1 / CGO2	Nov-20	264.057	1,855
	NPPD STATION 1 / CGO SOUTH LOT	Apr-18	103.094	11,032
	NPPD STATION 1 / 1ST AND NORFOLK	Jun-21	232.447	884
	NPPD STATION 1 / HUDDLE HOUSE	Jun-21	108.391	176
	NPPD STATION 1 / HUDDLEHOUSE DC1	Jun-21	243.251	2,091
	NPPD STATION 1 / HUDDLEHOUSE DC2	Jun-21	414.759	577
	1ST NORFOLK DC		460.957	1,313
	NORTH YOC			12
	SOUTH YOC			15
Minden	CITY OF MINDEN / GTW1	Nov-20	10.424	372
OPPD	OPPD ELKHORN / OPPD ELK-2	Jun-16	131.421	10,518
	OPPD ELKHORN / OPPD ELK-1	May-16		14,286

Community	Station Name	Activation Date	Total Energy Usage	
			Current Month-November (kWh)	Cumulative Since Installation (kWh)
City of Omaha	16TH AND HOWARD	Sep-20	489.554	8,717
	OMAHA PARK5	Jun-21	425.773	529
	OMAHA PARK 6	Jun-21	57.449	223
	OMAHA PARK 7	Jun-21	232.805	681
	OMAHA PARK 8	Jun-21	274.46	1,273
	OMAHA PARK 4-1	Jul-21	483.445	1,764
	OMAHA PARK 4-2	Jul-21	556.889	1,700
	OMAHA PARK 1-1	Jul-21		182
	OMAHA PARK 1-2	Jul-21		293
	OMAHA PARK 3-1 (ORG91521)	Oct-21	39.34	69
	OMAHA PARK 3-2	Oct-21	0	0
Omaha Zoological Society	OMAHA ZOO STA 2	Nov-19	131.269	2,788
	MAIN LOT STAT 1	Nov-19	150.026	2,676
Papio-Missouri NRD	NRD 1 / CHALCO HILLS 1	Jan-17	562.644	23,452
Seward	SEWARD / CONCORDIA UNIV.	Mar-13	131.117	8,822
	SEWARD / DOWNTOWN	Mar-15		785
	SEWARD / MUNICIPAL BLD	Feb-15		2,893
	SEWARD / SENIOR HIGH	Mar-13		429
	SEWARD / SEWARD LIBRARY	Mar-13	63.463	2,131
South Sioux City	SO. SIOUX CITY / CITY HALL	Mar-19	29.411	4,763
	FC STATION 1	Nov-20	293.954	2,699
	LAW ENFORCEMENT	Apr-15	468.034	30,085
	LIBRARY	Mar-19	78.755	2,996
	RIVERVIEW WTP	Dec-14	13.869	3,287
	SO. SIOUX CITY / STATION 2	Nov-20	22.405	1,172
UNMC	MAINPLANT	Feb-20	176.928	2,059

	PARK LEAVENWORT	Feb-20	382.215	2,931
UNO	PSG1 / LOT M	Jul-18	284.039	8,126
	PSG1 / SCOTT CAMPUS	Jul-17	364.766	10,737
	PSG1 / SCOTT CAMPUS 2	Apr-18	507.74	5,649
	PSG1 / WEST GARAGE	Jul-18	232.61	2,667
Valley	CITY HALL / VALLEY	May-16	16.515	1,853
Wayne	WAYNE, NE / WAYNE	Sep-13		1,241

Considering that the combined national average for conventional vehicles is 25.1 miles per gallon based on the combined fuel economy average (city and highway) of all the vehicle types (make and model) published in the Fuel Economy Guide for the year 2020, and the combined fuel economy for all electric vehicles is 3.412 miles per kilowatt hour (mi/ kWh) based on the combined fuel economy average (city and highway) of all the electric vehicle types (make and model) in the same report, a general comparison is made using the equation below to generate Table J.

$$Miles\ driven\ based\ on\ \$50 = \frac{50}{\mathbf{0.089038}} * 3.412 = \frac{50}{\mathbf{0.655}} * 25.1 = \ 1916\ \text{miles}$$

Table J: Summary of Yearly Gas and Electricity Prices and the Corresponding Miles Driven.

Year	Gas Price (Gallon)	Electricity Price (kWh)	Conventional Vehicle (CV) (Miles Per Gallon)	Battery Electric Vehicle (Miles Per kWh)	Miles driven based on $50	
					Gas	Electricity
2017	$2.36	0.091333	23.246	3.323	492	2025
2018	$2.62	0.092176	23.312	3.323	444	1802
2019	$2.49	0.092176	23.272	3.323	468	1802
2020	$2.09	0.089038	25.1	3.412	601	1916
2021	$3.10	0.089038	25.1	3.412	405	1916
Parity	$0.655	0.089038	25.1	3.412	1916	1916

Table of Contents

1. Project Description and Summary Savings 19
1.1. Introduction 19
1.2. Existing Stations Summary 22
2. Data Analysis 36
2.1. Summary of Unique User Data (Commercial) 36
2.2. Summary of Unique User Data (Utility/Residential) 40
2.3. Summary of Economic and Environmental Analysis (Commercial and Utility/ Residential) 47
3. Appendix A: Detailed Economic Analysis - Commercial 55
3.1. Introduction 56
3.2. Economic Benefits due to Fuel Type Price Differences 56
3.3. Economic Benefits due to Other Factors Affecting Each Fuel Type 63
3.4. Total Economic Benefits 63
3.5. References 66
4. Appendix B: Detailed Economic Analysis – Utility/Residential 68
4.1. Introduction 69
4.2. Economic Benefits due to Fuel Type Price Differences 69
4.3. Economic Benefits Due to Other Factors Effecting Each Fuel Type 70
4.4. Total Economic Benefits 70
4.5. References 71
5. Appendix C: Detailed Environmental Emissions Data Analysis – Commercial and Utility/Residential 72
5.1. Introduction 73
5.2. Greenhouse Gas Definitions 74
Greenhouse Gas Emissions Summary - Commercial and Utility/Residential 76
5.3. References 85
6. Appendix D. Detailed Greenhouse Gas Calculations 86
6.1. Conventional Vehicle (CV) 86
6.2. Diesel Vehicle (DV) 88
6.3. Compressed Natural Gas Vehicle (CNG) 90
6.4. Flexible Fuel Vehicles (FFVs) – E85 92
6.5. Battery Electric Vehicle (EV) 96
6.5.1. Vehicle Efficiency Calculation 96

6.5.2. Electricity Generation Mix and Emissions Calculations 96

6.6. References 121

7. Appendix E. Detailed Analysis for Charging Stations - Monthly Detailed Data – November 2021 122

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1. Project Description and Summary Savings

1.1. Introduction

The Nebraska Community Energy Alliance (NCEA) was founded in Jan 2014 as an interlocal cooperative agency. Today, it has 37 participating members that span the entire state of Nebraska, as shown in Figure 1 and Table 1.

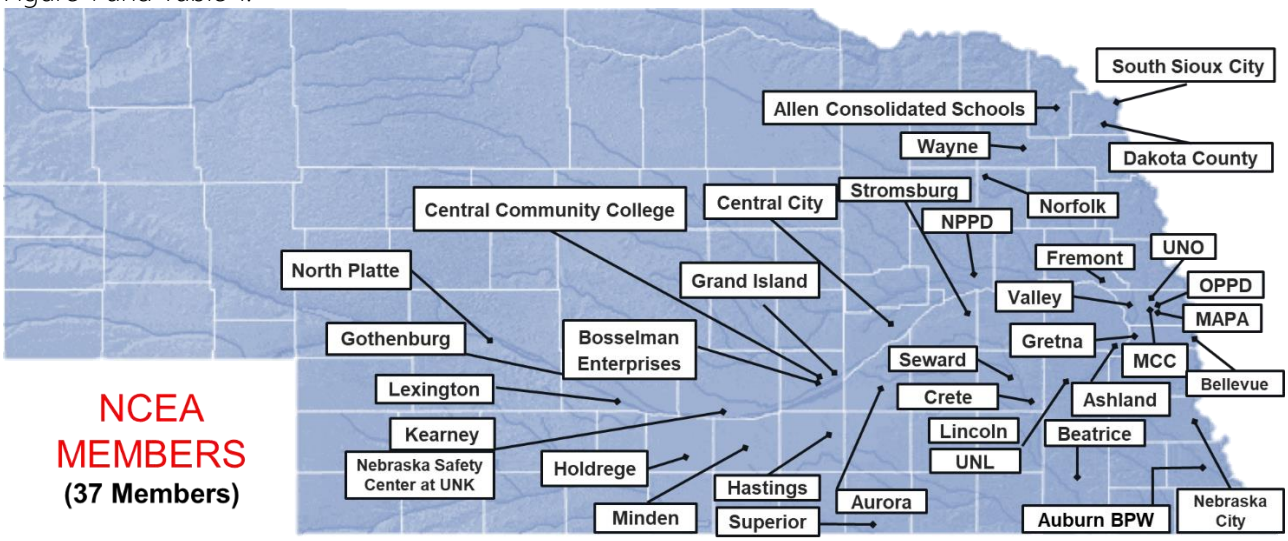

Figure 1: Nebraska Map Showing the 37 NCEA Participating Members.

The mission of the Nebraska Community Energy Alliance (NCEA) is to build and promote advanced technologies for housing and transportation that save energy, reduce CO_2 pollution and cut costs, (http://www.necommunity.energy/mission/). This mission is clearly articulated by Lance Hedquist, city administrator for South Sioux City, founder of NCEA and current member, "*Communities have a choice to simply exist or to lead. Our projects demonstrate leadership and help motivate and excite our citizens.*"

NCEA believes demonstrating the economic and air quality benefits of advanced fuel vehicles at the local level is the best way to accelerate the market in Nebraska. This mission is being achieved in part using grant funding from the Nebraska Environmental Trust (NET) and in compliance with the requirements of the Air Quality funding category as well as NET's mission "to conserve, enhance and restore the natural environments of Nebraska." (http://www.environmentaltrust.org/about/index.html).

Table 1: NCEA Members

NCEA Members (37)

- Allen Consolidated Schools
- Ashland
- Auburn BPW
- Aurora
- Beatrice
- Bellevue
- Bosselman Enterprises
- Central City
- Central Community College(CCC)
- Crete
- Dakota County
- Fremont
- Gothenburg
- Grand Island
- Gretna
- Hastings
- Holdrege
- Kearney
- Lexington
- Lincoln
- Metropolitan Area Planning Agency (MAPA) (includes cities and counties in Washington, Douglas, and Sarpy counties, including the City of Omaha)
- Metropolitan Community College
- Minden
- Nebraska City
- Nebraska Safety Center at UNK
- Nebraska Public Power District
- Norfolk
- North Platte
- Omaha Public Power District (OPPD)
- Seward
- South Sioux City
- Stromsburg
- Superior
- University of Nebraska at Omaha
- University of Nebraska-Lincoln
- Valley
- Wayne

NCEA is in the sixth phase of building a statewide charging infrastructure for electrified transportation through the award of its fifth grant from NET. When completed, an estimated total of 55 electric vehicles (EVs), nine compressed natural gas vehicles (CNG), one refueling CNG station, 92 Level-2 ChargePoint™ networked charging stations, and 7 DC fast charging stations will be deployed across Nebraska. In addition, in partnering with Omaha Public Power District (OPPD), Nebraska Public Power District (NPPD), and Fremont Municipal Utility, as part of a rebate program, an additional 293 EVs, 670 ChargePoint™ Home charging stations and 60 ChargePoint™ networked charging stations will be deployed. Table 2 shows the participating members and their involvement.

Table 2: Summary of Involvement of Participating Members over All Grant Cycles.

Participating Members	Electric Vehicle	CNG Vehicles	Charging Stations	DC Fast Charger
Allen Consolidated Schools	**1**	**-**	**1**	
Ashland	**-**	**-**	**1**	**1**
Auburn Department of Public Works	**-**	**-**	**2**	**1**
Aurora	**-**	**-**	**4**	
Beatrice	**1**		**1**	
Bellevue	**2**	**-**	**4**	
Central City	**1**	**-**	**1**	
Central Community College	**4**		**4**	
Dakota County	**1**	**-**	**1**	
Ferguson House (Lincoln)	**-**	**-**	**1**	
Fremont	**5**	**-**	**2**	
Fremont Municipal Utility Rebate Program	**11**	**-**	**10 - ChargePoint Home™**	
Gothenburg	**1**	**-**	**-**	
Gretna	**1**	**-**	**2**	**1**
Hastings	**3**	**-**	**1**	
Holdrege	**-**	**-**	**1**	
Kearney	**3**	**-**	**5**	
Lexington	**2**	**-**	**2**	
Lincoln	**1**	**-**	**22**	
Metro Community College	**1**	**-**	**2**	
Minden	**1**		**1**	
Nebraska City	**1**	**3 CNGs and one refueling station**	**2**	
Norfolk	**2**		**2**	
NPPD	**8**	**-**	**15**	**4**
NPPD Rebate Program	**57**	**-**	**110 - ChargePoint Home™**	
OPPD	**3**	**-**	**8**	
OPPD Rebate Program	**225**	**-**	**550 - ChargePoint Home™** (60) Workplace Charging stations	
Seward	**2**	**-**	**2**	
South Sioux City	**4 + 4 battery replacement** 1-Zero Motorcycle	**2**	**3**	
UNK	**1**	**-**	**1**	
Valley	**1**	**-**	**1**	
Wayne	**1**	**4**	**-**	
TOTAL	**348 (293 Via Utility Rebate programs & counting 4 battery replacements)**	**9**	**152 Commercial (60 via rebate to businesses) & 670 Residential**	**7**

1.2. Existing Stations Summary

Figure 2 shows the locations of the commercial ChargePoint Stations in Nebraska. Table 3 provides detailed information on the location of each existing ChargePoint™ charging station installed as part of all grant phases along with the rate structure. Furthermore, the Table shows additional stations that NCEA and the research team access for data analysis. Finally, the Table provides the net revenue from charging (current month and all time) based on the rate structure.

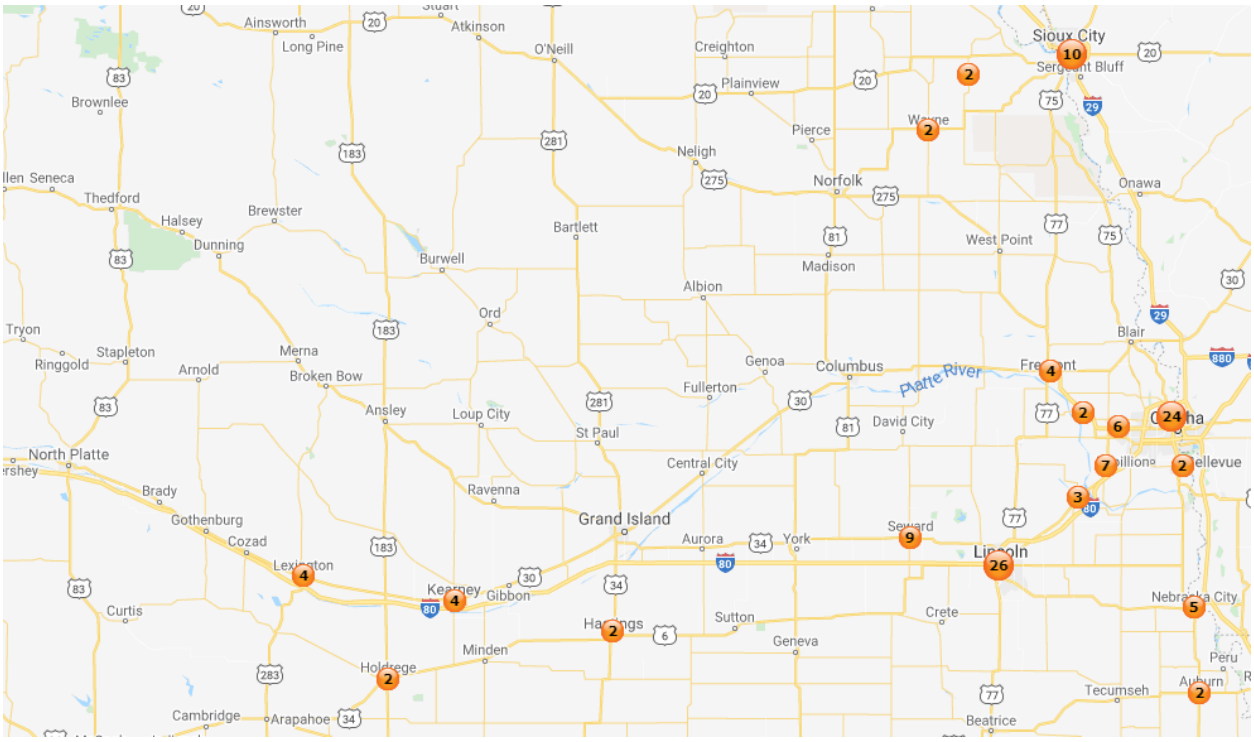

Figure 2: ChargePoint Charging Station Locations Across Nebraska, Numbers Shown Indicate Number of Charging Station ports.

Table 3: Charging Station Location and Rate Structure for All Existing Participating Charging Stations.

Charging Station Location	Address	Rate Structure	Net Revenue** for November 2021 (Since Jan 2013)	Number of Stations	Number of Ports	Grant Phase
Allen Consolidated Schools	126 E 5th Street, Allen, NE – 68710	Free For All	$0 ($0)	1	2	II
Auburn Board of Public Works	817 Central Ave, Auburn, NE 68305	Free For All	$ 22.58 ($314.5)	1	2	IV
	125 South 1st Street, Brownville, NE			1	2	
	830 Central Ave, Auburn, NE	All Days $5.00/hr Station Parking While charging Free When not charging $2.00/hr After 15 mins		1	1	
Aurora	1118 N St, Aurora, NE	**Level 2 stations** Energy Fee : All Days $1.00/hr Min :$2.00 Max: $4.00	$8 ($370.53)	2	3	IV V
	1118 N St, Aurora, NE	**DC stations** Energy Fee : All Days $0.07/min Min :$4.00 Max: $8.00				
Ashland	DC Fast Charger: S 13th St, Ashland, NE 68003	Energy Fee: $8.00/hr (Min: $4.00, Max: $8.00)	$0 ($2,863.74)	2	3	II
	Level 2 Station: S 13th St, Ashland, NE 68003	Flat Fee: $1.00				
Bellevue	North End of the 1500 Wall Street Building, Wall St, Bellevue, NE 68005	Free For All	$0 ($0)	1	2	I
B & R Stores	840 Fallbrook Blvd, Lincoln, Nebraska 68521, United States	$0.05/min	$323.16 ($2,788.83)	1	2	
	840 Fallbrook Blvd, Lincoln, Nebraska 68521, United States	$0.20/min		1	1	

	4400 S 33rd Ct, Lincoln, Nebraska 68516, United States	$0.05/min		1	2	
	4400 S 33rd Ct, Lincoln, Nebraska 68516, United States	$0.20/min		1	1	
	13901 Guildford St, Waverly, Nebraska 68462, United States	$0.1/min		1	1	
	13901 Guildford St, Waverly, Nebraska 68462, United States	$0. 5/hr		1	2	
Charging Station Location	**Address**	**Rate Structure**	**Net Revenue** for November 2021 (Since Jan 2013)**	**Number of Stations**	**Number of Ports**	**Grant Phase**
Central City	1515 17th St, Central City, NE 68826. Located 1 block south and 1 block east of the intersection of Highway 14 and 30 **(NO LONGER PRESENT IN DATABASE)**	Free For All	$0 **($0)**	1 (Unavailable)	2 (Unavailable)	I
Central Community College	550 S Technical Blvd, Hastings, NE	All Days $1.00/hr Min / Max Fees Min $2.00 Max $20.00 per session	$21.01 **($320.95)**	1	2	
	4500 63rd St, Columbus, NE			1	2	
	3134 US-34, Grand Island, NE			1	2	
	1215 30th Avenue, Kearney, NE			1	2	

Dakota County	1600-1698 Myrtle St, Dakota City, NE 68731. Located on North parking lot of the County Courthouse near the corner of 16th and Maple Street in Dakota City	Flat Fee: $1.00	$19 **($240)**	1	2	II
Charging Station Location	**Address**	**Rate Structure**	**Net Revenue** for November 2021 (Since Jan 2013)**	**Number of Stations**	**Number of Ports**	**Grant Phase**
Ferguson House, Lincoln office of **NCEA**	700 S 16th St, Lincoln, NE 68508. Located at parking lot of Ferguson House	First 4 hrs: $0.25/hr Thereafter: $1.00/hr Minimum $1.00	$13.49 **($735.46)**	1	2	I
Fremont	Station 1: 858 E 23rd Street, Fremont, NE 68025 Station 2: 135 E 5th St, Fremont, NE 68025	Station Parking: Free for 4hrs, Thereafter: $1.00/hr Maximum: $8.00	$71.34 **($858.47)**	2	4	III
Gretna	Station 1: 204 N Mc Kenna Ave, Gretna, NE 68028 South side of building to the rear Station 2: 21041 Nebraska Crossing Drive, Gretna, NE 68028. End of Nebraska Crossing Drive take a right, this is east of Nebraska Crossing Buildings Station 3: 21417 Nebraska Crossing Drive, Gretna, NE 68028	**Level 2 stations** Energy Fee : All Days $0.50/hr Station Parking: Free for 4hrs, Thereafter: $4.00/hr Min :$1.00 Max: $50.00 **DC stations** Energy Fee : All Days $4.00/hr Station Parking: Free for 4hrs, Thereafter: $8.00/hr Min :$2.00 Max: $40.00	$216.76 **($2,407.2)**	3	5	(2) II (1) IV

Hastings	1330 N Burlington Ave, Hastings, NE 68901. Located at South of the Museum in the south parking lot, next to the brick well house	$1.00/hr Minimum: $2.00 Maximum: $4.00	$15.54 **($336.41)**	1	2	II
Charging Station Location	**Address**	**Rate Structure**	**Net Revenue** for November 2021 (Since Jan 2013)**	**Number of Stations**	**Number of Ports**	**Grant Phase**
Holdrege	749-799 Railroad St, Holdrege, NE 68949. Located in the 3rd Ave and East Ave parking lot on the west side	Free For All	$0 **($0)**	1	2	I
Kearney	Station 1 : 1-99 E 23rd St, Kearney, NE 68847. Located at Public parking lot north of City Hall	All Days $1.00/hr Station Parking While charging Free When not charging $0.50/hr After 1 hr(s) grace period	$218.80 **($1,454.64)**	1	2	II
	Station 2 : 2025 A Avenue, Kearney, NE			1	2	V
	610 Talmadge St, Kearney, NE			1	2	
	911 W Talmadge Rd, Kearney, Nebraska 68845, United States	All Days $017/MIN Station Parking While charging Free When not charging $0.50/hr After 1 hr(s) grace 26eriod Min / Max Fees Min$2.50		1	1	
	911 W Talmadge Rd, Kearney, Nebraska 68845, United States			1	1	
LES	601 P St, Lincoln, NE 68501. Green 2 Garage located on NE corner of Pinnacle Arena Dr and P Streets. Located on level ONE. Use the south entrance off of P Street.	Free For LES Fleet. All others: $1.00/4 hrs	$139.15 **($4,384.4)**	2	4	

	9445 Rokeby Rd, Lincoln, Nebraska 68526, United States	Free For all		5	5	
Charging Station Location	**Address**	**Rate Structure**	**Net Revenue** for November 2021 (Since Jan 2013)**	**Number of Stations**	**Number of Ports**	**Grant Phase**
Lexington	Station 1: 652-698 N Jefferson St, Lexington, NE 68850. Located in the alley between 6th and 7th, toward the west end of the block (near Jefferson Street)	Free for Lexington Fleet. All others: $0.10/kWh. Minimum: $0.40 Maximum: $4.00	$18.70 **($681.67)**	**1**	**2**	I
	Station 2: 2607 Plum Creek Pkwy, Lexington, NE 68850. Located on the east side of Holiday Inn Express			**1**	**2**	
Lincoln	Station 1 : 848 Q St, Lincoln, NE 68508. Located in Garage, near R St entrance	Free for City Council Fleet at County Lot ONLY. All others: $0.25/hr for first 4 hours, then $1.00/hr Minimum: $1.00 Maximum: $12.00	$547.88 **($12,786.95)**	10	20	II
	Station 2 : 925 Q St, Lincoln, NE 68508. Located in Garage, near main entrance off 10th Street between "P" and "Q" Street.					
	Station 3: 111 Q street, Lincoln, Nebraska 68508, United States. Located in Garage, near main exit					

	Station 4: 1317 Q St, Lincoln, Nebraska 68508, United States. Located in Garage, near main entrance 2nd level.					
	Station 5: 101 N 14th St, Lincoln, Nebraska 68508, United States. Located in Garage, next to elevator					
	Station 6: 1120 N St, Lincoln, Nebraska 68508, United States. Located in Garage, near West entrance from 11th St.					
	Station 7: 700 N St, Lincoln, Nebraska 68508, United States. Located in Garage, near South entrance					
	Station 8: 1220 L Street, Lincoln, Nebraska 68508, United States. Located in Garage, 2nd floor near elevator					
	Station 9: 1128 L St, Lincoln, Nebraska 68508, United States. Located in Garage, near South entrance					
	Station 10: 921 L St, Lincoln, Nebraska 68508, United States. Located in Garage, near South stairs					
	Station 11 : 100 Oakcreek Dr, Lincoln, NE			1	2	

Charging Station Location	Address	Rate Structure	Net Revenue** for November 2021 (Since Jan 2013)	Number of Stations	Number of Ports	Grant Phase
Lincoln Public Schools	Station 1 :5801 N 33rd St, Lincoln, Nebraska 68504, United States	Station parking $0.25/hr for first 4 hours, then $1.00/hr	$57.02 **($392.71)**	7	7	
	Station 2: 6345 Madison Ave, Lincoln, Nebraska 68507, United States					
	Station 3: 2229 J St, Lincoln, Nebraska 68510, United States					
	Station 4: 800 S 24th St, Lincoln, NE					
	Station 5: 1000 S 70th St, Lincoln, NE					
	Station 6: 2930 S 37th St, Lincoln, NE					
	Station 7: 7001 S 14th St, Lincoln, NE					
MCC	Station 1&2: 3035 Saratoga St, Omaha, NE	Free For All	$0 **($0)**	2	4	
	Station 3: Cumberland Road, Omaha, NE			1	2	III
	Station 4: 5370 N. 30th St., Omaha, NE			**1**	**2**	III
	Station 5: Bldg 14 Middle Rd, Omaha, NE			**1**	**2**	III
	Station 6: 2900 Edward Babe Gomez Ave					
	Station 7: 2900 Edward Babe Gomez Ave					

	Station 8: 2900 Edward Babe Gomez Ave					
Charging Station Location	**Address**	**Rate Structure**	**Net Revenue** for November 2021 (Since Jan 2013)**	**Number of Stations**	**Number of Ports**	**Grant Phase**
Nebraska City	Station 1: 1321 Central Ave, Nebraska City, NE 68410	Free For All	$0 **($0)**	1	2	
	Station 2: 724 Central Ave, Nebraska City, NE 68410 Located at Downtown on the West side of the parking lot North of Central Avenue between 7th and 8th Street			2	3	I
	Station 3: 2515 S 11th St, Nebraska City, NE 68410 Located on the east end of the Best Western parking lot					
NORFOLK	309 N 5th St	Station parking free for first 4 hours, then $1.00/hr	$2 **($52.95)**			
Nebraska Safety Center at UNK	Station 1 and 2: 3035 Saratoga St, Omaha, NE 68111 South parking lot of CASC building 23 on MCC Campus.	FREE FOR ALL	$0 **($0)**	2	4	IV
NP Dodge	Station 1 : 8701 W Dodge Rd, Omaha, Nebraska 68114, United States		$20.17 **($192.51)**	1	1	

	Station 2 : 8601 West Dodge Road, Omaha, Nebraska 68114, United States			1	2	IV
Charging Station Location	**Address**	**Rate Structure**	**Net Revenue** for November 2021 (Since Jan 2013)**	**Number of Stations**	**Number of Ports**	**Grant Phase**
NPPD	Station 1 : 1200 S Chestnut St, Norfolk, Nebraska 68701, United States	Station Parking First 4 hr $0.50/hr Thereaftr $1.00/hr Min / Max Fees Min $2.00	$314.08 **($3,388.6)**	1	2	V
	Station 2 : 414 15th St, Columbus, Nebraska 68601, United States			1	2	
	Station 3: 1414 15th St, Columbus, Nebraska 68601, United States			1	2	
	Station 4 : 900 4th Ave, Kearney, Nebraska 68845, United States			1	2	
	Station 5 : 300 S Clarice Rd, Ogallala, Nebraska 69153, United States			1	2	
	Station 6 : 515 1st Ave, Scottsbluff, Nebraska 69361, United States			1	2	
Minden	325 N Colorado Ave, Minden, Nebraska 68959, United States	Free For All	$0 **($0)**	1	2	V
OPPD	Old Lincoln Hwy, Elkhorn, NE 68022. Station 1 Located on the west side of the transportation department parking stalls located directly south of the transportation garage. Station 2	Free For All	$0 **($0)**	2	4	II

	Located on the east side of transportation department parking stalls located directly south of transportation department garage					
Charging Station Location	**Address**	**Rate Structure**	**Net Revenue** for November 2021 (Since Jan 2013)**	**Number of Stations**	**Number of Ports**	**Grant Phase**
City of Omaha	Station 1 : 444 S 16th St, Omaha, Nebraska 68102, United States	$0.25 per hour for first 4 hours, then $2 per hour	$340.38 **($1,322.11)**	2	4	**IV**
	Station 2 : 321 N 17th St					
	Station 3 : 100 N 15th St					
	Station 4 : 1215 Capitol Ave					
	Station 5 : 1011 Jackson St					
	Station 6 : 1011 Jackson St.					
	Station 7 : 1506 Douglas St					
	Station 8 : 1506 Douglas St					
	Station 9 : 250N S 19th St					
Omaha Henry Doorly Zoo	Station 1 and 2: 3701 S 10th St , Omaha, NE 68107 South parking lot of CASC	$2 per hour for first 3 hours, then $3.5 per hour	$121.42 **($2,907.6)**	**2**	**4**	**IV**

	building 23 on MCC Campus.					
Charging Station Location	**Address**	**Rate Structure**	**Net Revenue** for November 2021 (Since Jan 2013)**	**Number of Stations**	**Number of Ports**	**Grant Phase**
Papio-Missouri NRD	Station 1: Chalco Hills Recreation Area 8901 S 154th St, Omaha, NE 68138	Free For All	$0 **($0)**	1	2	
Seward	Station 1: 532 Northern Heights Drive, Seward, NE 68434. Located at Southeast Corner of High School East Parking Lot	Free For Connected Drivers. Others: $2.00/session Flat Fee	$10 **($996)**	3 (1 Unavailable)	6 (2 Unavailable)	
	Station 2: 700 E Hillcrest Dr, Seward, NE 68434. Located at Northeast Corner of Walz Field House Parking Lot					
	Station 3: 233 S. 5th St., Seward, NE 68434. Located in Southwest Corner of West Library Parking Lot					
	Station 4: 546 Jackson Ave, Seward, NE 68434. 546 Jackson Ave, Seward, NE 68434			2	3	1

	Station 5: 142 N 7th St, Seward, NE 68434. Located on the North West Corner of the Municipal Building					
South Sioux City	Station 1: 701 W 29th St, South Sioux City, NE 68776	**Level 2 stations** Free For All **DC stations** All Days $0.07/min	$34.65 **($1,067.45)**	5	11	I
	Station 2: 1615 1st Ave, South Sioux City, NE 68776					
	Station 3: Riverview Dr, South Sioux City, NE 68776					
	Station 4: 2121 Dakota Avenue, South Sioux City, NE 68776					
	Station 5: 2501 Cornhusker Dr, South Sioux City, Nebraska 68776, United States					
University of Nebraska Medical Center (UNMC)	Station 1: 802 S 60th St, Omaha, NE 68106	$0.50 per hour for first 4 hours, then $3 per hour	$100.73 **($881.69)**	1	2	IV
	Station 2: 668 S 41th St, Omaha, NE 68105			1	2	IV
UNO	Stations 1&2: 1010 S 67th St, Omaha, NE 68106. Just to the south, inside the west entrance on the east wall of the parking garage.	$0.12/hr for 4 hrs. Thereafter, $3.00/hr. Minimum: $0.50 Maximum: $50.00	$115.72 **($2,748.24)**	4	8	
	Station 3: 6505 University Dr S, Omaha, NE 68182. Located in Lot M					

	Station 4: University Dr S, Omaha, NE 68132. Located in West Garage					
Valley	203 N Spruce St, Valley, NE 68064	$0.25/hr. Minimum: $1.00 Maximum: $1.00 for every 4 hrs	$1 **($114.76)**	1	2	II
Wayne	W 3rd St, Wayne, NE 68787. Located in parking lot along the south wall of garage behind City Hall	Flat Fee: $1.00	$0 **($0)**	1	2	
**** Net revenue = Gross revenue – Flex Billing Service Fee**			**Total** $2,752.58 **($44,850.54)**			

2. Data Analysis

In collaboration with the Durham School of Architectural Engineering and Construction (DSAEC) at the University of Nebraska-Lincoln, data is collected, processed, and analyzed to document the economic and environmental benefits of utilizing existing charging stations infrastructure throughout Nebraska. More information is available at the project's main website (http://necommunity.energy). The following sections provide findings and trends pertaining to the EV charging infrastructure usage and savings/benefits.

Regardless of the period, the economic and environmental benefits for each community and the overall benefits for the state of Nebraska highlight the impact these projects are having on improving our own environment and economic well-being.

2.1. Summary of Unique User Data (Commercial)

This section provides a summary of the number of unique users for each public ChargePoint charging station, the research team has access to, and for each NCEA participating member for the month of November 2021 and since installation (see Table 4). If a user uses a single station or multiple stations multiple times in a given month, he/she will only be counted once during that entire month. Once a new month starts, unique user counting will reset.

Table 4 summarizes the cumulative yearly unique user data in terms of the number of unique drivers and charging sessions, as well as the energy usage, since the start of the data collection from Apr`2013 to 2019 and then monthly for current year.

Table 4: Summary of Unique User Data, Charging Sessions and Energy Usage.

Year	Number of Unique Users	No of Charging Sessions	Energy Usage (kWh)
2013	19	618	3,410
2014	45	1,003	4,940
2015	97	1,962	14,114
2016	211	2,825	23,871
2017	427	4,361	34,715
2018	756	7,148	61,136
2019	1,137	9,471	108,238
2020	1,250	7,228	88,426
2021 (YTD)			
Jan 2021	213	560	7,520
Feb 2021	176	528	7,504
Mar 2021	330	994	11,529
Apr 2021	395	1,161	14,632
May 2021	477	1299	15,546
Jun 2021	627	1,569	17,820
Jul 2021	818	1,666	19,970
Aug 2021	810	1,811	22,840
Sep 2021	748	1,850	22,393
Oct 2021	818	1,973	24,585
Nov 2021	753	1,959	24,409

Table 5, shows the monthly summary of the same categories for the month of November 2021. The summary includes the breakdown of the obtained data according to each participating station.

Table 5: Unique User and Energy Information for November 2021.

Charging Station Location	Number of Unique Users in November 2021	Number of Charging Sessions	Energy Usage (kWh)
Allen Consolidated Schools	1	20	264
Auburn Board of Public Works	17	22	290.202
Aurora	2	2	33.89
Ashland	0	0	0
Bellevue	0	0	0
B & R Stores	38	68	849
Central City*			0.00
Central Community College	11	42	300.67
Dakota County	1	15	338
Ferguson House, Lincoln office of NCEA	2	5	122
Fremont	22	58	1,008
Gothenburg			0.00
Gretna	53	93	1,279
Hastings	6	7	54
Holdrege	3	6	172.335
Kearney	35	70	1,039
LES	108	127	2,378
Lexington	10	22	298
Lincoln	114	345	3,911
Lincoln Public Schools	32	89	784
MCC	30	103	1,158
Nebraska City	30	95	1,163
Norfolk	2	5	123
Nebraska Safety Center at UNK	0	0	0
NP Dodge	3	3	11.22
NPPD	71	133	2,238.44
Minden	3	3	10.43
OPPD	4	12	131
City of Omaha	92	258	2,560
Omaha Zoological Society	27	31	281.296
Papio-Missouri NRD	29	70	563
Seward	6	18	195
South Sioux City	18	61	906
UNMC	23	58	559.144
UNO	28	117	1,389
Valley	1	1	0
Wayne	0	0	0
Total	**753**	1,959	24,409

Total number of available charging ports: 236, (228 ports are active, 4 ports are inactive in Bellevue , 2 ports are inactive in Central City, 2 ports need service in Seward, 2 ports need service in Wayne, 2 ports need service in NP Dodge, and 2 ports need service in Ashland).
Charging station locations with "0" numbers indicate no reporting during this month.

Figures 3, 4, and 5 show charging infrastructure installation and usage trends over the period of data collection (since Jan 2013).

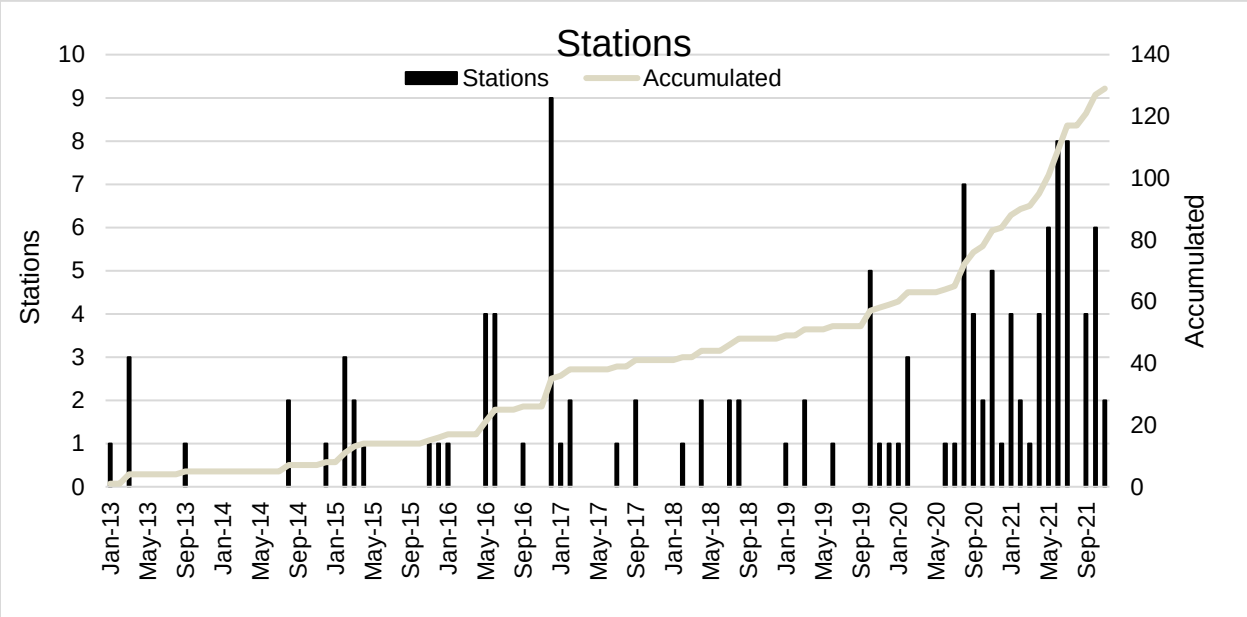

Figure 3: Number of Charging Stations Installed per Month Since Jan` 2013.

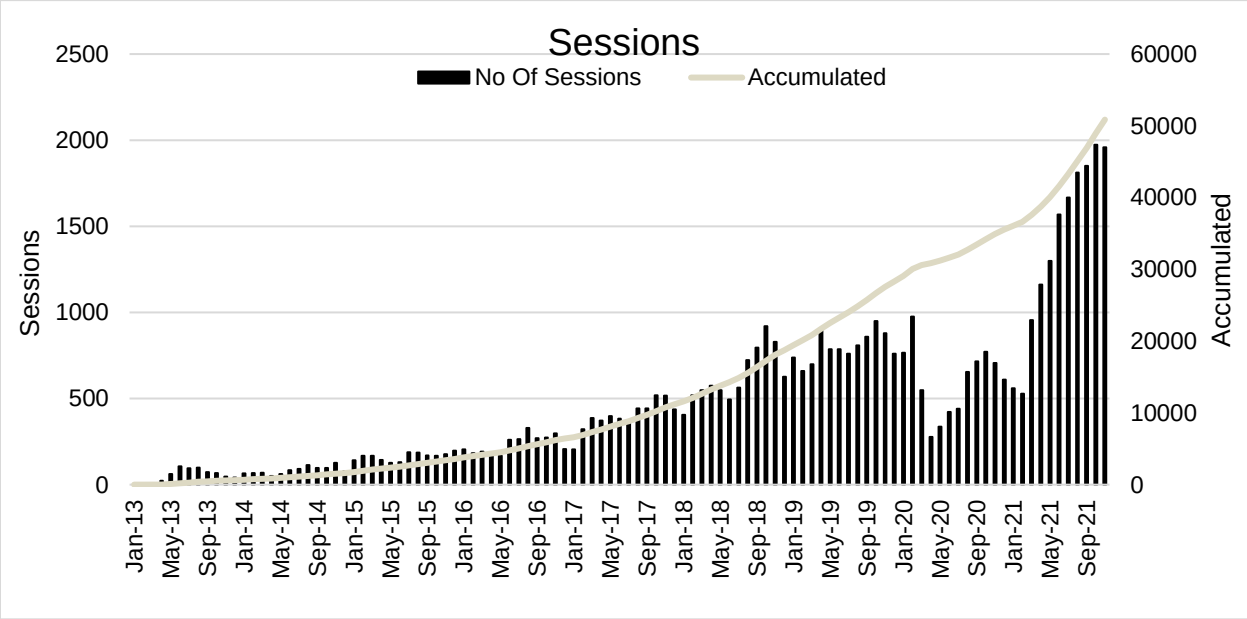

Figure 4: Number of Charging Sessions per Month Since Jan` 2013.

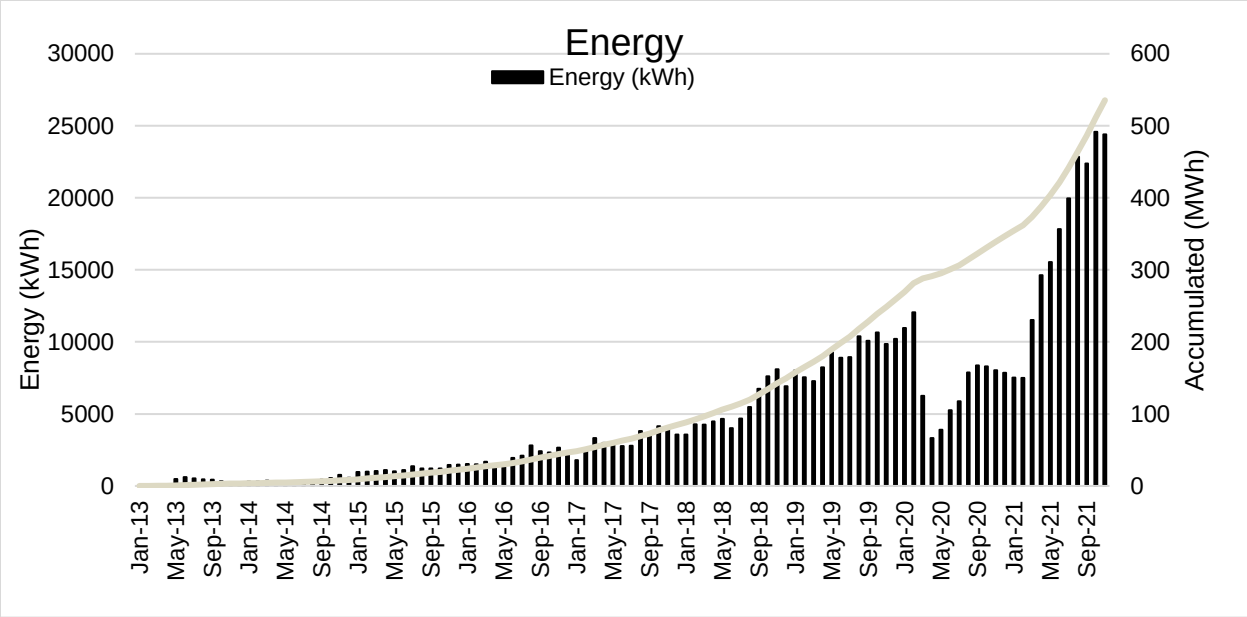

Figure 5: Energy Usage per Month Since Jan` 2013.

2.2. Summary of Unique User Data (Utility/Residential)

This section focuses on the utility rebate programs.

- OPPD Rebate Program

Table 6a shows the charging infrastructure usage summary for the data obtained since the inception of the rebate program for OPPD in Apr 2018. Cumulative Number of Installed Stations might vary from month to month because of the number of stations that lose connection to the network.

Table 6a: Summary of Installed OPPD Residential Charging Stations and Energy Usage per Month Since Apr` 2018.

	Number of Installed Stations Each Month	Cumulative Number of Installed Stations	Number of Charging Sessions	Energy Usage (kWh)
2018 Total	-	**126**	**10,487**	**119,049**
2019 Total	-	**236**	**45,921**	**547,841**
2020 Total	-	**368**	**48,022**	**611,576**
Jan`2021	12	372	5,033	75,049
Feb`2021	18	390	5,726	86,290
Mar`2021	28	418	6,689	87,513
Apr`2021	15	433	7,079	96,924
May`2021	0	433	7,203	97,245
Jun`2021	0	433	6,929	91,880
Jul`2021	5	438	6,476	89,288
Aug`2021	16	454	7,038	95,987
Sep`2021	18	472	7,042	95,453.40
Oct`2021	10	482	7,875	107,931
Nov`2021	2	484	7,528	103,520
Total		**484**	**178,892**	**2,297,632**

The data shown in Table 6a is presented in Figures 6a, 7a, and 8a. Figure 6a shows the number of charging infrastructure installed since the inception of the rebate program as well as the cumulative number of charging stations; Figure 7a and Figure 8a show the trends of charging sessions and energy usage respectively, over the same time period.

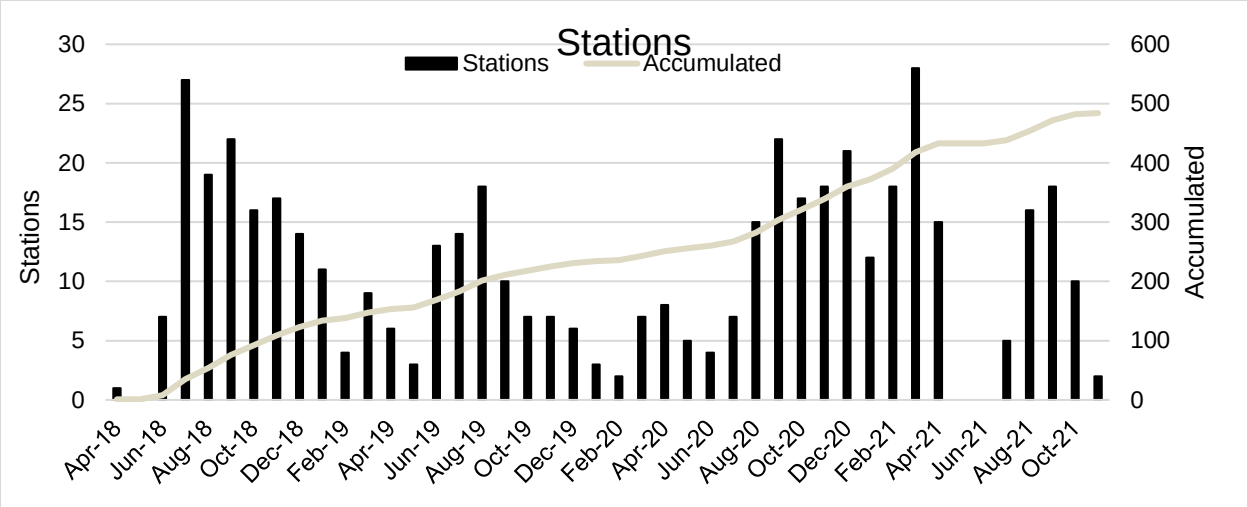

Figure 6a: Number of Charging Stations Installed per Month Since Apr 2018.

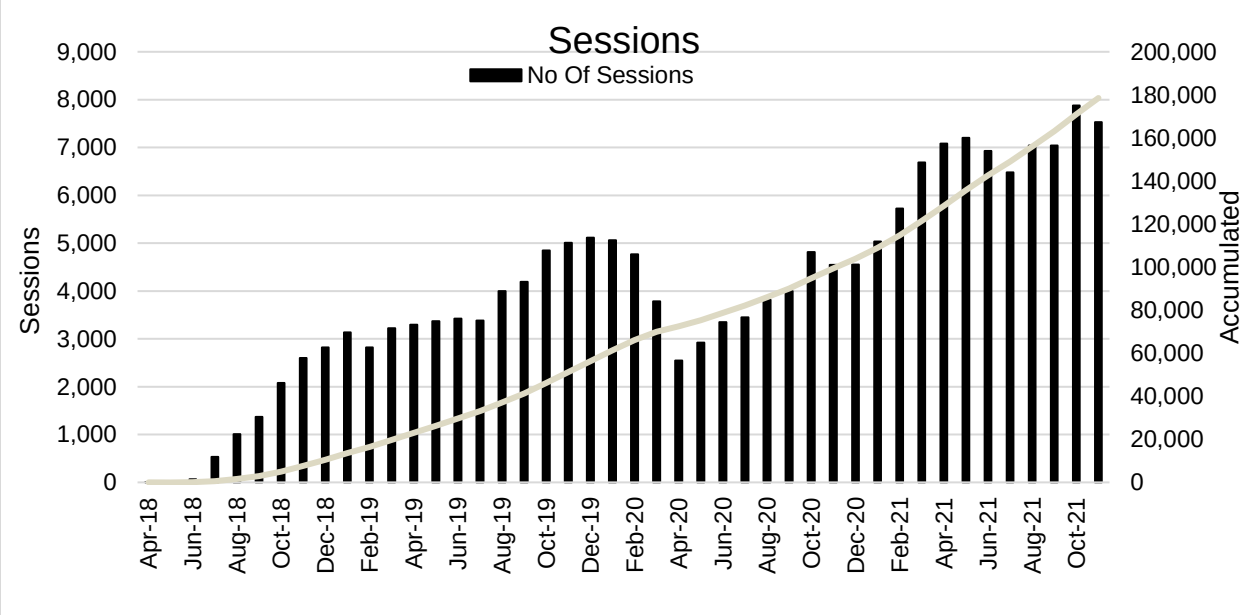

Figure 7a: Number of Charging Sessions per Month Since Apr 2018.

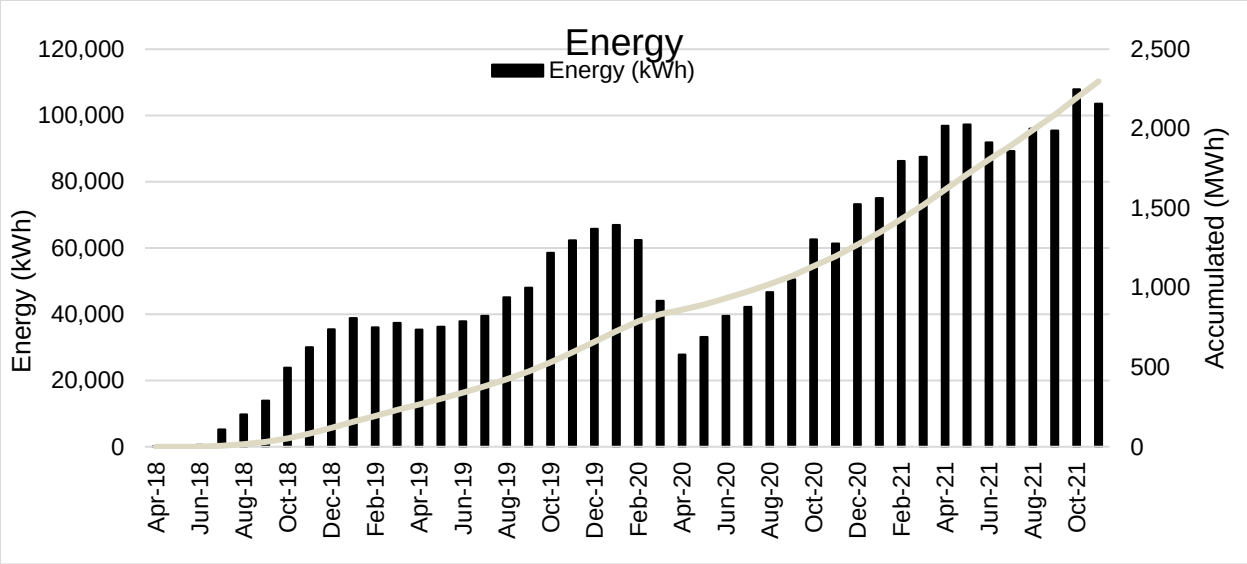

Figure 8a: Energy Usage per Month Since Apr 2018.

- NPPD Rebate Program

Table 6B shows the charging infrastructure usage summary for the data obtained since the inception of the rebate program for NPPD in Mar 2018. Cumulative Number of Installed Stations might vary from month to month because of the number of stations that lose connection to the network.

Table 6b: Summary of Installed NPPD Residential Charging Stations and Energy Usage per Month Since Mar` 2018.

	Number of Installed Stations Each Month	Cumulative Number of Installed Stations	Number of Charging Sessions	Energy Usage (kWh)
2018 Total	-	**4**	869	3875.868
2019 Total	-	**6**	1,664	8,906
2020 Total	-	**20**	2,406	31,561
Jan`2021	**2**	**32**	441	6,851
Feb`2021	**2**	**34**	413	6,144
Mar`2021	**1**	**35**	613	10,697
Apr`2021	**2**	**37**	640	11,325
May`2021	**7**	**44**	748	11,899.9
Jun`2021	**4**	**48**	793	13,219
Jul`2021	**0**	**48**	855	14,950
Aug`2021	**1**	**49**	967	18,192
Sep`2021	**2**	**51**	858	16,899
Oct`2021	**1**	**52**	1,012	18,440
Nov`2021	**3**	**55**	1,005	19,705
Total		**55**	**13,478**	**194,437**

The data shown in Table 6b is presented in Figures 6b ,7b, and 8b. Figure 6b shows the number of charging infrastructure installed since the inception of the rebate program as well as the cumulative number of charging stations; Figure 7b and Figure 8b show the trends of charging sessions and energy usage respectively, over the same time period.

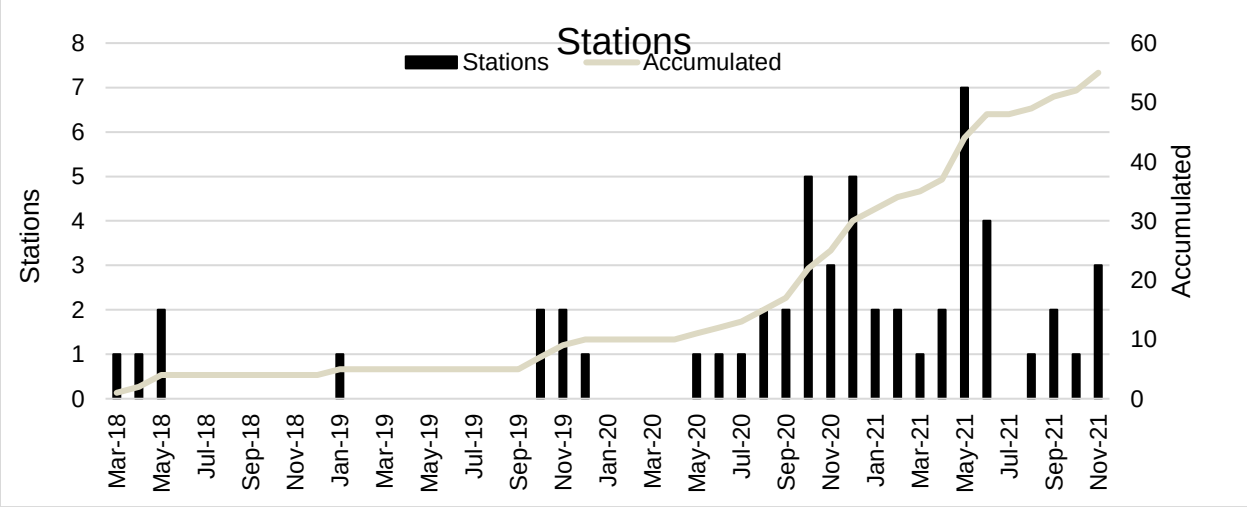

Figure 6b: Number of Charging Stations Installed per Month Since Mar 2018.

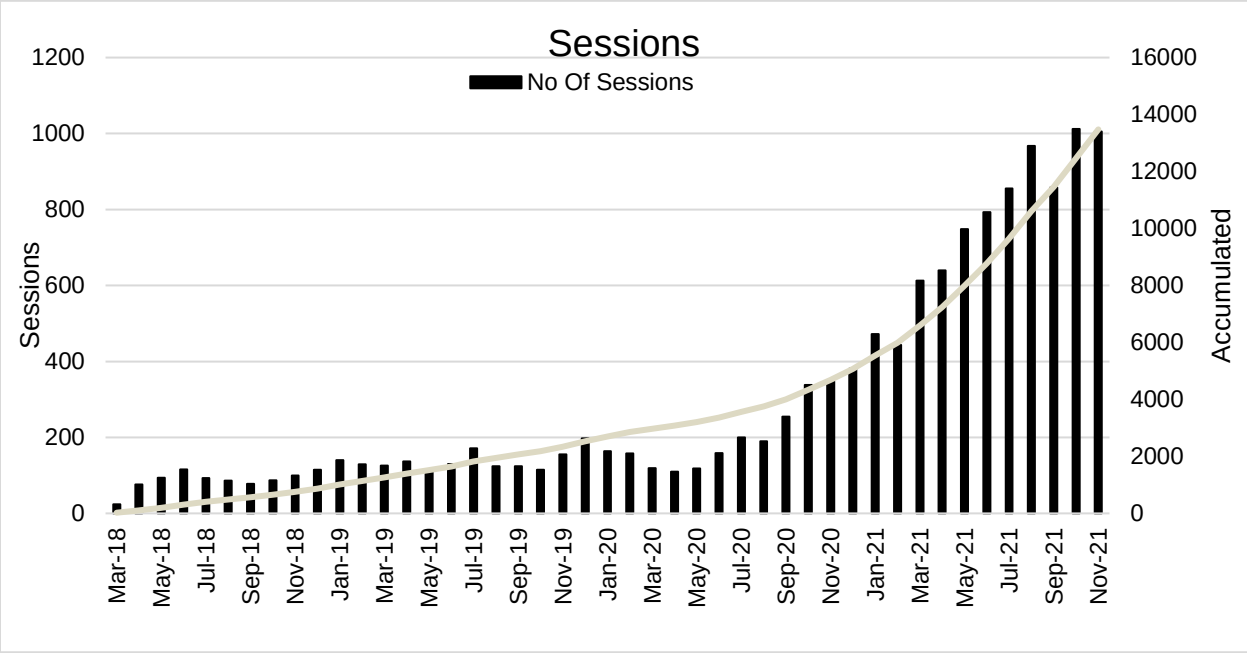

Figure 7b: Number of Charging Sessions per Month Since Mar 2018.

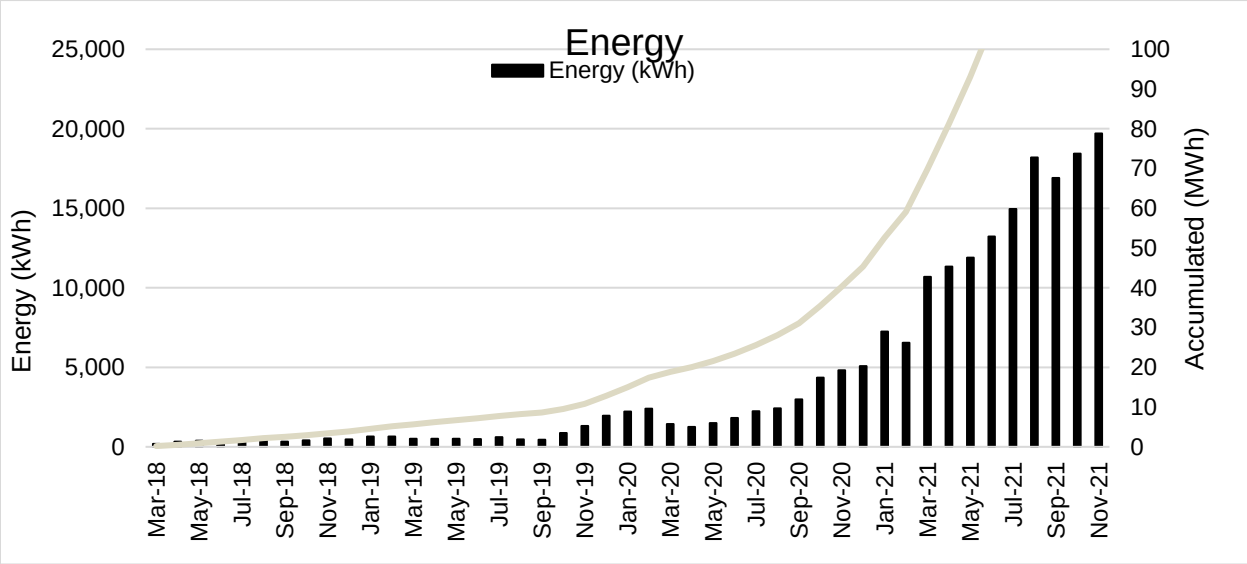

Figure 8b: Energy Usage per Month Since Mar 2018.

➢ Fremont Rebate Program

Table 6c shows the charging infrastructure usage summary for the data obtained since the inception of the rebate program for NPPD in Aug 2019. Cumulative Number of Installed Stations might vary from month to month because of the number of stations that lose connection to the network.

Table 6c: Summary of Installed Residential Charging Stations and Energy Usage per Month Since Aug` 2019.

	Number of Installed Stations Each Month	Cumulative Number of Installed Stations	Number of Charging Sessions	Energy Usage (kWh)
2019 Total	-	4	242	4,635
2020 Total	-	5	458	9,795
Jan`2021	0	5	29	652
Feb`2021	0	5	23	600
Mar`2021	0	5	35	632
Apr`2021	0	5	43	878
May`2021	0	5	60	1,211
Jun`201	0	5	57	1,252
Jul`2021	0	5	49	1,070
Aug`2021	0	5	64	1,511
Sep`2021	0	5	52	1,199
Oct`2021	0	5	68	1,526
Nov`2021	0	5	45	1,048
Total		**5**	**1,225**	**26,010**

The data shown in Table 6c is presented in Figures 6c ,7c, and 8c. Figure 6c shows the number of charging infrastructure installed since the inception of the rebate program as well as the cumulative number of charging stations; Figure 7c and Figure 8c show the trends of charging sessions and energy usage respectively, over the same time period.

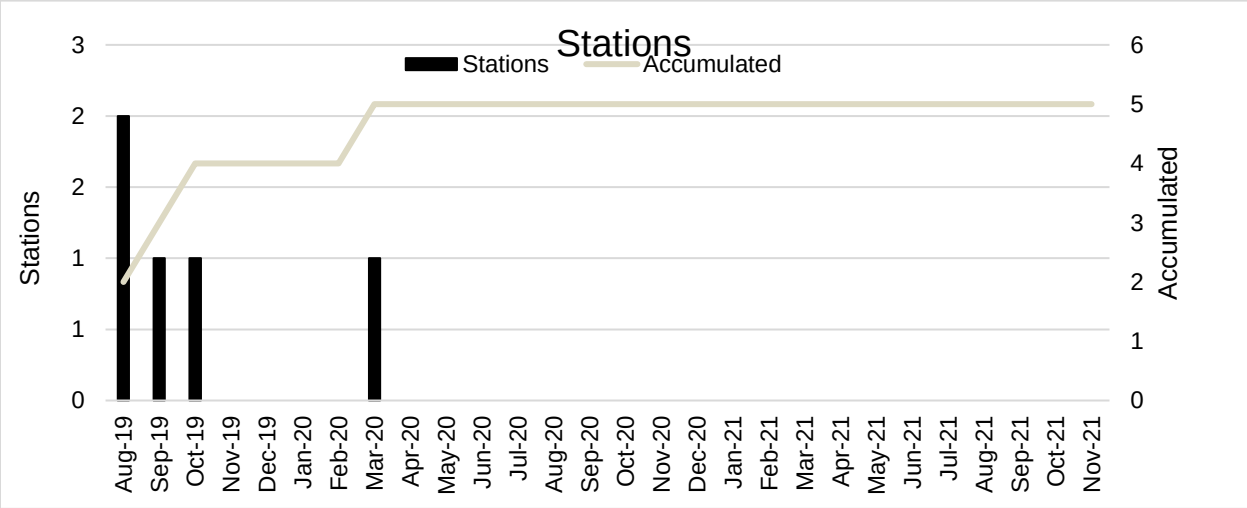

Figure 6c: Number of Charging Stations Installed per Month Since Aug 2019.

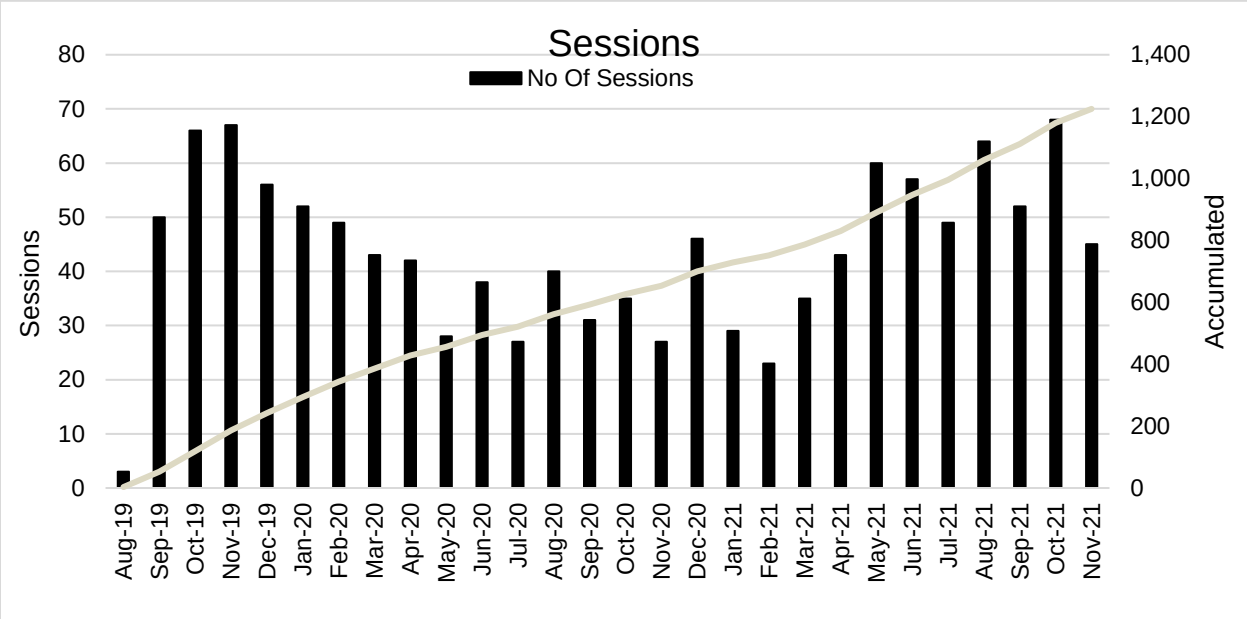

Figure 7c: Number of Charging Sessions per Month Since Aug 2019.

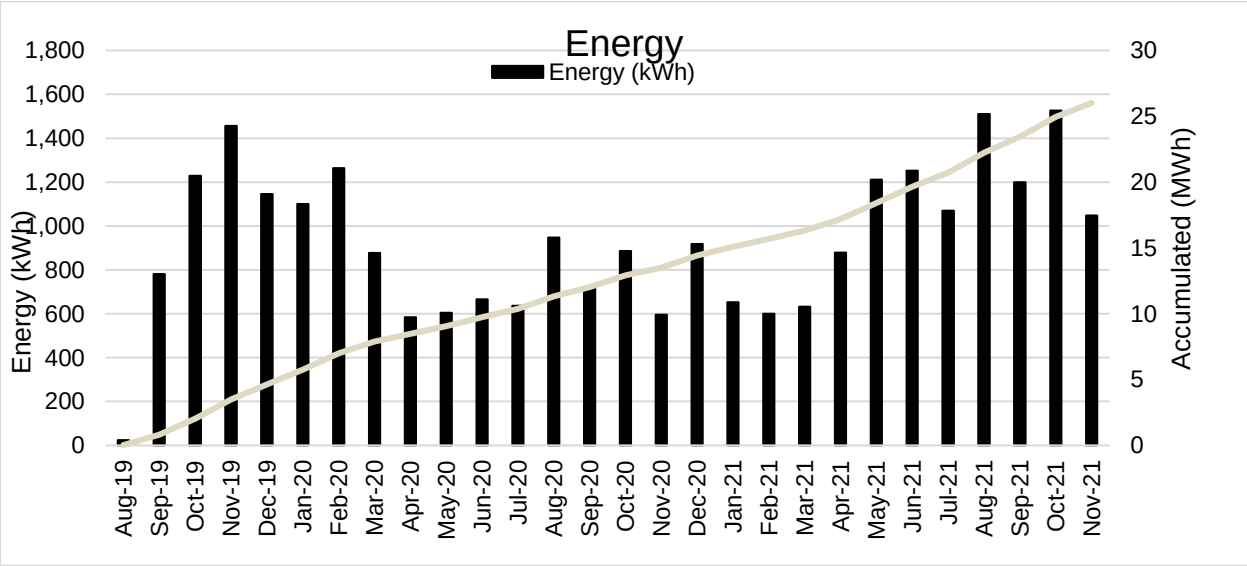

Figure 8c: Energy Usage per Month Since Aug 2019.

2.3. Summary of Economic and Environmental Analysis (Commercial and Utility/ Residential)

Commercial

A summary of the commercial economic and environmental benefits for the month of November2021 is shown in Table 7. Table 8 provides the total savings for each participating station since the start of data collection in Jan 2013. The difference in the amount saved for each participating member and/or charging station location is due to the number of EVs, CNGs, charging stations and activation dates. Data with "( )" savings indicate no savings. Only CO_2 data from CNG are used in the report. Furthermore, CNG data collection is stopped in 2018 due to the scarcity of the data usage.

Table 9, Table 10, Table 11, Table 12, and Table 13 show the grant cycle phase I, II, III, IV, and V benefits for the participating members respectively. Table 17 shows the benefits for the remaining existing charging stations.

Utility/Residential

A summary of the economic and environmental benefits for the users under the OPPD, NPPD, and Fremont Municipal Utility residential rebate programs for the month of November 2021 is provided in this section. Tables 14 and 15 shows the economic and environmental benefits calculations foe the OPPD rebate program.

Overall Savings

Table 16 shows the combined commercial and residential savings for Phases I-V. Table 18 shows the benefits for both DC and the commercial level-2 charging stations.

Table 7: Economic and Environmental Benefits for all Participating Stations for the Month of November 2021.

Charging Station Location	Number of Charging Ports	Number of Charging Sessions	Energy Usage (kWh)	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
					CO_2	CO	SO_2	NOx	CH_4	VOC
Allen Schools	2	20	264	$124	306	5.41	(0.72)	(1.00)	(0.02)	0.33
Auburn Board od Public Works	4	22	290.202	$134	559	6.04	(0.36)	0.15	(0.02)	0.37
Aurora	3	2	33.89	$16	39	0.70	(0.09)	(0.13)	(0.00)	0.04
Ashland	3	0	0	$0	0	0.00	0.00	0.00	0.00	0.00
Bellevue	4	0	0	$0	0	0.00	0.00	0.00	0.00	0.00
B & R Stores	9	68	849	$409	399	17.08	(2.20)	(1.30)	(0.19)	1.06
Central City	2		0.00	$0	0	0.00	0.00	0.00	0.00	0.00
Central Community College	8	42	300.67	$144	349	6.17	(0.82)	(1.14)	(0.02)	0.37
Dakota County	2	15	338	$158	392	6.94	(0.92)	(1.29)	(0.02)	0.42
Ferguson House, Lincoln office of NCEA	2	5	122	$59	177	2.52	(0.10)	(0.04)	(0.00)	0.15
Fremont	4	58	1,008	$457	1,208	20.33	(2.37)	(0.67)	(0.16)	1.26
Gothenburg	-		0.00	$0	0	0.00	0.00	0.00	0.00	0.00
Gretna	5	93	1,279	$597	1,243	25.89	(3.38)	(1.80)	(0.13)	1.59
Hastings	2	7	54	$26	25	1.08	(0.14)	(0.08)	(0.01)	0.07
Holdrege	2	6	172.335	$80	200	3.53	(0.47)	(0.65)	(0.01)	0.21
Kearney	8	70	1,039	$498	1,204	21.30	(2.82)	(3.95)	(0.07)	1.29
LES	12	127	2,378	$999	3,453	49.13	(2.04)	(0.80)	(0.08)	2.96
Lexington	4	22	298	$144	345	6.11	(0.81)	(1.13)	(0.02)	0.37
Lincoln	30	345	3,911	$1,894	5,678	80.80	(3.35)	(1.32)	(0.14)	4.87
Lincoln Public Schools	7	89	784	$379	1,138	16.19	(0.67)	(0.26)	(0.03)	0.97
MCC	10	103	1,158	$541	1,125	23.44	(3.06)	(1.63)	(0.12)	1.44
Nebraska City	7	95	1,163	$520	2,241	24.20	(1.45)	0.58	(0.06)	1.46
Norfolk	2	5	123	$53	211	2.63	(0.20)	(2.19)	0.00	0.15
Nebraska Safety Center at UNK	2	0	0	$0	0	0.00	0.00	0.00	0.00	0.00
NP Dodge	3	3	11.22	$5	11	0.23	(0.03)	(0.02)	(0.00)	0.01
NPPD	23	133	2,238.44	$1,084	3,250	46.24	(1.92)	(0.75)	(0.08)	2.78
Minden	3	3	10.43	$5	12	0.21	(0.03)	(0.04)	(0.00)	0.01
OPPD	4	12	131	$61	128	2.66	(0.35)	(0.18)	(0.01)	0.16
City of Omaha	6	258	2,560	$1,196	2,968	52.50	(6.96)	(9.73)	(0.18)	3.18
Omaha Zoological Society	4	31	281.296	$131	273	5.70	(0.74)	(0.39)	(0.03)	0.35
Papio-Missouri NRD	2	70	563	$263	547	11.39	(1.49)	(0.79)	(0.06)	0.70
Seward	9	18	195	$89	226	3.99	(0.53)	(0.74)	(0.01)	0.24
South Sioux City	11	61	906	$423	1,051	18.59	(2.46)	(3.44)	(0.06)	1.12
UNMC	4	58	559.144	$261	543	11.32	(1.48)	(0.78)	(0.06)	0.69
UNO	8	117	1,389	$649	1,350	28.13	(3.68)	(1.95)	(0.14)	1.72
Valley	2	1	0	$0	0	0.00	0.00	0.00	0.00	0.00
Wayne	2	0	0	$0	0	0.00	0.00	0.00	0.00	0.00
Total	236	1,959	24,409	$11,398	30,651	500.45	(45.64)	(37.47)	(1.76)	30.36

Table 8: Cumulative Charging Infrastructure Usage and Benefits for all Participating Charging stations since Jan` 2013.

Charging Station Location	Number of Charging Ports	Number of Charging Sessions	Energy Usage (kWh)	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
					CO_2	CO	SO_2	NOx	CH_4	VOC
Allen Schools	2	1,199	12,562	$4,549	23,797	485.66	(29.08)	(5.47)	1.29	16.96
Auburn Board od Public Works	4	712	4,776	$1,932	9,108	98.90	(6.11)	2.30	(0.21)	5.99
Aurora	3	263	1,361	$577	1,577	27.91	(3.70)	(5.17)	(0.10)	1.69
Ashland	3	1,160	11,989	$4,239	15,438	265.56	(37.78)	(14.26)	(0.08)	14.81
Bellevue	4	1,295	12,080	$3,959	25,594	571.21	(33.69)	18.47	1.87	16.91
B & R Stores	9	645	7,216	$3,211	3,390	145.19	(18.73)	(11.08)	(1.64)	9.03
Central City	2	33	522	$163	1,264	31.44	(1.18)	1.59	0.13	0.78
Central Community College	8	466	2,971	$1,318	3,444	60.93	(8.07)	(11.29)	(0.21)	3.68
Dakota County	2	423	5,451	$2,057	8,295	148.88	(14.03)	(12.60)	0.09	6.96
Ferguson House, Lincoln office of NCEA	2	640	5,531	$2,076	8,953	190.78	(6.57)	(9.24)	0.56	7.28
Fremont	4	1,575	24,695	$9,009	28,656	481.79	(60.27)	(24.09)	(3.93)	30.41
Gothenburg	-		0	$720	6,020	155.11	(5.30)	8.68	0.64	3.56
Gretna	5	2,764	26,787	$10,084	32,165	632.14	(76.58)	(27.94)	(1.15)	29.15
Hastings	2	162	1,456	$574	1,207	34.19	(3.77)	(0.62)	(0.04)	1.83
Holdrege	2	132	1,261	$484	1,941	36.67	(3.15)	(2.39)	0.04	1.63
Kearney	8	2,970	27,250	$10,582	40,108	681.61	(67.97)	(66.34)	0.42	34.40
LES	12	2,372	38,297	$14,491	49,265	990.47	(25.67)	(146.90)	2.53	48.00
Lexington	4	1,008	11,749	$4,020	19,024	354.29	(28.95)	(19.76)	0.58	15.21
Lincoln	30	8,163	89,741	$35,434	105,572	2,059.91	(64.82)	(371.58)	5.18	110.74
Lincoln Public Schools	7	756	5,964	$2,636	8,658	123.19	(5.11)	(2.01)	(0.21)	7.42
MCC	10	2,508	27,625	$10,610	32,867	549.39	(85.95)	(40.82)	(1.47)	33.79
Nebraska City	7	2,410	25,457	$10,712	59,326	809.92	(42.55)	30.78	1.59	33.59
Norfolk	2	47	675	$217	1,157	14.40	(1.11)	(11.98)	0.01	0.84
Nebraska Safety Center at UNK	2	50	249	$95	322	5.06	(0.65)	(0.87)	(0.01)	0.31
NP Dodge	3	137	3,190	$1,109	3,627	63.69	(9.56)	(4.68)	(0.22)	3.92
NPPD	23	1,666	21,933	$9,009	31,842	453.09	(18.79)	(7.37)	(0.76)	27.28
Minden	3	49	372	$153	431	7.62	(1.01)	(1.41)	(0.03)	0.46
OPPD	4	4,963	27,890	$9,210	53,965	1,182.66	(82.55)	28.50	3.58	38.17
City of Omaha	6	1,288	16,133	$6,662	19,405	330.03	(43.25)	(59.68)	(0.97)	19.98
Omaha Zoological Society	4	687	5,978	$2,411	6,206	120.36	(16.66)	(8.54)	(0.53)	7.38
Papio-Missouri NRD	2	2,514	24,330	$9,262	29,638	482.37	(77.10)	(36.42)	(1.24)	29.70
Seward	9	1,008	14,016	$4,724	24,004	464.77	(33.93)	(15.69)	1.06	18.42
South Sioux City	11	3,790	47,928	$16,682	82,669	1,586.62	(116.11)	(45.41)	3.63	62.92
UNMC	4	535	5,165	$2,053	5,410	103.91	(14.49)	(7.40)	(0.45)	6.38
UNO	8	3,072	27,254	$10,026	32,931	542.74	(86.24)	(39.40)	(1.20)	33.28
Valley	2	226	1,862	$633	2,986	59.92	(5.70)	(0.16)	0.12	2.42
Wayne	2	164	2,262	$1,889	8,787	64.17	(5.13)	(39.86)	0.25	2.85
Total	236	51,852	543,976	$207,568	789,049	14,416.52	(1,141.31)	(960.12)	9.12	688.12

Table 9: Cumulative Economic and Environmental Benefits for Phase I Participants.

Participating Members	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
		CO2	CO	SO2	NOx	CH4	VOC
Bellevue	$3,959	25,594	571.21	(33.69)	18.47	1.87	16.91
Central City	$163	1,264	31.44	(1.18)	1.59	0.13	0.78
Ferguson House, Lincoln office of NCEA	$2,076	8,953	190.78	(6.57)	(9.24)	0.56	7.28
Gothenburg	$720	6,020	155.11	(5.30)	8.68	0.64	3.56
Holdrege	$484	1,941	36.67	(3.15)	(2.39)	0.04	1.63
Lexington	$4,020	19,024	354.29	(28.95)	(19.76)	0.58	15.21
Nebraska City	$8,515	46,819	685.34	(38.27)	23.85	1.08	30.75
Seward	$525	2,144	28.22	(3.40)	(4.16)	0.03	1.72
South Sioux City	$1,106	4,272	62.58	(7.83)	(10.16)	(0.04)	3.80
Wayne*	$1,149	5,100	-	-	-	-	-
Total	$22,715	121,131	2,115.63	(128.34)	6.88	4.89	81.63

Table 10: Total Economic and Environmental Benefits for Phase II Participants.

Participating Members	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
		CO2	CO	SO2	Nox	CH4	VOC
Allen Consolidated Schools	$4,549	23,797	485.66	(29.08)	(5.47)	1.29	16.96
Ashland	$4,239	15,438	266	-38	-14	0	15
Dakota County	$2,057	8,295	148.88	(14.03)	(12.60)	0.09	6.96
Gretna	$3,579	15,088	299.43	(30.70)	(4.37)	0.33	8.74
Hastings	$574	1,207	34.19	(3.77)	(0.62)	(0.04)	1.83
Kearney	$8,704	34,873	588.99	(55.70)	(49.18)	0.75	28.80
Lincoln	$35,222	104,917	2,050.59	(64.43)	(371.43)	5.19	110.18
Nebraska City*	$1,678	7,565	-	-	-	-	-
OPPD	$9,210	53,965	1,182.66	(82.55)	28.50	3.58	38.17
UNO	$1,893	5,943	97.08	(15.47)	(7.32)	(0.25)	5.98
Valley	$633	2,986	59.92	(5.70)	(0.16)	0.12	2.42
Total	$72,337	274,073	5,212.96	(339.21)	(436.91)	10.97	234.85

*Data shown is for one CNG in Phase I, and two CNGs in Phase II.

Table 11: Total Economic and Environmental Benefits for Phase III Participants.

Participating Members	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
		CO2	CO	SO2	Nox	CH4	VOC
Fremont	$9,009	28,656	481.79	(60.27)	(24.09)	(3.93)	30.41
MCC	$1,795	4,786	88.89	(12.74)	(6.40)	(0.35)	5.46
Total	$10,804	33,442	570.68	(73.01)	(30.49)	(4.29)	35.87

Table 12: Total Economic and Environmental Benefits for Phase IV Participants.

Participating Members	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
		CO2	CO	SO2	Nox	CH4	VOC
Auburn Board of Public Works	$622	3,186.03	34.95	(2.27)	0.76	(0.04)	2.12
Aurora (DC)	$501	1,362.23	24.10	(3.19)	(4.47)	(0.08)	1.46
City of Omaha	$3,683	11,713.49	193.95	(25.23)	(34.47)	(0.50)	11.75
Nebraska Safety Center at UNK	$95	321.90	5.06	(0.65)	(0.65)	(0.01)	0.31
NP Dodge	$99	250.38	5.22	(0.68)	(0.36)	(0.03)	0.32
Omaha Zoological Society	$2,411	6,206.35	120.36	(16.66)	(8.54)	(0.53)	7.38
University of Nebraska Medical Center	$2,053	5,409.82	103.91	(14.49)	(7.40)	(0.45)	6.38
Gretna (DC)	$6,505	17,077.33	332.71	(45.88)	(23.58)	(1.48)	20.41
Kearney	$1,878	5,234.93	92.62	(12.27)	(17.16)	(0.32)	5.60
Total	$17,846	50,762.47	912.88	(121.32)	(95.86)	(3.44)	55.73

Table 13: Total Economic and Environmental Benefits for Phase V Participants.

Participating Members	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
		CO2	CO	SO2	Nox	CH4	VOC
Auburn Board of Public Works	$1,310	5,921.50	63.95	(3.84)	1.54	(0.17)	3.87
Aurora	$76	215.16	3.81	(0.50)	(0.71)	(0.01)	0.23
Central Community College	$1,318	3,443.92	60.93	(8.07)	(11.29)	(0.21)	3.68
Minden	$153	430.92	7.62	(1.01)	(1.41)	(0.03)	0.46
NPPD	$9,009	31,841.53	453.09	(18.79)	(7.37)	(0.76)	27.28
Norfolk	217.40	1,157.36	14.40	(1.11)	(11.98)	0.01	0.84
Lincoln	211.88	654.97	9.32	(0.39)	(0.15)	(0.02)	0.56
Total	$12,294	43,665	613	(34)	(31)	(1)	37

Table 14: Total Economic Savings Data for OPPD Residential Rebate Program (Fuel & Maintenance Cost Savings).

		This Month (November)	All Time
Miles Driven		353,211.97	
Energy Consumed(kWh)		103,520.51	
Fuel cost saving	Usage Cost Using CV(Gas)	$44,767	
	Usage Cost Using EV(Electricity)	$8,799	
	Total Fuel Saving	$35,968	
Other cost saving	CV Costs	$21,546	
	EV Costs	$9,184	
	Total, other cost savings	$12,362	
Overall Economic Savings		$48,330	$889,600

Table 15: Total Environmental Savings Data for OPPD Residential Rebate Program (Reduction in Emissions).

		This Month (November)	All Time
Miles Driven			
Energy Consumed (kWh)			
Co2 Emissions (lbs.)	CV (Gas)	275,706	
	EV (Electricity)	175,089	
	Total Fuel Saving	100,617	2,743,780
Co Emissions (lbs.)	CV (Gas)	2,227.93	
	EV (Electricity)	132.02	
	Total Fuel Saving	2,095.92	47,279
So2 Emissions (lbs.)	CV (Gas)	3.27	
	EV (Electricity)	277.19	
	Total Fuel Saving	(273.92)	(7,207)
Nox Emissions (lbs.)	CV (Gas)	93.44	
	EV (Electricity)	238.76	
	Total Fuel Saving	(145.32)	(3,275)
CH4 Emissions (lbs.)	CV (Gas)	5.22	
	EV (Electricity)	15.86	
	Total Fuel Saving	(10.64)	(149.12)
VOC Emissions (lbs.)	CV (Gas)	131.13	
	EV (Electricity)	2.71	
	Total Fuel Saving	128.42	2,907

Table 16: Total Economic and Environmental Benefits for Phase I to IV Participating Members.

	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
		CO2	CO	SO2	NOx	CH4	VOC
Savings Excluding Residential Rebate Program	$135,997	523,073	9,425	(695.59)	(587.76)	(3.91)	445.00
OPPD_ Residential Rebate Program Savings	$889,600	2,743,780	47,280	(7,207.10)	(3,275.70)	(149.12)	2,907.69
NPPD_ Residential Rebate Program Savings	$78,354	253,170	3,829	(138.51)	(274.95)	(3.02)	229.51
Fremont_ Residential Rebate Program Savings	$9,255	30,210	508	(63.21)	(24.76)	(4.14)	32.02
Total Saving	$1,113,206	3,550,234	61,041	(8,104.41)	(4,163.16)	(160.18)	3,614

Table 17: Total Economic and Environmental Benefits for Remaining Existing Charging Stations.

Participating Members	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
		CO2	CO	SO2	NOx	CH4	VOC
B & R Stores	$3,211	3,390	145.19	(18.73)	(11.08)	(1.64)	9.03
LES	$2,979	7,691	136.08	(18.03)	(25.21)	(0.47)	8.23
Lincoln Public Schools	$14,491	49,265	990.47	(25.67)	(146.90)	2.53	48.00
MCC	$2,636	8,658	123.19	(5.11)	(2.01)	(0.21)	7.42
Nebraska City	$8,814	28,081	460.50	(73.21)	(34.42)	(1.11)	28.33
NP Dodge	$519	4,942	124.58	(4.28)	6.93	0.51	2.85
Papio-Missouri NRD	$1,010	3,376	58.47	(8.88)	(4.32)	(0.19)	3.60
Seward	$9,262	29,638	482.37	(77.10)	(36.42)	(1.24)	29.70
South Sioux City	$4,199	21,860	436.55	(30.54)	(11.54)	1.03	16.70
UNO	$15,577	78,398	1,524.04	(108.27)	(35.25)	3.67	59.12
Wayne	$8,133	26,988	445.65	(70.77)	(32.08)	(0.95)	27.30
Total	$740	3,687	64.17	(5.13)	(39.86)	0.25	2.85

Table 18: Analysis for DC Fast Chargers and all Level 2 Charging Stations.

Commercial Charging Station Type	Number of Charging Ports	Number of Charging Sessions	Energy Usage (kWh)	Economic Benefits	Environmental Benefits (Emission Reductions) (lbs.)					
					CO2	CO	SO2	NOx	CH4	VOC
Level 2 Charger	226	49,631	504,085	$191,509	746,279	13,589.22	(1,033.50)	(895.91)	12.74	638.61
DC Fast Charger	10	2221	39,891	$16,059	42,769	827.30	(107.80)	(64.21)	(3.6222)	49.5075
Total	236	51,852	543,976	$207,568	789,049	14,416.52	(1,141.31)	(960.12)	9.12	688.12

3. Appendix A: Detailed Economic Analysis - Commercial

3.1. Introduction

The following five types of vehicles are investigated in this report:

- CV – Conventional vehicles running on gasoline fuel.
- DV – Conventional vehicles running on diesel fuel.
- CNG – Trucks running on compressed natural gas (CNG) fuel.
- Ethanol (E85) - Conventional vehicles running on Ethanol (E85) fuel.
- EV – Electric Vehicles (all electric) running on electricity.

3.2.Economic Benefits due to Fuel Type Price Differences

Data calculations are based on the following average prices and assumptions:

- Gas price of $2.079 per gallon (Regular unleaded, based on 2020 monthly Nebraska state average [1]).
- Diesel price of $2.364 per gallon (based on YTD Nebraska state average [2]).
- CNG price of $2.00 per gallon based on the current average filling station CNG rate for Nebraska. [3]
- Ethanol (E85) price of $0.88 per gallon based on 2020 monthly Nebraska state average [4].
- Electricity prices depend on the current rate charged by the electric utility provider serving the participating charging stations in this study. There are seven electric utility providers:
    - Fremont Utilities
    - Hastings Utilities
    - Lincoln Electric System (LES)
    - Nebraska City Utilities
    - Nebraska Public Power District (NPPD)
    - Omaha Public Power District (OPPD)
    - Western Area Power Administration (WAPA)

OPPD serves Ashland, Bellevue, Gretna, and Valley [5]. NPPD serves Allen, Dakota County, Gothenburg, Holdrege, Lexington, Seward, South Sioux City, Wayne, and Auburn as a wholesale power supply; and Kearney as a retail provider [6]. LES serves Lincoln [7]. Fremont, Hastings and Nebraska City are unique as they provide their own power for their cities [8][9][10]. The city of Wayne receives 56% of its power from oil resource, and 44% from the renewable resource, mainly from wind [11][12].

Table A1 provides the name of the electric utility provider and the (commercial or retail) rate per kilowatt-hour for the participating members. Allen, Gothenburg, Holdrege, Lexington, Seward, and Wayne have their own utility rates, while Central City, Dakota County, Kearney, South Sioux City, and Auburn follow the rate schedule as specified by NPPD. To distinguish between the different rates, additional letters (‘a’ to ‘h’) have been added to NPPD listing.

Table A1: Electricity Providers and Rate Structure for the Participating Charging Stations.

Charging Station Location	Provider	Price per kWh ($)#
Allen Consolidated Schools [13]	NPPD - a	0.0817
Auburn Board of Public Works [14]	NPPD-h	0.0941
Ashland [15]	OPPD	0.085
Bellevue [15]	OPPD	0.085
Central City [16]	NPPD - b	0.0853
Dakota County [16]	NPPD - b	0.0853
Ferguson House (Lincoln) [17]	LES	0.0757
Fremont [18]	Provides own service	0.0985
Gothenburg [19]	NPPD - c	0.0801
Gretna [15]	OPPD	0.085
Hastings [20]	Provides own service	0.0783
Holdrege [21]	NPPD - d	0.0975
Kearney [16]	NPPD - b	0.0853
Lexington [22]	NPPD - e	0.14
Lincoln [17]	LES	0.0757
LES [17]	LES	0.0757
MCC [15]	OPPD	0.085
Nebraska City [23]	Provides own service	0.1084
Nebraska Safety Center at UNK [16]	NPPD - b	0.0853
OPPD [15]	OPPD	0.085
Omaha Zoological Society [15]	OPPD	0.085
Seward [24]	NPPD - f	0.085
South Sioux City [16]	NPPD - b	0.085
UNMC [15]	OPPD	0.098
UNO [15]	OPPD	0.0853
Valley [15]	OPPD	0.085
Wayne [25]	NPPD - g	0.085
Average		0.08904
#All rates are the average of the base summer and winter rates.		

Table A2 shows the fuel economy of the different vehicle types and the cost for driving one mile. The cost of fuel for the EV vehicle is based on the price per kWh, for each participating member, calculated by averaging the summer and winter rates.

The following fuel economy values are used:

- CV and DV vehicles: 25.10 mpg and 28.47 mpg respectively, Average fuel economy for the model year 2018 = 25.1 mpg [26][27]
- CNG vehicle: 25.10 mpg, based on the same fuel economy of a CV because it is roughly equal to that of a CV when converted to gasoline gallons equivalent (GGE) [28].
- EV vehicle: 3.412 miles per kWh, based on the combined fuel economy average (city and highway) of all the vehicle types (make and model) published in the Fuel Economy Guide for the year 2020 [29].
- Ethanol (E85): 18.33 mpg based on [30].
- The national driving average is 11,556 miles based on [31].

Table A2: Cost of Driving one Mile for the Five Vehicle Types (Arranged in Descending Order).

Vehicle Type		Cost of Fuel	Combined Fuel Economy	Cost per mile
Gasoline Vehicles (CV)		$2.079	25.10 mpg	$0.083
Diesel Vehicles (DV)		$2.364	28.47 mpg	$0.083
Compressed Natural Gas Vehicles (CNG)		$2.000	25.10 mpg	$0.080
Ethanol Vehicles (E-85)		$0.882	18.33 mpg	$0.048
EV	Lexington (NPPD – e)	$0.140	3.412 miles per kWh	$0.041
	Wayne (NPPD – g)	$0.117		$0.034
	Nebraska City	$0.108		$0.032
	Fremont	$0.099		$0.029
	Seward (NPPD – f)	$0.098		$0.029
	Holdrege (NPPD – d)	$0.098		$0.029
	Auburn Board of Public Works (NPPD – h)	$0.094		$0.028
	Ashland, Bellevue, Gretna, MCC, OPPD, UNO, Valley (OPPD)	$0.085		$0.025
	Central City, Dakota County, Kearney, South Sioux City (NPPD – b)	$0.085		$0.025
	Allen (NPPD – a)	$0.082		$0.024
	Gothenburg (NPPD – c)	$0.080		$0.023
	Hastings	$0.078		$0.023
	Ferguson House, LES, Lincoln (LES)	$0.076		$0.022

Table A3 and Table A4 show the cost savings when comparing between the five types of vehicles. The calculations shown are for driving one mile (Table A3) and then for driving an average of 11,556 miles [31] annually (Table A4). The red shading represents no savings (negative savings) and the green shading represents positive savings. Figure A1 provides a visual representation of Table A4.

Table A3: Cost Savings per Mile in Terms of Fuel Consumption (Arranged in Ascending Order).

Vehicle Type		Savings per mile			
		Compared to CV	Compared to DV	Compared to CNG	Compared to E85
Gasoline Vehicles (CV)		-	$0.000	-$0.003	-$0.035
Diesel Vehicles (DV)		$0.000	-	-$0.003	-$0.035
Compressed Natural Gas Vehicles (CNG)		$0.003	$0.003	-	-$0.032
Ethanol Vehicles (E-85)		$0.035	$0.035	$0.032	-
EV	Lexington (NPPD – e)	$483.02	$485.63	$446.70	$82.09
	Wayne (NPPD – g)	$561.25	$563.86	$524.93	$160.32
	Nebraska City	$590.03	$592.64	$553.71	$189.10
	Fremont	$623.56	$626.17	$587.24	$222.63
	Seward (NPPD – f)	$625.25	$627.86	$588.93	$224.32
	Holdrege (NPPD – d)	$626.94	$629.56	$590.62	$226.01
	Auburn Board of Public Works (NPPD – h)	$638.46	$641.07	$602.14	$237.53
	Central City, Dakota County, Kearney, South Sioux City (NPPD – b)	$668.26	$670.87	$631.94	$267.33
	Ashland, Bellevue, Gretna, MCC, OPPD, UNO, Valley (OPPD)	$669.27	$671.89	$632.95	$268.34
	Allen (NPPD – a)	$680.45	$683.06	$644.13	$279.52
	Gothenburg (NPPD – c)	$685.87	$688.48	$649.55	$284.94
	Hastings	$691.96	$694.57	$655.64	$291.03
	Ferguson House, LES, Lincoln (LES)	$700.77	$703.38	$664.45	$299.84

Table A4: Estimated Annual Cost Savings in Terms of Fuel Consumption (Arranged in Ascending Order).

Vehicle Type		Estimated Annual Savings			
		Compared to CV	Compared to DV	Compared to CNG	Compared to E85
Gasoline Vehicles (CV)		-	$2.61	-$36.32	-$400.93
Diesel Vehicles (DV)		-$2.61	-	-$38.93	-$403.54
Compressed Natural Gas Vehicles (CNG)		$36.32	$38.93	-	-$364.61
Ethanol Vehicles (E-85)		$400.93	$403.54	$364.61	-
EV	Lexington (NPPD – e)	$483.02	$485.63	$446.70	$82.09
	Wayne (NPPD – g)	$561.25	$563.86	$524.93	$160.32
	Nebraska City	$590.03	$592.64	$553.71	$189.10
	Fremont	$623.56	$626.17	$587.24	$222.63
	Seward (NPPD – f)	$625.25	$627.86	$588.93	$224.32
	Holdrege (NPPD – d)	$626.94	$629.56	$590.62	$226.01
	Auburn Board of Public Works (NPPD – h)	$638.46	$641.07	$602.14	$237.53
	Central City, Dakota County, Kearney, South Sioux City (NPPD – b)	$668.26	$670.87	$631.94	$267.33
	Ashland, Bellevue, Gretna, MCC, OPPD, UNO, Valley (OPPD)	$669.27	$671.89	$632.95	$268.34
	Allen (NPPD – a)	$680.45	$683.06	$644.13	$279.52
	Gothenburg (NPPD – c)	$685.87	$688.48	$649.55	$284.94
	Hastings	$691.96	$694.57	$655.64	$291.03
	Ferguson House, LES, Lincoln (LES)	$700.77	$703.38	$664.45	$299.84

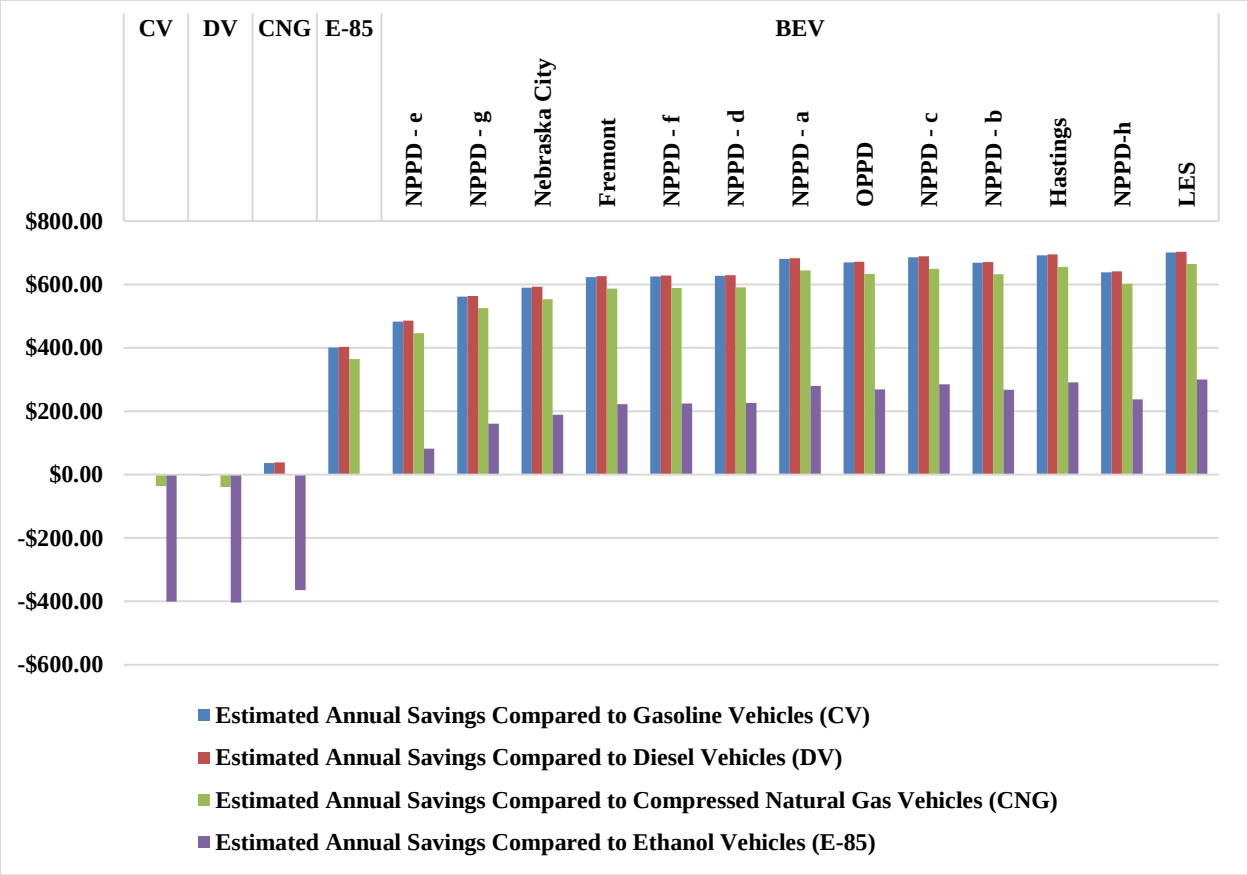

Figure A1. Estimated Annual Cost Savings in Terms of Fuel Consumption Arranged in Ascending Order.

Table A5 shows the cost savings in terms of varying fuel (gasoline, diesel, CNG, and Ethanol) prices. This analysis is performed on a price range of $1.50 to $3.50 in 50 cent increments. The cost per kWh considered is the average of the kWh prices shown in Table A1 ($0.08904 per kWh). The results for CNG and Gasoline fuel will be the same as their fuel economy is equal in terms of GGE [29]. Figure A2 provides a visual representation of Table A5.

Table A5: Estimated Annual Cost Savings When Using an EV Against Varying Fuel Prices.

Cost of Fuel	Estimated Annual Savings in Fuel Cost when using a EV		
	Compared to CV & CNG	Compared to DV	Compared to E85
$0.50	-$71.32	-$98.57	$13.70
$1.00	$158.88	$104.38	$328.92
$1.50	$389.08	$307.33	$644.14
$2.00	$619.28	$510.28	$959.36
$2.50	$849.48	$713.23	$1,274.59
$3.00	$1,079.68	$916.18	$1,589.81
$3.50	$1,309.88	$1,119.13	$1,905.03

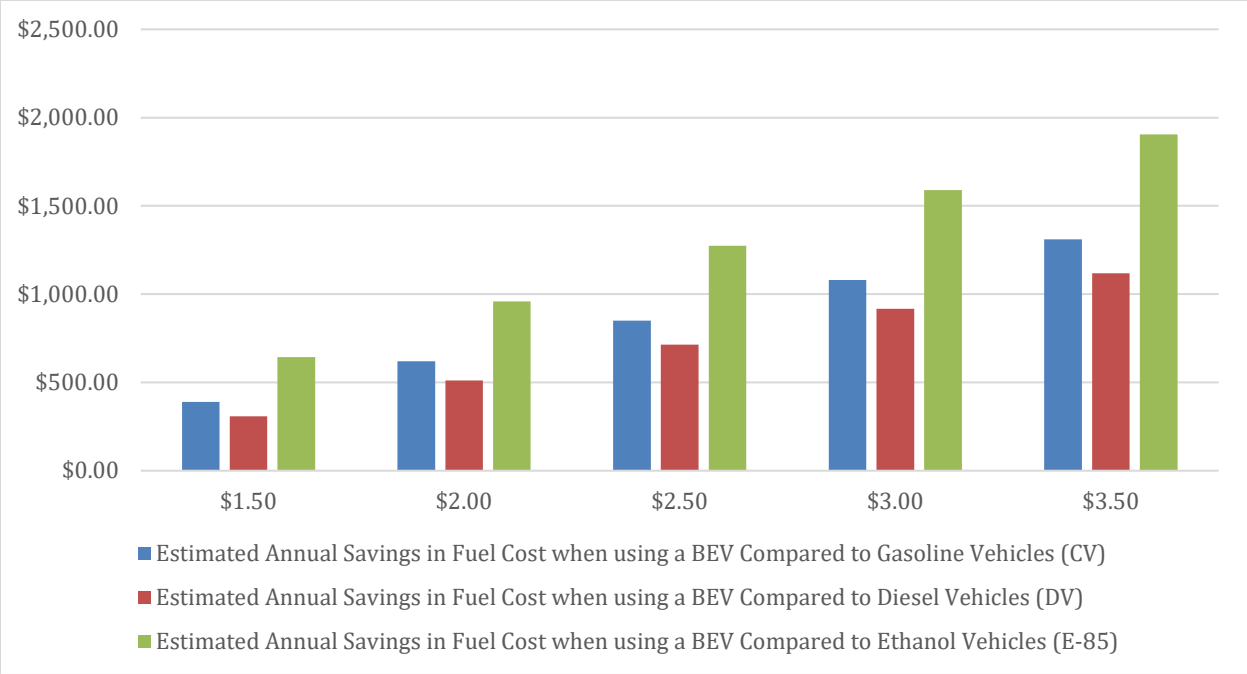

Figure A2: Estimated Annual Cost Savings When Using an EV Against Varying Fuel Prices.

3.3. Economic Benefits due to Other Factors Affecting Each Fuel Type

In addition to the fuel savings, additional cost savings for EVs are attributed to vehicle maintenance requirements. Table A6 shows the average maintenance cost for each type of vehicle and calculates the yearly savings for the DV and EV over the CV.

Table A6: Estimated Maintenance Costs and Savings for a Given Year.

	Gasoline Vehicles (CV)	Diesel Vehicles (DV)	Ethanol Vehicles (E-85)	Electric Vehicles (EV)
Maintenance Cost per mile	$0.0610	$0.0610	$0.0610	$0.0260
Estimated Annual Maintenance Cost	$705.77	$705.77	$705.77	$300.82
Savings over CV per year	-	$0.00	$0.00	$404.95

3.4.Total Economic Benefits

Table A7 and Figure A3 show the total combined fuel and maintenance cost savings for the three types of vehicles (CV, DV, and EV) arranged in ascending order. The red shading represents no savings (negative savings) and the green shading represents positive savings. Conventional vehicle maintenance cost is $0.061 per mile; maintenance cost for EV is $0.026 per mile based on 2018 data found in [32].

Table A7: Estimated Total Annual Cost Savings Arranged in Ascending Order

		Total Cost Per Mile	Total Savings per Mile			Estimated Total Annual Cost Savings		
			Over CV	Over DV	E85	Over CV	Over DV	E85
Gasoline Vehicles (CV)		$0.1438	-	$0.0002	-$0.0031	-	$2.61	-$36.32
Diesel Vehicles (DV)		$0.1441	$0.000	-	-$0.0034	-$2.61	-	-$38.93
Ethanol Vehicles (E-85)		$0.1407	$0.003	$0.0034		$36.32	$38.93	-
EV	Lexington (NPPD – e)	$0.0670	$0.077	$0.0770	$0.0737	$887.48	$890.09	$851.16
	Wayne (NPPD – g)	$0.0603	$0.084	$0.0838	$0.0804	$965.71	$968.32	$929.39
	Nebraska City	$0.0578	$0.086	$0.0863	$0.0829	$994.49	$997.10	$958.17
	Fremont	$0.0549	$0.089	$0.0892	$0.0858	$1,028.02	$1,030.63	$991.70
	Seward (NPPD – f)	$0.0547	$0.089	$0.0893	$0.0860	$1,029.71	$1,032.32	$993.39
	Holdrege (NPPD – d)	$0.0546	$0.089	$0.0895	$0.0861	$1,031.40	$1,034.02	$995.08
	Auburn Board of Public Works (NPPD – h)	$0.0536	$0.090	$0.0905	$0.0871	$1,042.92	$1,045.53	$1,006.60
	Central City, Dakota County, Kearney, South Sioux City (NPPD – b)	$0.0510	$0.093	$0.0931	$0.0897	$1,072.72	$1,075.33	$1,036.40
	Ashland, Bellevue, Gretna, MCC, OPPD, UNO, Valley (OPPD)	$0.0509	$0.093	$0.0931	$0.0898	$1,073.73	$1,076.35	$1,037.41
	Allen (NPPD – a)	$0.0499	$0.094	$0.0941	$0.0907	$1,084.91	$1,087.52	$1,048.59
	Gothenburg (NPPD – c)	$0.0495	$0.094	$0.0946	$0.0912	$1,090.33	$1,092.94	$1,054.01
	Hastings	$0.0489	$0.095	$0.0951	$0.0917	$1,096.42	$1,099.03	$1,060.10
	Ferguson House, LES, Lincoln (LES)	$0.0482	$0.096	$0.0959	$0.0925	$1,105.23	$1,107.84	$1,068.91

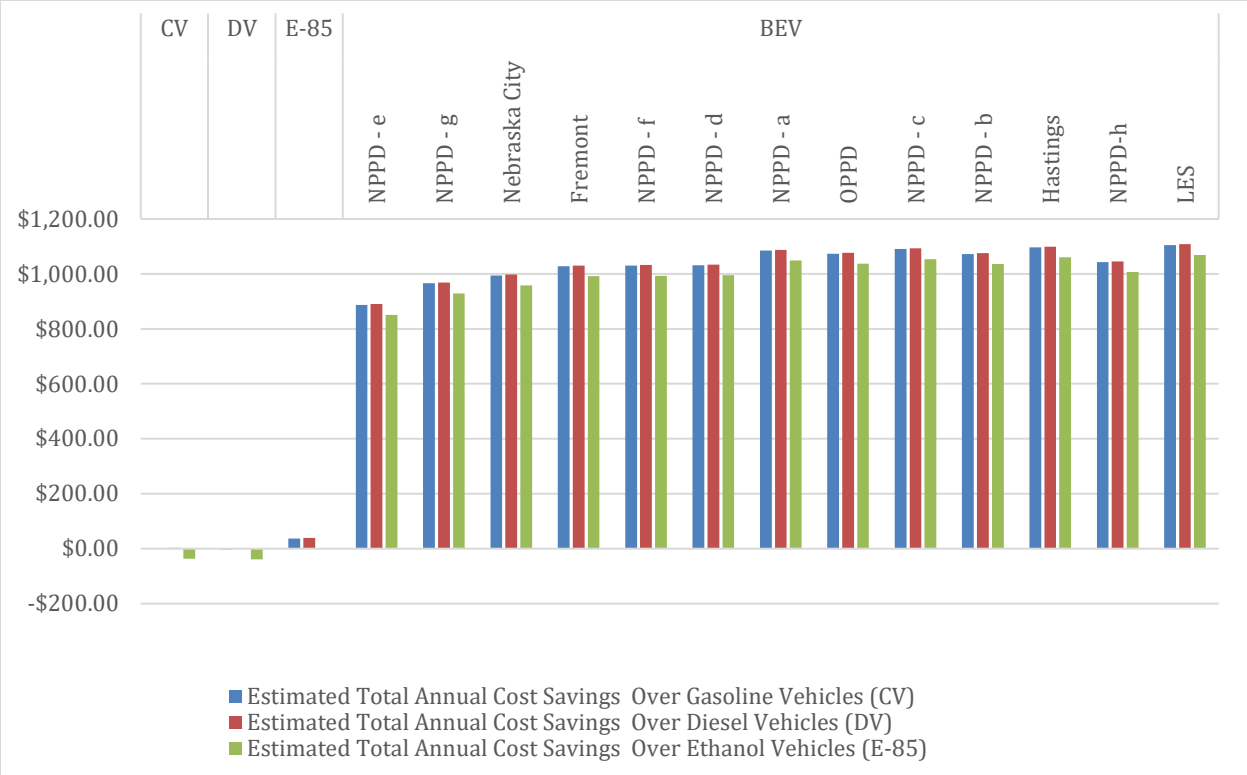

Figure A3: Estimated Total Annual Cost Savings When Using an EV Over a CV, DV, and E-85.

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4. Appendix B: Detailed Economic Analysis – Utility/Residential

4.1. Introduction

The following two types of vehicles are investigated in this report:

- CV – Conventional vehicles running on gasoline fuel.
- EV – Electric Vehicles (all electric) running on electricity.

4.2. Economic Benefits due to Fuel Type Price Differences

Data calculations are based on the following average prices and assumptions:

- Gas price of $2.079 per gallon (Regular unleaded, based on 2020 monthly Nebraska state average [1]).
- Electricity prices depend on the current rate charged by the electric utility provider serving the participating members in this study. The electric utility provider is
    - Omaha Public Power District (OPPD)

Table B1 shows the fuel economy of the different vehicle types and the cost for driving one mile. The cost of fuel for the EV vehicle is based on the price per kWh calculated by averaging the summer and winter rates.

The following fuel economy values are used:

- CV vehicles: 25.10 mpg, Average fuel economy for the model year 2018 = 25.1 mpg [2].
- EV vehicle: 3.412 miles per kWh , based on the combined fuel economy average (city and highway) of all the vehicle types (make and model) published in the Fuel Economy Guide for the year 2020 [3].

Table B1: Cost of Driving One Mile for Both Vehicle Types.

Vehicle Type		Cost of Fuel	Combined Fuel Economy	Cost per mile
Gasoline Vehicles (CV)		$2.079	25.10 mpg	$0.083
Electric Vehicles (EV)	(OPPD)	$0.085	3.412 miles per kWh	$0.025

Table B2 shows the cost savings in terms of varying fuel prices. This analysis is performed on a price range of $1.50 to $3.50 in 50 cent increments. The cost per kWh considered is the average of the kWh prices for NCEA participating members ($0.08904 per kWh).

Table B 2: Estimated Annual Cost Savings When Using an EV Against Varying Fuel Prices.

Cost of Fuel	Estimated Annual Savings in Fuel Cost when using a EV Compared to a CV
$1.50	$389.08
$2.00	$619.28
$2.50	$849.48
$3.00	$1,079.68
$3.50	$1,309.88

4.3. Economic Benefits Due to Other Factors Effecting Each Fuel Type

In addition to the fuel savings, additional cost savings for EVs are attributed to vehicle maintenance requirements. Table B3 shows the average maintenance cost for each type of vehicle and calculates the yearly savings for EV over the CV. Conventional vehicle maintenance cost is $0.061 per mile; maintenance cost for EV is $0.026 per mile based on 2018 data found in [4].

Table B3: Estimated Maintenance Costs and Savings for a Given Year.

	Gasoline Vehicles (CV)	Electric Vehicles (EV)
Maintenance Cost per mile	$0.0610	$0.0260
Estimated Annual Maintenance Cost	$705.77	$300.82
Savings over CV per year	-	$404.95

4.4. Total Economic Benefits

Table B4 shows the total combined fuel and maintenance cost savings for the two types of vehicles.

Table B4: Estimated Total Annual Cost Savings.

		Total Cost Per Mile	Total Savings per mile		Estimated Total Annual Cost Savings
			Over CV	Over DV	Over CV
Gasoline Vehicles (CV)		$0.1438	-	$0.0002	-
Electric Vehicles (EV)	(OPPD)	$0.0509	$0.093	$0.0931	$1,073.73

4.5. References

[1] Nebraska Government, "Average Monthly Retail Motor Gasoline Prices in Nebraska," *Nebraska's Monthly Motor Gasoline Prices*. [Online]. Available: http://www.neo.ne.gov/statshtml/97.htm#regular_unleaded. [Accessed: 10-Oct-2020].
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5. Appendix C: Detailed Environmental Emissions Data Analysis – Commercial and Utility/Residential

5.1. Introduction

The following five types of vehicles are investigated in this report:

- CV – Conventional vehicles running on gasoline fuel.
- DV – Conventional vehicles running on diesel fuel.
- CNG – Trucks running on compressed natural gas (CNG) fuel.
- Ethanol (E85)- Conventional vehicles running on Ethanol (E85) fuel.
- EV – Electric Vehicles (all electric) running on electricity.

With respect to Electric Vehicles (EVs), the calculations are based on how the electricity is generated (what primary energy sources are used in this production and their percentages). There are seven electric utility providers serving the participating members:

- Fremont Utilities
- Hastings Utilities
- Lincoln Electric System (LES)
- Nebraska City Utilities
- Nebraska Public Power District (NPPD)
- Omaha Public Power District (OPPD)
- Western Area Power Administration (WAPA)

With respect to the utility/residential report the following two types of vehicles are investigated:

- CV – Conventional vehicles running on gasoline fuel.
- EV – Electric Vehicles (all electric) running on electricity.

With respect to Electric Vehicles (EVs), the calculations are based on how the electricity is generated (what primary energy sources are used in this production and their percentages). The electric utility provider is:

- Omaha Public Power District (OPPD)

The report looks into current and future primary energy sources in use and/or proposed for the generation of electricity by each electric utility provider. This information is obtained from the emissions data and energy mix as per the eGRID 2016 tool published by the U.S. Environmental Protection Agency (EPA) [1]. eGRID provides a detailed information on the following:

- Emissions Profile: This covers nitrogen oxides (NO_X), sulfur dioxide (SO_2), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and mercury (Hg). (Hg emissions are available prior to year 2007).
- Generation resource mix, in megawatt-hours and percent; and
- Identification and location information.

The current version of this tool, uploaded in Jan-2020, provides real-time emissions and generation data for 2018.

5.2. Greenhouse Gas Definitions

A greenhouse gas (GHG) is a gas that contributes to the greenhouse effect by infrared radiation produced by solar warming of the earth's surface. The following information provides a definition of each type of GHG emission and detailed analysis of how these GHG emissions are calculated along with supporting references.

5.2.1. Carbon Dioxide Equivalent (CO_2e)

The CO_2 equivalent gives a total emissions factor for the three most dominant greenhouse gasses, CO_2, CH_4, and N_2O. Each of the three gasses is multiplied by its global warming potential (GWP) shown below which accounts for the overall effect of each gas on global warming [2]. For example, CH_4 has a GWP of 25 which means that one gram of CH_4 has the same effect on global warming as 25 grams of CO_2 over a period of a hundred years. Certain gasses are more harmful in the short term or in the long term, so the 100-year value is usually used as a good average. The equation below shows the formula for calculating CO_2 equivalent emissions.

	100-year GWP value
Carbon Dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous Oxide (N_2O)	298

$$CO_2e = 1*CO_2 \text{ emissions} + 25*CH_4 \text{ emissions} + 298*N_2O \text{ emissions}$$

Carbon Dioxide (CO_2)

Carbon dioxide is the most common greenhouse gas and makes up 81% of all GHG emissions [3]. The majority of CO_2 emissions come directly from electricity generation, transportation, and industry while a smaller fraction comes indirectly from deforestation, increased agriculture, and other activities that reduce the amount of natural land.

Methane (CH_4)

Methane is the second most common greenhouse gas at 10% of all emissions [3], and is also the main component of natural gas. When released into the atmosphere it reacts to form CH_3 and water vapor which is the most potent of greenhouse gasses. Methane is far worse in the short term with a 20-year GWP of 84. The long term GWP of methane is 28.

Nitrous Oxide (N_2O)

Nitrous oxide is the third most common greenhouse gas at 6% of all GHG emissions [3]. N_2O reacts with the air to produce nitric oxide (NO) which then reacts with the ozone layer. N_2O is extremely potent and has a GWP factor 265 times that of CO_2.

5.2.2. Other Harmful Gases Emitted as a By-product of Electricity Generation

Carbon Monoxide (CO)

Carbon monoxide is a very weak direct greenhouse gas, but has important indirect effects on global warming. CO reacts with hydroxyl (OH) radicals in the atmosphere, reducing their abundance.

Sulfur Dioxide (SO_2)

Exposure to sulfur dioxide can have significant impacts to the human respiratory system. Short term exposure to SO_2 can make breathing difficult and the effect is worse for children, the elderly, and those with asthma. SO_2 also contributes to formation of acid rain.

Nitrogen Oxides (NO_x)

Nitrogen oxides can also cause breathing problems for healthy people and especially for those with asthma. The EPA measured that NO_x concentrations inside vehicles can be 2-3 times higher than at locations away from roadways. Nitrogen oxides also react in the air to produce smog and acid rain.

Volatile Organic Compounds (VOC)

Volatile organic compounds cause many problems as indoor and outdoor air pollutants. Outdoor VOC emissions can create photochemical smog. VOCs are any compound of carbon, not including carbon dioxide, carbon monoxide, carbonic acid, metallic carbides, and ammonium carbonate.

Greenhouse Gas Emissions Summary - Commercial and Utility/Residential

The following sections, starting on the next page, provide general information on each electric utility provider and a summary of the associated greenhouse gas emissions for each of the vehicle types.

a. Omaha Public Power District (OPPD) - Commercial

Omaha Public Power District is a publicly owned electric utility that serves a population of 855,000 people, and is the 12th largest public power utility in the U.S. While its headquarters is located in Omaha, Nebraska, OPPD has several other locations in its 13-county, 5,000-square-mile service area in southeast Nebraska. Current fuel sources for generation include low-sulfur coal, wind, landfill gas, natural gas and fuel oil, and hydroelectric [4]. The North Omaha Station and Nebraska City Station burn low-sulfur coal, and units for each station were retrofitted with emission control systems in 2016. Three peaking plants are fueled by natural gas and fuel oil, including Cass County Station, Jones Street Station, and Sarpy County Station. The Elk City Station uses methane and other gases from decomposing trash in the Douglas County Landfill. With the stations, OPPD also has purchase power agreements with eight wind facilities in Nebraska. OPPD retired the nuclear-powered Fort Calhoun Station, and ceased generation on Oct 24th , 2016 with completed defueling outage in Oct- 2016.

The energy mix is estimated from eGRID 2018 power plant data tool [1]. Table C1 and C2 provide a summary of GHG emissions for each vehicle type based on the primary energy source used for driving one mile and for driving 11,556 miles annually [5]. Detailed calculations are provided in Appendix D.

Table C1: Greenhouse Gas Emissions (Grams per Mile) for OPPD Utility Company.

	CV	E85	DV	CNG	EV
					OPPD 2018 (14% Renewable)
CO2 Equiv.	354.69	346.22	364.36	285.18	226.227
CO2	354.06	343.44	357.57	280.08	224.848
CO	2.8611	2.7	2.7362	2.7	0.1695
CH4 (Methane)	0.0067	0.01	0.0296	0.1025	0.0204
N2O	0.0016	0.0085	0.0203	0.0085	0.0029
NOx	0.12	0.12	0.2324	0.12	0.3066
SO2	0.0042	0.0006	0.002	0.0012	0.3560
VOC	0.1684	0.22	0.0722	0.17	0.0035

Table C2: Greenhouse Gas Emissions in lbs. for One Year

	CV	E85	DV	CNG	EV
					OPPD 2018 (14% Renewable)
CO2 Equiv.	9036.309	8820.522	9282.668	7265.428	5763.509
CO2	9020.259	8749.697	9109.682	7135.497	5728.377
CO	72.891	68.787	69.709	68.787	4.319
CH4 (Methane)	0.171	0.255	0.754	2.611	0.519
N2O	0.041	0.217	0.517	0.217	0.074
NOx	3.057	3.057	5.921	3.057	7.812
SO2	0.107	0.015	0.051	0.031	9.069
VOC	4.290	5.605	1.839	4.331	0.089

b. Omaha Public Power District (OPPD) – Utility/Residential

The energy mix is estimated from eGRID 2018 power plant data tool [1]. Table C3 and C4 provide a summary of GHG emissions for each vehicle type based on the primary energy source used for driving one mile and for driving 11,556 miles annually [5]. Detailed calculations are provided in Appendix D.

Table C3: Greenhouse Gas Emissions (Grams Per Mile) for OPPD Utility Company.

	CV	EV
		OPPD 2018 (14% Renewable)
CO2 Equiv.	354.69	226.227
CO2	354.06	224.848
CO	2.8611	0.1695
CH4 (Methane)	0.0067	0.0204
N2O	0.0016	0.0029
NOx	0.12	0.3066
SO2	0.0042	0.3560
VOC	0.1684	0.0035

Table C4: Greenhouse Gas Emissions in lbs. for One Year.

	CV	EV
		OPPD 2018 (14% Renewable)
CO2 Equiv.	9036.309	5763.509
CO2	9020.259	5728.377
CO	72.891	4.319
CH4 (Methane)	0.171	0.519
N2O	0.041	0.074
NOx	3.057	7.812
SO2	0.107	9.069
VOC	4.290	0.089

c. Nebraska Public Power District (NPPD)

NPPD's revenue is mainly derived from wholesale power supply agreements with 46 municipalities and 24 rural public power districts and rural cooperatives who rely totally or partially on NPPD's electrical system. NPPD also serves about 80 communities at the retail level. Approximately 5,352 miles of transmission lines make up the NPPD electrical grid system, which delivers power to about 600,000 Nebraskans [6]. NPPD owns or has operating control of 29 generating facilities, and their current fuel sources include coal, nuclear, natural gas and oil, hydropower, wind and solar. They have two low-sulfur coal stations including Gerald Gentleman Station and Sheldon Station. Their natural gas facilities include the Beatrice Power Station, Canaday Station, and three peaking units located in Hallam, Hebron, and McCook. Wind is supplied from eight facilities located in Nebraska. NPPD operates three hydroelectric generators located in North Platte, Kearney, and Spencer.

The energy mix is estimated from eGRID 2018 power plant data tool [1]. Tables C5 and C6 provide a summary of GHG emissions for each vehicle type based on the primary energy source used for driving one mile and for driving 11,556 miles annually. Detailed calculations are provided in Appendix D.

Table C5: Greenhouse Gas Emissions Factors (Grams Per Mile) for NPPD Utility Company.

	CV	E85	DV	CNG	EV
					NPPD 2018 (15% Renewable)
CO2 Equiv.	354.69	346.22	364.36	285.18	201.044
CO2	354.06	343.44	357.57	280.08	199.933
CO	2.8611	2.7	2.7362	2.7	0.1343
CH4 (Methane)	0.0067	0.01	0.0296	0.1025	0.0161
N2O	0.0016	0.0085	0.0203	0.0085	0.0024
NOx	0.12	0.12	0.2324	0.12	0.6252
SO2	0.0042	0.0006	0.002	0.0012	0.3654
VOC	0.1684	0.22	0.0722	0.17	0.0035

Table C6: Greenhouse Gas Emissions in lbs. for One Year.

	CV	E85	DV	CNG	EV
					NPPD 2018 (15% Renewable)
CO2 Equiv.	9036.309	8820.522	9282.668	7265.428	5121.924
CO2	9020.259	8749.697	9109.682	7135.497	5093.616
CO	72.891	68.787	69.709	68.787	3.421
CH4 (Methane)	0.171	0.255	0.754	2.611	0.411
N2O	0.041	0.217	0.517	0.217	0.061
NOx	3.057	3.057	5.921	3.057	15.928
SO2	0.107	0.015	0.051	0.031	9.310
VOC	4.290	5.605	1.839	4.331	0.089

d. Lincoln Electric System (LES)

LES services approximately 200 square miles within Lancaster County in Nebraska, comprising the cities of Lincoln, Prairie Home, Waverly, Walton, Cheney, and Emerald. Approximately 136,000 retail customers. Their fuel sources include coal, natural gas, landfill gas, hydropower, wind, and solar. LES owns the coal-powered Laramie River Station, and is a part owner of the Walter Scott, Jr. Energy Center Unit 4. They are currently under a purchase agreement with NPPD for part of the output from their Sheldon and Gerald Gentleman Stations. LES has three natural gas stations including 8th & J, Rokeby, and Terry Bundy Stations. Their 5-MW landfill gas facility was completed in 2014 from the Bluff Road Landfill. They also purchase hydropower through Western Area Power Administration, and they are in a power purchase agreement to receive wind power from seven facilities located in Nebraska, Oklahoma, and Kansas. LES has their own wind generators capable of generating 1 MW. They also launched their SunShares program in Jul-2014 to allow customers to voluntarily support a local community solar project, and the 5-MW project was finished in Jun-2016 [7].

The energy mix is estimated from eGRID 2018 power plant data tool [1]. Tables C7 and C8 provide a summary of GHG emissions for each vehicle type based on the primary energy source used for driving one mile and for driving 11,556 miles annually. Detailed calculations are in Appendix D.

Table C7: Greenhouse Gas Emissions Factors (Grams Per Mile) for LES Utility Company.

	CV	E85	DV	CNG	EV
					LES 2018 (29% Renewable)
CO2 Equiv.	354.69	346.22	364.36	285.18	161.820
CO2	354.06	343.44	357.57	280.08	161.065
CO	2.8611	2.7	2.7362	2.7	0.1149
CH4 (Methane)	0.0067	0.01	0.0296	0.1025	0.0113
N2O	0.0016	0.0085	0.0203	0.0085	0.0016
NOx	0.12	0.12	0.2324	0.12	0.1647
SO2	0.0042	0.0006	0.002	0.0012	0.1181
VOC	0.1684	0.22	0.0722	0.17	0.0030

Table C8: Greenhouse Gas Emissions in lbs. for One Year.

	CV	E85	DV	CNG	EV
					LES 2018 (29% Renewable)
CO2 Equiv.	9036.309	8820.522	9282.668	7265.428	4122.638
CO2	9020.259	8749.697	9109.682	7135.497	4103.402
CO	72.891	68.787	69.709	68.787	2.927
CH4 (Methane)	0.171	0.255	0.754	2.611	0.289
N2O	0.041	0.217	0.517	0.217	0.040
NOx	3.057	3.057	5.921	3.057	4.196
SO2	0.107	0.015	0.051	0.031	3.008
VOC	4.290	5.605	1.839	4.331	0.077

e. Fremont Utilities

The Fremont Electric Service Area covers 60 square miles including the City of Fremont and the surrounding Area. The electric division provides power to 14,210 homes and businesses. The Lon D. Wright Power Plant at First and Luther Road is the utility's power production facility, and it is staffed by three shifts 24-hours a day to provide our customers economical, safe, and reliable electric service.

The coal fired plant located on the east side of Fremont has three units producing 16.5, 22, and 91.5 megawatts respectively. Each year the plant uses approximately 370,000 ton of coal to produce about 620,128 megawatt hours of electricity [8].

The energy mix is estimated from eGRID 2018 power plant data tool [1]. Tables C9 and C10 provide a summary of GHG emissions for each vehicle type based on the primary energy source used for driving one mile and for driving 11,556 miles annually. Detailed calculations are provided in Appendix D.

Table C9: Greenhouse Gas Emissions Factors (Grams Per Mile) for Fremont Utility Company.

	CV	E85	DV	CNG	EV
					Fremont 2018 (20% Renewable)
CO2 Equiv.	354.69	346.22	364.36	285.18	196.683
CO2	354.06	343.44	357.57	280.08	194.684
CO	2.8611	2.7	2.7362	2.7	0.1791
CH4 (Methane)	0.0067	0.01	0.0296	0.1025	0.0280
N2O	0.0016	0.0085	0.0203	0.0085	0.0044
NOx	0.12	0.12	0.2324	0.12	0.2082
SO2	0.0042	0.0006	0.002	0.0012	0.3163
VOC	0.1684	0.22	0.0722	0.17	0.0020

Table C10: Greenhouse Gas Emissions in lbs. for One Year.

	CV	E85	DV	CNG	EV
					Fremont 2018 (20% Renewable)
CO2 Equiv.	9036.309	8820.522	9282.668	7265.428	5010.812
CO2	9020.259	8749.697	9109.682	7135.497	4959.888
CO	72.891	68.787	69.709	68.787	4.562
CH4 (Methane)	0.171	0.255	0.754	2.611	0.713
N2O	0.041	0.217	0.517	0.217	0.111
NOx	3.057	3.057	5.921	3.057	5.305
SO2	0.107	0.015	0.051	0.031	8.058
VOC	4.290	5.605	1.839	4.331	0.052

f. Hastings Utilities

Hastings Utilities serves 56 square miles, including the city of Hastings and the village of Juniata. Most electricity is generated by the coal-fired Gerald T. Whelan Energy Center. The rest of the generation is provided by the Don Henry Power Center and the North Denver Station. The Don Henry Power Center operates primarily on natural gas, and at times fuel oil. The North Denver Station has two natural gas fired generators. The largest peak demand for Hastings Utilities was 100.7 MW in Jul-2005, but they are capable of producing approximately 135 MW. Any electricity generation that goes beyond local needs can be sold on the wholesale market, and the sales revenues help to keep local electric rates down. [9]

The energy mix is estimated from eGRID 2018 power plant data tool [1]. Tables C11 and C12 provide a summary of GHG emissions for each vehicle type based on the primary energy source used for driving one mile and for driving 11,556 miles annually. Detailed calculations are provided in Appendix D.

Table C11: Greenhouse Gas Emissions Factors (Grams Per Mile) for Hastings Utility Company.

	CV	E85	DV	CNG	EV
					Hastings 2018 (2% Renewable)
CO2 Equiv.	354.69	346.22	364.36	285.18	294.114
CO2	354.06	343.44	357.57	280.08	291.605
CO	2.8611	2.7	2.7362	2.7	0.1864
CH4 (Methane)	0.0067	0.01	0.0296	0.1025	0.0370
N2O	0.0016	0.0085	0.0203	0.0085	0.0053
NOx	0.12	0.12	0.2324	0.12	0.3241
SO2	0.0042	0.0006	0.002	0.0012	0.3493
VOC	0.1684	0.22	0.0722	0.17	0.0021

Table C12: Greenhouse Gas Emissions in lbs. for One Year.

	CV	E85	DV	CNG	EV
					Hastings 2018 (2% Renewable)
CO2 Equiv.	9036.309	8820.522	9282.668	7265.428	7493.043
CO2	9020.259	8749.697	9109.682	7135.497	7429.113
CO	72.891	68.787	69.709	68.787	4.748
CH4 (Methane)	0.171	0.255	0.754	2.611	0.942
N2O	0.041	0.217	0.517	0.217	0.136
NOx	3.057	3.057	5.921	3.057	8.257
SO2	0.107	0.015	0.051	0.031	8.899
VOC	4.290	5.605	1.839	4.331	0.054

g. Nebraska City Utilities

Nebraska City Utilities provides electric, natural gas, water and waste water service to Nebraska City and electric and natural gas service to several communities in the area. It maintains three natural gas fired power plants to serve its peaking needs as necessary and in time of grid outages. Nebraska City Utilities also has a 1.67% participation or approximately 10 MW in the OPPD Unit2 just directly south of Nebraska City. This coal fired unit is capable of producing 670 MW and went on-line in 2009. Nebraska City Utilities also has a 4.55% participation in the Public Power Generation Agency's Hastings NE WEC-2 Unit scheduled to be commercial in Feb-2011. For Projects outside the jurisdiction of the Nebraska City Utilities, Omaha Public Power District is the electric provider. Nebraska City Utilities and Omaha Public Power District are collaborative partners for projects requiring large sources or redundant power. [10]

The energy mix is estimated from eGRID 2018 power plant data tool [1]. Tables C13 and C14 provide a summary of GHG emissions for each vehicle type based on the primary energy source used for driving one mile and for driving 11,556 miles annually. Detailed calculations are provided in Appendix D.

Table C13: Greenhouse Gas Emissions Factors (Grams Per Mile) for Nebraska City Utilities.

	CV	E85	DV	CNG	EV
					Nebraska City 2018 (0% Renewable)
CO2 Equiv.	354.69	346.22	364.36	285.18	98.914
CO2	354.06	343.44	357.57	280.08	97.951
CO	2.8611	2.7	2.7362	2.7	0.0954
CH4 (Methane)	0.0067	0.01	0.0296	0.1025	0.0141
N2O	0.0016	0.0085	0.0203	0.0085	0.0020
NOx	0.12	0.12	0.2324	0.12	0.0536
SO2	0.0042	0.0006	0.002	0.0012	0.1702
VOC	0.1684	0.22	0.0722	0.17	0.0011

Table C14: Greenhouse Gas Emissions in lbs. for One Year.

	CV	E85	DV	CNG	EV
					Nebraska City 2018 (0% Renewable)
CO2 Equiv.	9036.309	8820.522	9282.668	7265.428	2519.993
CO2	9020.259	8749.697	9109.682	7135.497	2495.465
CO	72.891	68.787	69.709	68.787	2.431
CH4 (Methane)	0.171	0.255	0.754	2.611	0.359
N2O	0.041	0.217	0.517	0.217	0.052
NOx	3.057	3.057	5.921	3.057	1.365
SO2	0.107	0.015	0.051	0.031	4.336
VOC	4.290	5.605	1.839	4.331	0.028

h. Wayne Energy Mix

The city of Wayne receives 56% of its power from oil resource, and 44% from the renewable resource, mainly from wind [11][12].

The energy mix is estimated from eGRID 2018 power plant data tool [1]. Tables C15 and C16 provide a summary of GHG emissions for each vehicle type based on the primary energy source used for driving one mile and for driving 11,556 miles annually. Detailed calculations are provided in Appendix D.

Table C15: Greenhouse Gas Emissions Factors (Grams per Mile) for Wayne Energy Mix.

	CV	E85	DV	CNG	EV
					Wayne 2018 (46% Renewable)
CO2 Equiv.	354.69	346.22	364.36	285.18	126.464
CO2	354.06	343.44	357.57	280.08	126.038
CO	2.8611	2.7	2.7362	2.7	0.0243
CH4 (Methane)	0.0067	0.01	0.0296	0.1025	0.0051
N2O	0.0016	0.0085	0.0203	0.0085	0.0010
NOx	0.12	0.12	0.2324	0.12	2.4802
SO2	0.0042	0.0006	0.002	0.0012	0.2237
VOC	0.1684	0.22	0.0722	0.17	0.0031

Table C16: Greenhouse Gas Emissions in lbs. for One Year.

	CV	E85	DV	CNG	EV
					Wayne 2018 (46% Renewable)
CO2 Equiv.	9036.309	8820.522	9282.668	7265.428	3221.878
CO2	9020.259	8749.697	9109.682	7135.497	3211.026
CO	72.891	68.787	69.709	68.787	0.619
CH4 (Methane)	0.171	0.255	0.754	2.611	0.131
N2O	0.041	0.217	0.517	0.217	0.025
NOx	3.057	3.057	5.921	3.057	63.187
SO2	0.107	0.015	0.051	0.031	5.699
VOC	4.290	5.605	1.839	4.331	0.079

5.3. References

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6. Appendix D. Detailed Greenhouse Gas Calculations

6.1. Conventional Vehicle (CV)

Carbon Dioxide (CO_2) Emissions

The EPA has stated that burning 1 gallon of gasoline emits 8,887 grams of CO2 emissions. [1]

CO_2 emissions from burning 1 gallon of gasoline = 8,887 grams

Average fuel economy for the model year 2018 = 25.1 mpg [3]

CO_2 emissions per mile = 8,887 /25.1 = **354.06 grams CO_2 per mile**

Methane (CH_4) Emissions

Methane emissions are based on emission factors for GHG Inventories, last modified on Mar 26th, 2020. Mobile Combustion CH4 emission factors for on-road gasoline vehicles for model year 2018 is **0.00665 g of CH_4 per mile** [4].

Nitrous Oxide (N_2O) Emissions

Nitrous Oxide emissions are based on emission factors for GHG Inventories, last modified on Mar 26th, 2020. Mobile Combustion N_2O emission factors for on-road gasoline vehicles for model year 2018 **is 0.00155 g of N_2O per mile [**4].

Carbon Monoxide (CO) Emissions

A 2013 report by Argonne National Laboratory uses a lifetime mileage-weighted average air pollutant emission factors for gasoline passenger cars for model years 1990-2020 to estimate the CO emission factors for 2018 to be **2.8611 g of CO per mile** [5].

Sulfur Dioxide (SO_2) Emissions

Using the same 2013 report by Argonne National Laboratory, the SO_2 emission factor for model year 2018 is estimated to be **0.0042 g of SO_2 per mile** [5].

Nitrogen Oxides (NO_x) Emissions

Using the same 2013 report by Argonne National Laboratory, the NO_x emission factor for model year 2018 is estimated to be **0.12 g of NO_x per mile** [5].

Volatile Organic Compound (VOC) Emissions

The VOC emission factors were estimated in the 2013 report by Argonne National Laboratory, including the exhaust and evaporation separately.

Model Year	VOC, exhaust (g/mile)	VOC, evaporation	Total
2018	0.1078	0.0604	0.1684

The total emission factor is **0.1684 g of VOC per mile** [5].

Carbon Dioxide Equivalent Emissions

Using the individual emissions values calculated above, CVs have a CO_2 equivalent emissions rate of: CO_2 Equivalent = 1*CO_2 emissions + 28*CH_4 emissions + 265*N_2O emissions

= (1***354.06** g) + (25***0.00665**g) + (298***0.00155**)

= **354.6882 g**

6.2. Diesel Vehicle (DV)

Carbon Dioxide (CO_2) Emissions

For CO_2 emissions from burning a gallon of diesel = 10,180 CO_2/gallon [1]
For the model year 2018, the average mileage for a diesel vehicle is 28.47 mpg. [2]
CO_2 emissions per mile = 10,180 / 28.47 = **357.57 g of CO_2 per mile**

Methane (CH_4) Emissions

Methane emissions are based on emission factors for GHG Inventories, last modified on Mar 26th, 2020. Mobile Combustion CH_4 emission factors for on-road diesel vehicles for model year 2007-2018 is **0.0296 g of CH_4 per mile** [4].

Nitrous Oxide (N_2O) Emissions

Nitrous Oxide emissions are based on emission factors for GHG Inventories, last modified on Mar 26th, 2020. Mobile Combustion N_2O emission factors for on-road diesel vehicles for model year 2007-2018 is **0.0203 g of N_2O per mile** [4].

Carbon Monoxide (CO) Emissions

A 2013 report by Argonne National Laboratory uses a lifetime mileage-weighted average air pollutant emission factors for diesel passenger cars for model years 2001-2020 to estimate the CO emission factors for 2016 to be **2.7362 g of CO per mile** [5].

Nitrogen Oxides (NO_x) Emissions

Using the same 2013 report by Argonne National Laboratory, the NO_x emission factor for 2016 is estimated to be **0.2324 g of NO_x per mile** [5].

Sulfur Dioxide (SO_2) Emissions

Using the same 2013 report by Argonne National Laboratory, the SO2 emission factor for 2016 is estimated to be **0.0020 g of SO_2 per mile** [5].

Volatile Organic Compound (VOC) Emissions

The VOC emission factors were estimated in the 2013 report by Argonne National Laboratory, including the exhaust and evaporation separately.

Model Year	VOC, exhaust (g/mile)	VOC, evaporation	Total
2018	0.0722	------	0.0722

The total emission factor for is **0.0722 g of VOC per mile** [5].

Carbon Dioxide Equivalent (CO_2) Emissions

Using the individual emission rates calculated above, the CO_2 equivalent rate is:

CO_2 Equivalent = 1*CO_2 emissions + 28*CH_4 emissions + 265*N_2O emissions

= 1*357.57 + 25*0.0296 + 298*0.0203

= **364.3594 grams CO_2 per mile.**

6.3. Compressed Natural Gas Vehicle (CNG)

Carbon Dioxide (CO_2) Emissions

Vehicles converted to CNG generally achieve a mpg equivalent similar to its mpg rating when running on gasoline; hence, the fuel economy used is similar to that of CV, 25.1 mpg.
EPA's TRENDS for light-duty automotive technology, carbon dioxide emissions, and fuel economy trends: 1975 through 2016 reports the emission factor per gallon of gas equivalent as:

7030 g/gallon / 25.1 = **280.08 g of CO_2 per mile** [6]

Methane (CH_4) Emissions

Methane emissions are based on emission factors for GHG Inventories, last modified on Mar 26th, 2020. Mobile Combustion CH_4 emission factors for CNG light-duty vehicles for model year 1996-present is **0.1025 g of CH_4 per mile** [4].

Nitrous Oxide (N_2O) Emissions

Nitrous Oxide emissions are based on emission factors for GHG Inventories, last modified on Mar 26th, 2020. Mobile Combustion N_2O emission factors for CNG light-duty vehicles for model year 1996-present is **0.0085 g of N_2O per mile** [4].

Carbon Monoxide (CO) Emissions

According to a 2015 pump-to-wheel simulation, a regular CNG vehicle emits **2.700 grams of CO per mile** [7].

Nitrogen Oxides (NO_x) Emissions

The same simulation found that CNG passenger vehicles emit **0.12 grams NO_x per mile.** [7]

Sulfur Dioxide (SO_2) Emissions

The same simulation found that CNG passenger vehicles emit **0.0012 grams SO_2 per mile.** [7]

Volatile Organic Compound (VOC) Emissions

The same simulation found that CNG passenger vehicles emit **0.17 grams VOC per mile.** [7]

Carbon Dioxide Equivalent (CO_2e) Emissions

Using the individual emissions values calculated above, CNG passenger vehicles have a CO_2 equivalent emissions rate of:

CO_2 Equivalent = 1*CO_2 emissions + 25*CH_4 emissions + 298*N_2O emissions

= 1* 280.08 + 25* 0.1025 + 298*0.0085

= **285.18 grams CO_2e per mile.**

6.4. Flexible Fuel Vehicles (FFVs) – E85

Carbon Dioxide (CO_2) Emissions

Flexible fuel vehicles (FFVs) can run on gasoline or gasoline-ethanol blends of up to 85% ethanol (E85). There are few engine and fuel system modifications, but mostly they are identical to gasoline-only models. The fuel economy used is 73% of the conventional vehicle (CV) fuel economy based on 25.1 mpg data. The fuel economy used in the calculations is 18.3 mpg. [9] EPA's TRENDS for light-duty automotive technology, carbon dioxide emissions, and fuel economy trends: 2019 reports the emission factor per gallon of gas equivalent as:

0.97 * 354.06 = **343.44 g of CO_2 per mile** [8]

Alternate method to verify Carbon Dioxide (CO_2) Emissions

Office of Energy efficiency and Renewable energy, US DOE, publishes fuel economy and tail-pipe emissions for all cars in a model year [9]. To verify the calculations for miles per gallon and carbon emissions for a CV and E85 vehicle, the following table will help visualize the difference for the model year 2018.

Model Name	mpg of CV	mpg of E85	%mpg of E85 to CV	g/mi of E85	g/mi of CV	%emission of E85 less than CV
2018 Mercedes-Benz CLA250 4matic	27	20	74.07	328	328	0.000
2018 Mercedes-Benz GLA250 4matic	26	19	73.08	337	337	0.000
2018 Jeep Renegade 2WD	25	19	76.00	331	357	7.283
2018 Jeep Cherokee FWD	25	18	72.00	351	361	2.770
2018 Ford Escape FWD FFV	24	18	75.00	353	369	4.336
2018 Jeep Cherokee 4WD	23	17	73.91	372	378	1.587
2018 Ford Transit Connect Van FFV	23	17	73.91	375	392	4.337
2018 Chrysler 300	23	17	73.91	376	389	3.342
2018 Dodge Charger	23	17	73.91	376	389	3.342
2018 Ford F150 Pickup 2WD FFV	22	16	72.73	393	407	3.440
2018 Ford Transit Connect Wagon FFV	22	16	72.73	388	404	3.960

Model name	mpg of CV	mpg of E85	%mpg of E85 to CV	g/mi of E85	g/mi of CV	%emission of E85 less than CV
2018 Ford Transit Connect Wagon LWB FFV	22	16	72.73	388	404	3.960
2018 Chevrolet Impala	22	16	72.73	394	409	3.667
2018 Ford F150 2WD FFV BASE PAYLOAD LT TIR	21	16	76.19	393	423	7.092
2018 Chrysler 300 AWD	21	16	76.19	399	415	3.855
2018 Dodge Charger AWD	21	16	76.19	399	415	3.855
2018 Ford Taurus FWD FFV	21	16	76.19	401	423	5.201
2018 Chevrolet Silverado C15 2WD	20	14	70.00	457	448	-2.009
2018 GMC Sierra C15 2WD	20	14	70.00	457	448	-2.009
2018 Ford F150 Pickup 4WD FFV	20	15	75.00	421	437	3.661
2018 Dodge Grand Caravan	20	14	70.00	440	445	1.124
2018 Ram 1500 2WD	20	14	70.00	455	450	-1.111
2018 Ford Explorer 2WD FFV	20	15	75.00	433	455	4.835
2018 Mercedes-Benz GLE350 4matic	19	14	73.68	429	457	6.127
2018 Dodge Journey	19	14	73.68	440	456	3.509
2018 Ford Taurus AWD FFV	19	14	73.68	437	467	6.424
2018 Ford F150 Pickup 2WD FFV	19	14	73.68	455	457	0.438
2018 Chevrolet Silverado K15 4WD	19	13	68.42	476	473	-0.634
2018 Ford F150 4WD FFV BASE PAYLOAD LT TIRE	19	15	78.95	420	467	10.064
2018 GMC Sierra K15 4WD	19	13	68.42	477	474	-0.633
2018 Chevrolet Silverado C15 2WD	19	14	73.68	455	475	4.211
2018 Chevrolet Suburban C1500 2WD	19	14	73.68	443	468	5.342
2018 Chevrolet Tahoe C1500 2WD	19	14	73.68	443	468	5.342
2018 GMC Sierra C15 2WD	19	14	73.68	456	475	4.000
2018 GMC Yukon C1500 2WD	19	14	73.68	443	468	5.342
2018 GMC Yukon C1500 XL 2WD	19	14	73.68	443	468	5.342

Model name	mpg of CV	mpg of E85	%mpg of E85 to CV	g/mi of E85	g/mi of CV	%emission of E85 less than CV
2018 Ram 1500 4WD	19	13	68.42	482	475	-1.474
2018 Chevrolet Silverado K15 4WD	18	13	72.22	489	489	0.000
2018 Chevrolet Tahoe K1500 4WD	18	13	72.22	482	497	3.018
2018 Ford Explorer AWD FFV	18	14	77.78	464	483	3.934
2018 Ford F150 Pickup 4WD FFV	18	13	72.22	478	498	4.016
2018 GMC Sierra K15 4WD	18	13	72.22	489	489	0.000
2018 GMC Yukon K1500 4WD	18	13	72.22	482	497	3.018
2018 Nissan Frontier 2WD FFV	18	13	72.22	471	494	4.656
2018 Ford F150 2WD FFV BASE PAYLOAD	18	14	77.78	456	491	7.128
2018 Chevrolet Suburban K1500 4WD	18	12	66.67	515	504	-2.183
2018 GMC Yukon K1500 XL 4WD	18	12	66.67	515	504	-2.183
2018 Ford F150 4WD FFV BASE PAYLOAD	17	13	76.47	481	522	7.854
2018 Ford F150 5.0L 2WD FFV GVWR>7599 LBS	17	14	82.35	455	520	12.500
2018 Nissan Frontier 4WD FFV	17	12	70.59	503	520	3.269
2018 Ford F150 5.0L 4WD FFV GVWR>7599 LBS	17	13	76.47	498	523	4.780
2018 Ford Transit T150 Wagon FFV	16	11	68.75	548	570	3.860
2018 Toyota Tundra 4WD FFV	15	10	66.67	622	604	-2.980
2018 Toyota Sequoia 4WD FFV	14	10	71.43	594	614	3.257
Average			**73.10**	441.81	456.48	**3.220**

The average fuel economy of E85 vehicle is **73.10%** to that of CV.

% emission of E85 vehicle is **3.22%** less than % emission of CV.

Methane (CH_4) Emissions

Methane emissions are based on emission factors for GHG Inventories, last modified on Mar 26th, 2020. Mobile Combustion CH_4 emission factors for CNG light-duty vehicles for model year 1996-present is **0.01 g of CH_4 per mile** [4].

Nitrous Oxide (N_2O) Emissions

Nitrous Oxide emissions are based on emission factors for GHG Inventories, last modified on Mar 26th, 2020. Mobile Combustion N_2O emission factors for CNG light-duty vehicles for model year 1996-present is **0.0085 g of N_2O per mile** [4].

Carbon Monoxide (CO) Emissions

According to a 2015 pump-to-wheel simulation, a regular CNG vehicle emits **2.700 grams of CO per mile** [7].

Nitrogen Oxides (NO_x) Emissions

The same simulation found that CNG passenger vehicles emit **0.12 grams NO_x per mile.** [7]

Sulfur Dioxide (SO_2) Emissions

The same simulation found that CNG passenger vehicles emit **0.0006 grams SO_2 per mile.** [7]

Volatile Organic Compound (VOC) Emissions

The same simulation found that CNG passenger vehicles emit **0.22 grams VOC per mile.** [7]

Carbon Dioxide Equivalent (CO_2e) Emissions

Using the individual emissions values calculated above, CNG passenger vehicles have a CO_2 equivalent emissions rate of:

CO_2 Equivalent = 1*CO_2 emissions + 25*CH_4 emissions + 298*N_2O emissions

= 1* 280.08 + 25* 0.1025 + 298*0.0085

= **346.22 grams CO_2e per mile.**

6.5. Battery Electric Vehicle (EV)

6.5.1. Vehicle Efficiency Calculation

EV vehicle: 115 MpGe , based on the combined fuel economy average (city and highway) of all the vehicle types (make and model) published in the Fuel Economy Guide for the year 2020 [15].

The process to convert from MPGe to miles per kWh is as follows:
1 gallon equivalent = 33.7 kWh (it takes 33.7 kWh to create the same amount of heat as burning 1 gallon of gasoline) [16].

115 MPGe / 33.7 kWh/gallon = **3.412 miles per kWh**

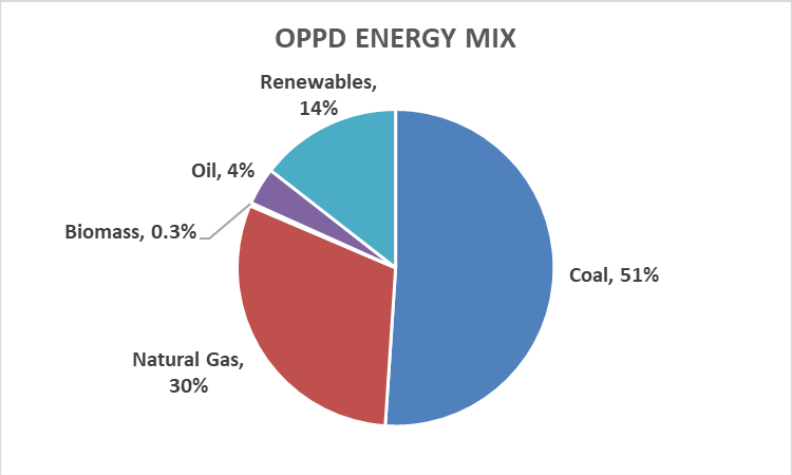
6.5.2. Electricity Generation Mix and Emissions Calculations

The electricity generation mix and associated emissions for all the electric utility providers serving the participating members is calculated using the eGRID 2018 power plant data tool published by EPA [10]. The CO and VOC emission data are not provided in the tool, and hence, baseline emission rates are used as per a report published by the California Environmental Protection Agency (CEPA) in 2009 [11].

a. Omaha Public Power District (OPPD) Data Analysis - Commercial

Electricity Generation Mix

The energy mix has been estimated as per the eGRID 2018 power plant data tool [10]. The tables below show the emission calculations.



Carbon Dioxide (CO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO_2 Emission per kWh [10]		Contribution to Total Grams of CO_2 Emission per kWh
Coal	51.05%	x	990.4	=	505.6
Natural Gas	30.36%	x	861.79	=	261.7
Biomass	0.32%	x	32.0	=	0.1022
Oil	3.81%	x	0	=	0
Renewables	14.46%	x	0	=	0

Total	grams/kWh	767.4
	grams/mile	224.85

Carbon Monoxide (CO) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO Emission per kWh [11]		Contribution to Total Grams of CO Emission per kWh
Coal	51.05%	x	1.0006	=	0.5108
Natural Gas	30.36%	x	0.1953	=	0.0593
Biomass	0.32%	x	0.8160	=	0.0026
Oil	3.81%	x	0.1546	=	0.0059
Renewables	14.46%	x	0	=	0

Total	grams/kWh	0.579
	grams/mile	0.170

Methane (CH_4) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CH_4 Emission per kWh [10]		Contribution to Total Grams of CH_4 Emission per kWh
Coal	51.05%	x	0.111	=	0.057
Natural Gas	30.36%	x	0.042	=	0.0127
Biomass	0.32%	x	0.003	=	0.0000
Oil	3.81%	x	0	=	0
Renewables	14.46%	x	0	=	0

Total	grams/kWh	0.0695
	grams/mile	0.020

Nitrous Oxide (N_2O) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of N_2O Emission per kWh [10]		Contribution to Total Grams of N_2O Emission per kWh
Coal	51.05%	x	0.0161	=	0.00820
Natural Gas	30.36%	x	0.0058	=	0.00176
Biomass	0.32%	x	0.0002	=	0.000001
Oil	3.81%	x	0	=	0
Renewables	14.46%	x	0	=	0

Total	grams/kWh	0.010
	grams/mile	0.0029

Sulfur Dioxide (SO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of SO_2 Emission per kWh [10]		Contribution to Total Grams of SO_2 Emission per kWh
Coal	51.05%	x	1.722	=	0.8793
Natural Gas	30.36%	x	1.104	=	0.3352
Biomass	0.32%	x	0.117	=	0.0004
Oil	3.81%	x	0	=	0
Renewables	14.46%	x	0	=	0

Total	grams/kWh	1.215
	grams/mile	0.356

Nitrogen Oxides (NO_x) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of NO_x Emission per kWh [10]		Contribution to Total Grams of NO_x Emission per kWh
Coal	51.05%	x	0.819	=	0.4180
Natural Gas	30.36%	x	2.026	=	0.6151
Biomass	0.32%	x	4.200	=	0.0134
Oil	3.81%	x	0	=	0
Renewables	14.46%	x	0	=	0

Total	grams/kWh	1.046
	grams/mile	0.307

Volatile Organic Compound (VOC) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of VOC Emission per kWh [11]		Contribution to Total Grams of VOC Emission per kWh
Coal	51.05%	x	0.0114	=	0.0058
Natural Gas	30.36%	x	0.0169	=	0.0051
Biomass	0.32%	x	0.0570	=	0.0002
Oil	3.81%	x	0.0198	=	0.0008
Renewables	14.46%	x	0	=	0

Total	grams/kWh	0.0119
	grams/mile	0.0035

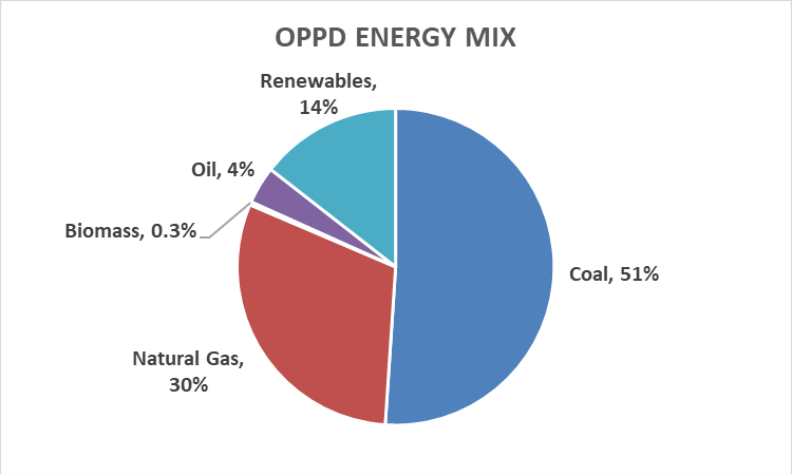
Carbon Dioxide Equivalent (CO_2e) Emissions

Contributing Gas	grams/mile		GWP		Contribution to Total CO2e Emission
CO2	224.85	x	1	=	224.8482053
CH4	0.020	x	25	=	0.509135599
N2O	0.0029	x	298	=	0.86988211
			Total	grams/mile	226.23

b. Omaha Public Power District (OPPD) Data Analysis – Utility/Residential

Electricity Generation Mix

The energy mix has been estimated as per the eGRID 2018 power plant data tool [10]. The tables below show the emission calculations.



Carbon Dioxide (CO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO_2 Emission per kWh [10]		Contribution to Total Grams of CO_2 Emission per kWh
Coal	51.05%	x	990.4	=	505.6
Natural Gas	30.36%	x	861.79	=	261.7
Biomass	0.32%	x	32.0	=	0.1022
Oil	3.81%	x	0	=	0
Renewables	14.46%	x	0	=	0

Total	grams/kWh	767.4
	grams/mile	224.85

Carbon Monoxide (CO) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO Emission per kWh [11]		Contribution to Total Grams of CO Emission per kWh
Coal	51.05%	x	1.0006	=	0.5108
Natural Gas	30.36%	x	0.1953	=	0.0593
Biomass	0.32%	x	0.8160	=	0.0026
Oil	3.81%	x	0.1546	=	0.0059
Renewables	14.46%	x	0	=	0

Total	grams/kWh	0.579
	grams/mile	0.170

Methane (CH_4) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CH_4 Emission per kWh [10]		Contribution to Total Grams of CH_4 Emission per kWh
Coal	51.05%	x	0.111	=	0.057
Natural Gas	30.36%	x	0.042	=	0.0127
Biomass	0.32%	x	0.003	=	0.0000
Oil	3.81%	x	0	=	0
Renewables	14.46%	x	0	=	0

Total	grams/kWh	0.0695
	grams/mile	0.020

Nitrous Oxide (N_2O) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of N_2O Emission per kWh [10]		Contribution to Total Grams of N_2O Emission per kWh
Coal	51.05%	x	0.0161	=	0.00820
Natural Gas	30.36%	x	0.0058	=	0.00176
Biomass	0.32%	x	0.0002	=	0.000001
Oil	3.81%	x	0	=	0
Renewables	14.46%	x	0	=	0

Total	grams/kWh	0.010
	grams/mile	0.0029

Sulfur Dioxide (SO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of SO_2 Emission per kWh [10]		Contribution to Total Grams of SO_2 Emission per kWh
Coal	51.05%	x	1.722	=	0.8793
Natural Gas	30.36%	x	1.104	=	0.3352
Biomass	0.32%	x	0.117	=	0.0004
Oil	3.81%	x	0	=	0
Renewables	14.46%	x	0	=	0

Total	grams/kWh	1.215
	grams/mile	0.356

Nitrogen Oxides (NO_x) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of NO_x Emission per kWh [10]		Contribution to Total Grams of NO_x Emission per kWh
Coal	51.05%	x	0.819	=	0.4180
Natural Gas	30.36%	x	2.026	=	0.6151
Biomass	0.32%	x	4.200	=	0.0134
Oil	3.81%	x	0	=	0
Renewables	14.46%	x	0	=	0

Total	grams/kWh	1.046
	grams/mile	0.307

Volatile Organic Compound (VOC) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of VOC Emission per kWh [11]		Contribution to Total Grams of VOC Emission per kWh
Coal	51.05%	x	0.0114	=	0.0058
Natural Gas	30.36%	x	0.0169	=	0.0051
Biomass	0.32%	x	0.0570	=	0.0002
Oil	3.81%	x	0.0198	=	0.0008
Renewables	14.46%	x	0	=	0

Total	grams/kWh	0.0119
	grams/mile	0.0035

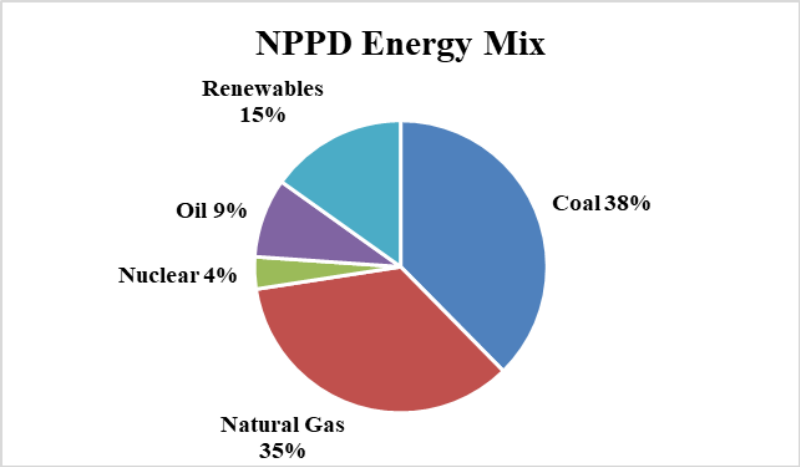
Carbon Dioxide Equivalent (CO_2e) Emissions

Contributing Gas	grams/mile		GWP		Contribution to Total CO2e Emission
CO2	224.85	x	1	=	224.8482053
CH4	0.020	x	25	=	0.509135599
N2O	0.0029	x	298	=	0.86988211
			Total	grams/mile	226.23

c. Nebraska Public Power District (NPPD) Data Analysis

Electricity Generation Mix

The energy mix has been estimated as per the eGRID 2018 power plant data tool [10]. The tables below show the emission calculations.



Carbon Dioxide (CO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO_2 Emission per kWh [10]		Contribution to Total Grams of CO_2 Emission per kWh
Coal	37.63%	x	999.1	=	376.0
Natural Gas	34.92%	x	644.1	=	224.9
Nuclear	3.55%	x	0	=	0
Oil	8.77%	x	929.3	=	81.46
Renewables	15.13%	x	0	=	0
			Total	grams/kWh	682.4
				grams/mile	199.93

Carbon Monoxide (CO) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO Emission per kWh [11]		Contribution to Total Grams of CO Emission per kWh
Coal	37.63%	x	1.0006	=	0.377
Natural Gas	34.92%	x	0.195	=	0.068
Nuclear	3.55%	x	0	=	0.000
Oil	8.77%	x	0.155	=	0.014
Renewables	15.13%	x	0	=	0.000
			Total	grams/kWh	0.458
				grams/mile	0.134

Methane (CH_4) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CH_4 Emission per kWh [10]		Contribution to Total Grams of CH_4 Emission per kWh
Coal	37.63%	x	0.126	=	0.0474
Natural Gas	34.92%	x	0.013	=	0.0044
Nuclear	3.55%	x	0	=	0
Oil	8.77%	x	0.037	=	0.0032
Renewables	15.13%	x	0	=	0
			Total	grams/kWh	0.055
				grams/mile	0.0161

Nitrous Oxide (N_2O) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of N_2O Emission per kWh [10]		Contribution to Total Grams of N_2O Emission per kWh
Coal	37.63%	x	0.018	=	0.007
Natural Gas	34.92%	x	0.002	=	0.0006
Nuclear	3.55%	x	0	=	0
Oil	8.77%	x	0.007	=	0.0006
Renewables	15.13%	x	0	=	0
			Total	grams/kWh	0.008
				grams/mile	0.0024

Sulfur Dioxide (SO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of SO_2 Emission per kWh [10]		Contribution to Total Grams of SO_2 Emission per kWh
Coal	37.63%	x	2.616	=	0.985
Natural Gas	34.92%	x	0.152	=	0.0532
Nuclear	3.55%	x	0	=	0
Oil	8.77%	x	2.390	=	0.2095
Renewables	15.13%	x	0	=	0
			Total	grams/kWh	1.247
				grams/mile	0.3654

Nitrogen Oxides (NOx) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of NO_x Emission per kWh [10]		Contribution to Total Grams of NO_x Emission per kWh
Coal	37.63%	x	0.931	=	0.350
Natural Gas	34.92%	x	2.574	=	0.8989
Nuclear	3.55%	x	0	=	0
Oil	8.77%	x	10.093	=	0.8847
Renewables	15.13%	x	0	=	0
			Total	grams/kWh	2.134
				grams/mile	0.6252

Volatile Organic Compound (VOC) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of VOC Emission per kWh [11]		Contribution to Total Grams of VOC Emission per kWh
Coal	37.63%	x	0.011	=	0.004
Natural Gas	34.92%	x	0.017	=	0.0059
Nuclear	3.55%	x	0	=	0
Oil	8.77%	x	0.020	=	0.0017
Renewables	15.13%	x	0	=	0
			Total	grams/kWh	0.012
				grams/mile	0.0035

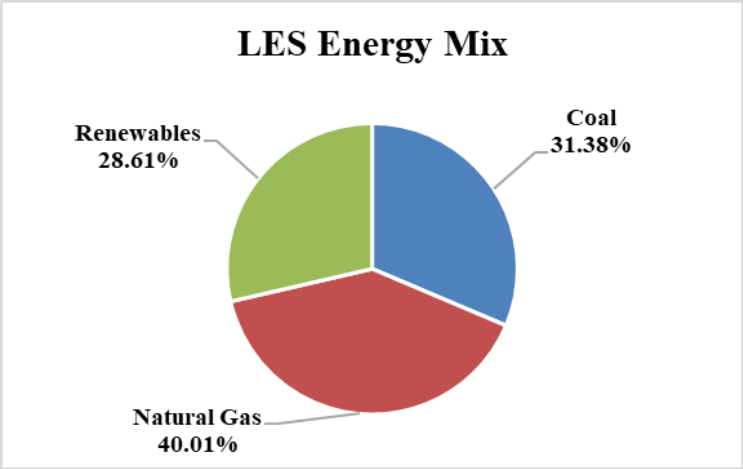
Carbon Dioxide Equivalent (CO_2e) Emissions

Contributing Gas	grams/mile		GWP		Contribution to Total CO_2e Emission
CO2	199.93	x	1	=	199.9327846
CH4	0.016	x	25	=	0.403446221
N2O	0.0024	x	298	=	0.707721896
			Total	grams/mile	201.04

d. Lincoln Electric System (LES) Data Analysis

Electricity Generation Mix

The energy mix has been estimated as per the eGRID 2018 power plant data tool [10]. The tables below show the emission calculations.



Carbon Dioxide (CO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO_2 Emission per kWh [10]		Contribution to Total Grams of CO_2 Emission per kWh
Coal	31.38%	x	1009.1	=	316.6
Natural Gas	40.01%	x	582.5	=	233.1
Renewables	28.61%	x	0	=	0
			Total	grams/kWh	549.716
				grams/mile	161.065

Carbon Monoxide (CO) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO Emission per kWh [11]		Contribution to Total Grams of CO Emission per kWh
Coal	31.38%	x	1.0006	=	0.314
Natural Gas	40.01%	x	0.1953	=	0.078
Renewables	28.61%	x	0	=	0
			Total	grams/kWh	0.392
				grams/mile	0.1149

Methane (CH_4) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CH_4 Emission per kWh [10]		Contribution to Total Grams of CH_4 Emission per kWh
Coal	31.38%	x	0.1	=	0.0342
Natural Gas	40.01%	x	0.0	=	0.0045
Renewables	28.61%	x	0	=	0
			Total	grams/kWh	0.039
				grams/mile	0.0113

Nitrous Oxide (N_2O) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of N_2O Emission per kWh [10]		Contribution to Total Grams of N_2O Emission per kWh
Coal	31.38%	x	0.0	=	0.0050
Natural Gas	40.01%	x	0.0	=	0.0004
Renewables	28.61%	x	0	=	0
			Total	grams/kWh	0.005
				grams/mile	0.0016

Sulfur Dioxide (SO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of SO_2 Emission per kWh [10]		Contribution to Total Grams of SO_2 Emission per kWh
Coal	31.38%	x	1.3	=	0.402
Natural Gas	40.01%	x	0.0	=	0.0011
Renewables	28.61%	x	0	=	0
			Total	grams/kWh	0.403
				grams/mile	0.1181

Nitrogen Oxides (NO_x) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of NO_X Emission per kWh [10]		Contribution to Total Grams of NO_X Emission per kWh
Coal	31.38%	x	0.7	=	0.235
Natural Gas	40.01%	x	0.8	=	0.3271
Renewables	28.61%	x	0	=	0
			Total	grams/kWh	0.562
				grams/mile	0.1647

Volatile Organic Compound (VOC) Emissions

Coal	Percentage of Total Energy Production [10]		Grams of VOC Emission per kWh [11]		Contribution to Total Grams of VOC Emission per kWh
Coal	31.38%	x	0.011	=	0.004
Natural Gas	40.01%	x	0.017	=	0.0068
Renewables	28.61%	x	0	=	0
			Total	grams/kWh	0.010
				grams/mile	0.0030

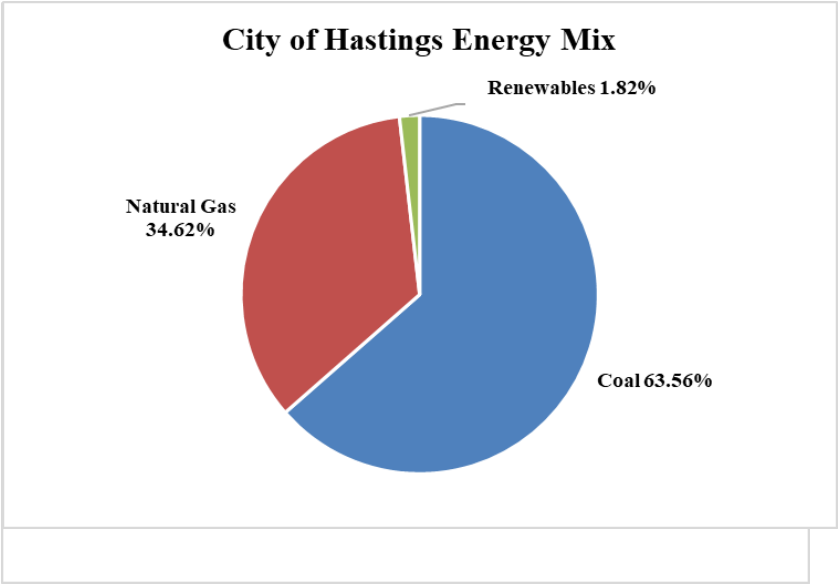
Carbon Dioxide Equivalent (CO_2e) Emissions

Contributing Gas	grams/mile		GWP		Contribution to Total CO_2e Emission
CO2	161.07	x	1	=	161.0652579
CH4	0.011	x	25	=	0.283117752
N2O	0.0016	x	298	=	0.471934992
			Total	grams/mile	161.82

e. City of Hastings Utilities Data Analysis

Electricity Generation Mix

As per the city website, power is supplied to the city of Hastings by three plants: Gerald Whelan Energy Center, North Denver Station, and the Don Henry Power Station [12]. Amongst the renewable small amount of power is also generated by the wind energy farm at CCC Hastings Wind Turbine and solar at Hastings Community Solar Farm [10]. The energy mix has been estimated as per the eGRID 2018 power plant data tool [10].



Carbon Dioxide (CO2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO_2 Emission per kWh [10]		Contribution to Total Grams of CO_2 Emission per kWh
Coal	63.56%	x	1091.1	=	693.6
Natural Gas	34.62%	x	871	=	301.7
Renewables	1.82%	x	0	=	0
			Total	grams/kWh	995.248
				grams/mile	291.605

Carbon Monoxide (CO) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO Emission per kWh [11]		Contribution to Total Grams of CO Emission per kWh
Coal	64.67%	x	1.0006	=	0.647
Natural Gas	33.49%	x	0	=	0.000
Renewables	1.85%	x	0	=	0
			Total	grams/kWh	0.647
				grams/mile	0.1896

Methane (CH_4) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CH_4 Emission per kWh [10]		Contribution to Total Grams of CH_4 Emission per kWh
Coal	63.56%	x	0.2	=	0.1205
Natural Gas	34.62%	x	0	=	0.0057
Renewables	1.82%	x	0	=	0
			Total	grams/kWh	0.126
				grams/mile	0.0370

Nitrous Oxide (N_2O) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of N_2O Emission per kWh [10]		Contribution to Total Grams of N_2O Emission per kWh
Coal	63.56%	x	0.0	=	0.0176
Natural Gas	34.62%	x	0	=	0.0006
Renewables	1.82%	x	0	=	0
			Total	grams/kWh	0.018
				grams/mile	0.0053

Sulfur Dioxide (SO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of SO_2 Emission per kWh [10]		Contribution to Total Grams of SO_2 Emission per kWh
Coal	63.56%	x	1.9	=	1.184
Natural Gas	34.62%	x	0	=	0.0083
Renewables	1.82%	x	0	=	0
			Total	grams/kWh	1.192
				grams/mile	0.3493

Nitrogen Oxides (NOx) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of NO_x Emission per kWh [10]		Contribution to Total Grams of NO_x Emission per kWh
Coal	63.56%	x	0.5	=	0.343
Natural Gas	34.62%	x	2	=	0.7627
Renewables	1.82%	x	0	=	0
			Total	grams/kWh	1.106
				grams/mile	0.3241

Volatile Organic Compound (VOC) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of VOC Emission per kWh [11]		Contribution to Total Grams of VOC Emission per kWh
Coal	64.67%	x	0.011	=	0.007
Natural Gas	33.49%	x	0	=	0.0000
Renewables	1.85%	x	0	=	0
			Total	grams/kWh	0.007
				grams/mile	0.0022

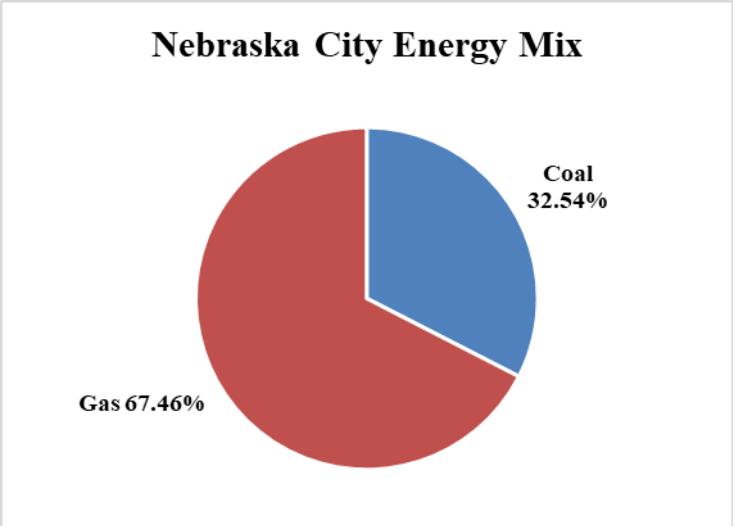
Carbon Dioxide Equivalent (CO_2e) Emissions

Contributing Gas	grams/mile		GWP		Contribution to Total CO_2e Emission
CO2	291.60	x	1	=	291.6049132
CH4	0.037	x	25	=	0.92427471
N2O	0.0053	x	298	=	1.5850821
			Total	grams/mile	294.11

f. Nebraska City Utilities Data Analysis

Electricity Generation Mix

According to the Nebraska City Area Economic Development website, Nebraska City maintains its own natural gas-powered plants for peaking needs, and draws power partially from Nebraska City Station (1.67%) and Gerald Whelan Energy Center (4.55%) [13]. The energy mix has been estimated as per the eGRID 2018 power plant data tool [10].



Carbon Dioxide (CO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO_2 Emission per kWh [10]		Contribution to Total Grams of CO_2 Emission per kWh
Coal	32.54%	x	1027.3	=	334.3
Natural Gas	67.46%	x	0	=	0.0
			Total	grams/kWh	334.307
				grams/mile	97.951

Carbon Monoxide (CO) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO Emission per kWh [11]		Contribution to Total Grams of CO Emission per kWh
Coal	32.54%	x	1.0006	=	0.326
Natural Gas	67.46%	x	0	=	0.000
			Total	grams/kWh	0.326
				grams/mile	0.0954

Methane (CH_4) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CH_4 Emission per kWh [10]		Contribution to Total Grams of CH_4 Emission per kWh
Coal	32.54%	x	0.1	=	0.0481
Natural Gas	67.46%	x	0	=	0.0000
			Total	grams/kWh	0.048
				grams/mile	0.0141

Nitrous Oxide (N_2O) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of N_2O Emission per kWh [10]		Contribution to Total Grams of N_2O Emission per kWh
Coal	32.54%	x	0.0	=	0.0070
Natural Gas	67.46%	x	0	=	0.0000
			Total	grams/kWh	0.007
				grams/mile	0.0020

Sulfur Dioxide (SO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of SO_2 Emission per kWh [10]		Contribution to Total Grams of SO_2 Emission per kWh
Coal	32.54%	x	1.8	=	0.581
Natural Gas	67.46%	x	0	=	0.0000
			Total	grams/kWh	0.581
				grams/mile	0.1702

Nitrogen Oxides (NO_x) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of NO_x Emission per kWh [10]		Contribution to Total Grams of NO_x Emission per kWh
Coal	32.54%	x	0.6	=	0.183
Natural Gas	67.46%	x	0	=	0.0000
			Total	grams/kWh	0.183
				grams/mile	0.0536

Volatile Organic Compound (VOC) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of VOC Emission per kWh [11]		Contribution to Total Grams of VOC Emission per kWh
Coal	32.54%	x	0.011	=	0.004
Natural Gas	67.46%	x	0	=	0.0000
			Total	grams/kWh	0.004
				grams/mile	0.0011

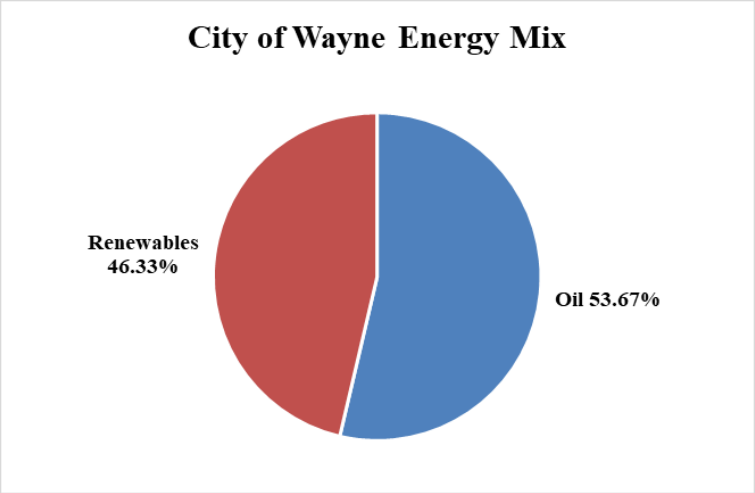
Carbon Dioxide Equivalent (CO_2e) Emissions

Contributing Gas	grams/mile		GWP		Contribution to Total CO_2e Emission
CO2	97.95	x	1	=	97.95109365
CH4	0.014	x	25	=	0.352214659
N2O	0.0020	x	298	=	0.610552155
			Total	grams/mile	98.91

g. Wayne Energy Mix Data Analysis

Electricity Generation Mix

The energy mix has been estimated as per the eGRID 2018 power plant data tool [10]. The tables below show the emission calculations.



Carbon Dioxide (CO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO_2 Emission per kWh [10]		Contribution to Total Grams of CO_2 Emission per kWh
Oil	53.67%	x	801.5	=	430.168
Renewables	46.33%	x	0	=	0
			Total	grams/kWh	430.168
				grams/mile	126.038

Carbon Monoxide (CO) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO Emission per kWh [11]		Contribution to Total Grams of CO Emission per kWh
Oil	53.67%	x	0.1546	=	0.083
Renewables	46.33%	x	0	=	0
			Total	grams/kWh	0.083
				grams/mile	0.0243

Methane (CH_4) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CH_4 Emission per kWh [10]		Contribution to Total Grams of CH_4 Emission per kWh
Oil	53.67%	x	0.0	=	0.0175
Renewables	46.33%	x	0	=	0
			Total	grams/kWh	0.018
				grams/mile	0.0051

Nitrous Oxide (N_2O) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of N_2O Emission per kWh [10]		Contribution to Total Grams of N_2O Emission per kWh
Oil	53.67%	x	0.0	=	0.0034
Renewables	46.33%	x	0	=	0
			Total	grams/kWh	0.003
				grams/mile	0.0010

Sulfur Dioxide (SO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of SO_2 Emission per kWh [10]		Contribution to Total Grams of SO_2 Emission per kWh
Oil	53.67%	x	1.4	=	0.7634
Renewables	46.33%	x	0	=	0
			Total	grams/kWh	0.763
				grams/mile	0.2237

Nitrogen Oxides (NOx) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of NO_x Emission per kWh [10]		Contribution to Total Grams of NO_x Emission per kWh
Oil	53.67%	x	15.8	=	8.4650
Renewables	46.33%	x	0	=	0
			Total	grams/kWh	8.465
				grams/mile	2.4802

Volatile Organic Compound (VOC) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of NO_x Emission per kWh [11]		Contribution to Total Grams of NO_x Emission per kWh
Oil	53.67%	x	0.020	=	0.0106
Renewables	46.33%	x	0	=	0
			Total	grams/kWh	0.011
				grams/mile	0.0031

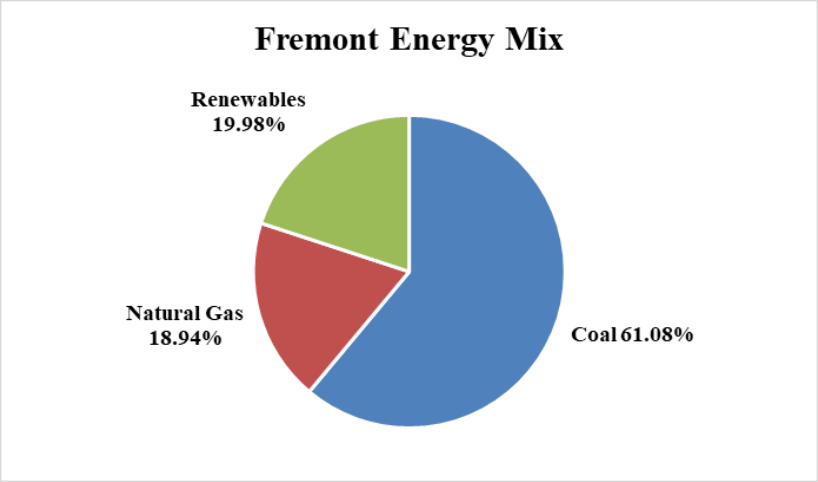
Carbon Dioxide Equivalent (CO_2e) Emissions

Contributing Gas	grams/mile		GWP		Contribution to Total CO_2e Emission
CO2	126.04	x	1	=	126.0380378
CH4	0.005	x	25	=	0.128386367
N2O	0.0010	x	298	=	0.297571069
			Total	grams/mile	126.46

h. Fremont Utilities Data Analysis

Electricity Generation Mix

According to the official City of Fremont website, The Lon D. Wright Power Plant at First and Luther Road is the utility's power production facility. The coal fired plant located on the east side of Fremont has three units producing 16.5, 22, and 91.5 megawatts respectively. Each year the plant uses approximately 370,000 ton of coal to produce about 620,128 megawatt hours of electricity [14]. The energy mix has been estimated as per the eGRID 2018 power plant data tool [10].



Carbon Dioxide (CO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO_2 Emission per kWh [10]		Contribution to Total Grams of CO_2 Emission per kWh
Coal	61.08%	x	830.3	=	507.2
Natural Gas	18.94%	x	830	=	157.3
Renewables	19.98%	x	0	=	0
			Total	grams/kWh	664.456
				grams/mile	194.684

Carbon Monoxide (CO) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CO Emission per kWh [11]		Contribution to Total Grams of CO Emission per kWh
Coal	61.08%	x	1.0006	=	0.611
Natural Gas	18.94%	x	0	=	0.000
Renewables	19.98%	x	0	=	0
			Total	grams/kWh	0.611
				grams/mile	0.1791

Methane (CH_4) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of CH_4 Emission per kWh [10]		Contribution to Total Grams of CH_4 Emission per kWh
Coal	61.08%	x	0.1	=	0.0781
Natural Gas	18.94%	x	0	=	0.0174
Renewables	19.98%	x	0	=	0
			Total	grams/kWh	0.095
				grams/mile	0.0280

Nitrous Oxide (N_2O) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of N_2O Emission per kWh [10]		Contribution to Total Grams of N_2O Emission per kWh
Coal	61.08%	x	0.0	=	0.0114
Natural Gas	18.94%	x	0	=	0.0035
Renewables	19.98%	x	0	=	0
			Total	grams/kWh	0.015
				grams/mile	0.0044

Sulfur Dioxide (SO_2) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of SO_2 Emission per kWh [10]		Contribution to Total Grams of SO_2 Emission per kWh
Coal	61.08%	x	1.3	=	0.824
Natural Gas	18.94%	x	1	=	0.2555
Renewables	19.98%	x	0	=	0
			Total	grams/kWh	1.079
				grams/mile	0.3163

Nitrogen Oxides (NO_x) Emissions

Energy Source	Percentage of Total Energy Production [10]		Grams of NO_X Emission per kWh [10]		Contribution to Total Grams of NO_X Emission per kWh
Coal	61.08%	x	0.9	=	0.542
Natural Gas	18.94%	x	1	=	0.1682
Renewables	19.98%	x	0	=	0
			Total	grams/kWh	0.711
				grams/mile	0.2082

Volatile Organic Compound (VOC) Emissions

Coal	Percentage of Total Energy Production [10]		Grams of VOC Emission per kWh [11]		Contribution to Total Grams of VOC Emission per kWh
Coal	61.08%	x	0.011	=	0.007
Natural Gas	18.94%	x	0	=	0.0000
Renewables	19.98%	x	0	=	0
			Total	grams/kWh	0.007
				grams/mile	0.0020

Carbon Dioxide Equivalent (CO_2e) Emissions

Contributing Gas	grams/mile		GWP		Contribution to Total CO_2e Emission
CO2	194.68	x	1	=	194.6837675
CH4	0.028	x	25	=	0.69943229
N2O	0.0044	x	298	=	1.299399135
			Total	grams/mile	196.68

6.6. References

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[9] *Flex-Fuel Vehicles*. http://www.fueleconomy.gov/feg/flextech.shtml. [Accessed: 10-Oct-2020].
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7. Appendix E. Detailed Analysis for Charging Stations - Monthly Detailed Data – November 2021

Introduction

In the tables and graphs that follow, the cost of miles driven using a comparable gasoline-powered vehicle (CV) is provided. Then, the cost of miles driven using the EVs are provided. The economic savings comparison is then provided. In addition to miles driven, maintenance costs and savings that include oil and filter changes for the CV and maintenance costs for the EVs are provided in the Other Cost Savings information for each station location. Similar calculations and analysis are provided for the GHG emissions and reductions.

Blue bars on graphs show daily energy usage while the green line shows cumulative usage. For this report, we are using the kWh data from ChargePoint™ to calculate the economic and environmental savings, accounting for the energy feedstock mix of each of the power generation districts in Nebraska.

Allen Consolidated Schools

Charging stations: One Level-2 station
The price of electricity per kWh: $0.0925

Total Economic Saving Data (Fuel & Maintenance Cost Savings)

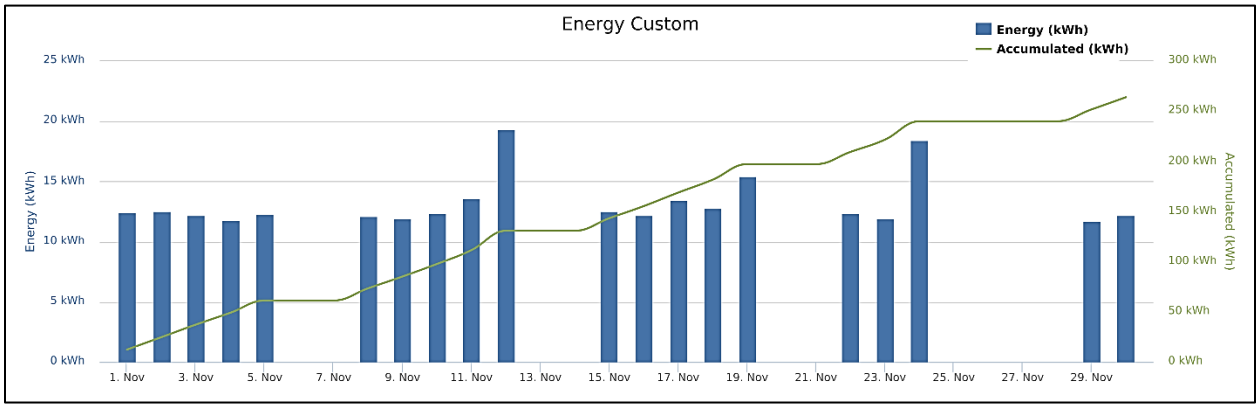
		This Month (November)	All Time
Miles Driven		**900.29**	**42,475.49**
Energy Consumed(kWh)		**263.86**	**12,562.26**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**114.14**	**4,468.48**
	Usage Cost Using EV(Electricity)	**21.56**	**995.50**
	Total Fuel Saving	**92.58**	**3,472.98**
Other Cost Saving	**CV Costs**	**54.92**	**2,179.28**
	EV Costs	**23.41**	**1,102.92**
	Total Other Cost Saving	**31.51**	**1,076.36**
Overall Economic Savings		**124.09**	**4,549.34**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**900.29**	**42,475.49**
Energy Consumed (kWh)		**263.86**	**12,562.26**
Co2 Emissions (lbs.)	**CV (Gas)**	**702.74**	**35,646.58**
	EV (Electricity)	**396.83**	**11,850.07**
	Total Fuel Saving	**305.91**	**23,796.52**
Co Emissions (lbs.)	**CV (Gas)**	**5.6787**	**495.2626**
	EV (Electricity)	**0.2665**	**9.6027**
	Total Fuel Saving	**5.4122**	**485.6599**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0083**	**1.0264**
	EV (Electricity)	**0.7253**	**30.1040**
	Total Fuel Saving	**(0.7170)**	**(29.0777)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.2382**	**31.1583**
	EV (Electricity)	**1.2409**	**36.6266**
	Total Fuel Saving	**(1.0028)**	**(5.4683)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0133**	**2.1216**
	EV (Electricity)	**0.0320**	**0.8332**
	Total Fuel Saving	**(0.0187)**	**1.2884**
VOC Emissions (lbs.)	**CV (Gas)**	**0.3342**	**17.1992**
	EV (Electricity)	**0.0069**	**0.2430**
	Total Fuel Saving	**0.3273**	**16.9562**

Energy Consumption Data

November 2021



Auburn Board of Public Works

Charging stations: One Level-2 station
The price of electricity per kWh: $0.0925

Total Economic Saving Data (Fuel & Maintenance Cost Savings):

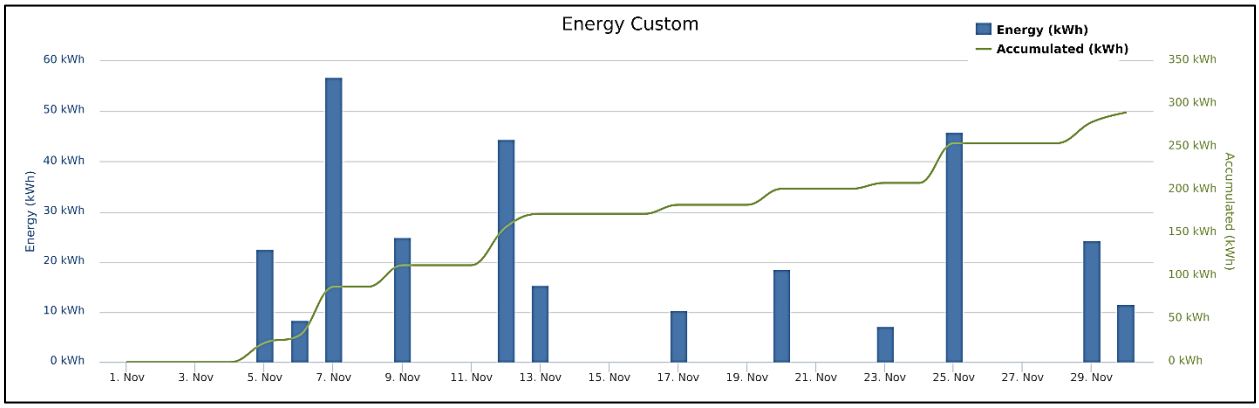
		This Month (November)	All Time
Miles Driven		**990.17**	**16,250.61**
Energy Consumed(kWh)		**290.20**	**4,775.58**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$126.62**	**$1,822.64**
	Usage Cost Using EV(Electricity)	**$27.31**	**$456.43**
	Total Fuel Saving	**$99.32**	**$1,366.20**
Other Cost Saving	**CV Costs**	**$60.40**	**$961.13**
	EV Costs	**$25.74**	**$395.64**
	Total Other Cost Saving	**$34.66**	**$565.49**
Overall Economic Savings		**$133.97**	**$1,931.69**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**990.17**	**16,250.61**
Energy Consumed (kWh)		**290.20**	**4,775.58**
Co2 Emissions (lbs.)	**CV (Gas)**	**772.89**	**12,788.88**
	EV (Electricity)	**213.82**	**3,681.34**
	Total Fuel Saving	**559.07**	**9,107.54**
Co Emissions (lbs.)	**CV (Gas)**	**6.2456**	**102.5030**
	EV (Electricity)	**0.2083**	**3.6058**
	Total Fuel Saving	**6.0374**	**98.8972**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0092**	**0.1505**
	EV (Electricity)	**0.3716**	**6.2631**
	Total Fuel Saving	**(0.3624)**	**(6.1126)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.2620**	**4.2992**
	EV (Electricity)	**0.1169**	**1.9999**
	Total Fuel Saving	**0.1450**	**2.2992**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0146**	**0.2783**
	EV (Electricity)	**0.0308**	**0.4871**
	Total Fuel Saving	**(0.0161)**	**(0.2087)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.3676**	**6.0332**
	EV (Electricity)	**0.0024**	**0.0412**
	Total Fuel Saving	**0.3652**	**5.9920**

Energy Consumption Data

November 2021



Aurora

Charging stations: One Level-2 station & One Fast DC charging station
The price of electricity per kWh: $0.0853

SUMMARY OF ALL STATIONS
Total Economic Saving Data (Fuel & Maintenance Cost Savings):

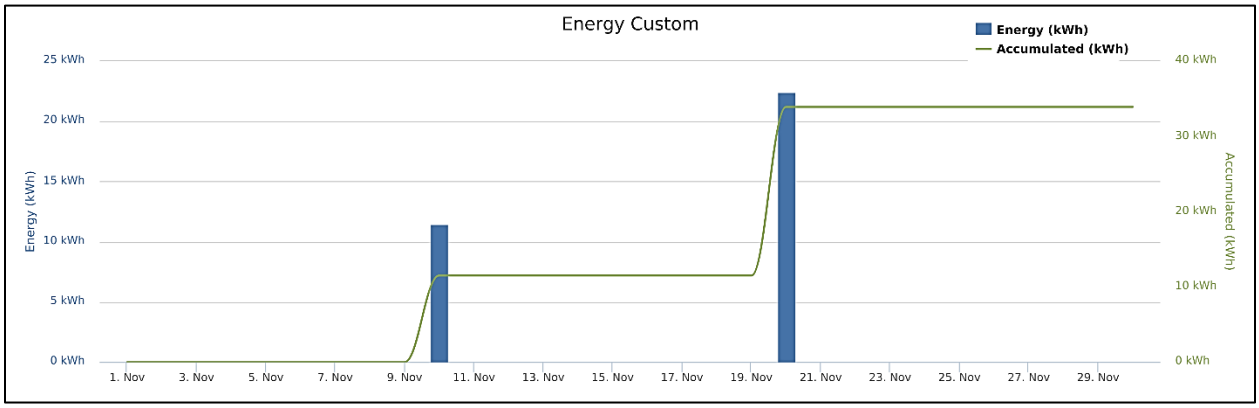
		This Month (November)	All Time
Miles Driven		**115.62**	**4,642.22**
Energy Consumed(kWh)		**33.89**	**1,360.56**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$14.92**	**$525.36**
	Usage Cost Using EV(Electricity)	**$2.77**	**$111.16**
	Total Fuel Saving	**$12.16**	**$414.20**
Other Cost Saving	**CV Costs**	**$7.05**	**$283.18**
	EV Costs	**$3.01**	**$120.70**
	Total Other Cost Saving	**$4.05**	**$162.48**
Overall Economic Savings		**$16.20**	**$576.68**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**115.62**	**4,642.22**
Energy Consumed (kWh)		**33.89**	**1,360.56**
Co2 Emissions (lbs.)	**CV (Gas)**	**90.25**	**3,623.57**
	EV (Electricity)	**50.96**	**2,046.18**
	Total Fuel Saving	**39.29**	**1,577.39**
Co Emissions (lbs.)	**CV (Gas)**	**0.7293**	**29.2815**
	EV (Electricity)	**0.0342**	**1.3742**
	Total Fuel Saving	**0.6951**	**27.9072**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0011**	**0.0430**
	EV (Electricity)	**0.0931**	**3.7399**
	Total Fuel Saving	**(0.0921)**	**(3.6970)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0306**	**1.2281**
	EV (Electricity)	**0.1594**	**6.3987**
	Total Fuel Saving	**(0.1288)**	**(5.1706)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0017**	**0.0686**
	EV (Electricity)	**0.0041**	**0.1652**
	Total Fuel Saving	**(0.0024)**	**(0.0966)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0429**	**1.7235**
	EV (Electricity)	**0.0009**	**0.0358**
	Total Fuel Saving	**0.0420**	**1.6877**

Energy Consumption Data

November 2021



Aurora (AURORANE / DC FAST 1):

Economic Saving Data (Fuel & Maintenance Cost Savings):

		This Month (November)	All Time
Miles Driven		**115.62**	**4,009.01**
Energy Consumed(kWh)		**33.89**	**1,174.97**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$14.92**	**$456.60**
	Usage Cost Using EV(Electricity)	**$2.77**	**$96.00**
	Total Fuel Saving	**$12.16**	**$360.61**
Other Cost Saving	**CV Costs**	**$7.05**	**$244.55**
	EV Costs	**$3.01**	**$104.23**
	Total Other Cost Saving	**$4.05**	**$140.32**
Overall Economic Savings		**$16.20**	**$500.92**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**115.62**	**4,009.01**
Energy Consumed (kWh)		**33.89**	**1,174.97**
Co2 Emissions (lbs.)	**CV (Gas)**	**90.25**	**3,129.30**
	EV (Electricity)	**50.96**	**1,767.07**
	Total Fuel Saving	**39.29**	**1,362.23**
Co Emissions (lbs.)	**CV (Gas)**	**0.7293**	**25.2874**
	EV (Electricity)	**0.0342**	**1.1868**
	Total Fuel Saving	**0.6951**	**24.1006**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0011**	**0.0371**
	EV (Electricity)	**0.0931**	**3.2298**
	Total Fuel Saving	**(0.0921)**	**(3.1927)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0306**	**1.0606**
	EV (Electricity)	**0.1594**	**5.5259**
	Total Fuel Saving	**(0.1288)**	**(4.4653)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0017**	**0.0592**
	EV (Electricity)	**0.0041**	**0.1426**
	Total Fuel Saving	**(0.0024)**	**(0.0834)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0429**	**1.4884**
	EV (Electricity)	**0.0009**	**0.0309**
	Total Fuel Saving	**0.0420**	**1.4575**

Aurora (One Level-2 station):

Economic Saving Data (Fuel & Maintenance Cost Savings):

Level 2 GW1		This Month (November)	All Time
Miles Driven		0.00	633.22
Energy Consumed(kWh)		0.00	185.59
Fuel Cost Saving	Usage Cost Using CV(Gas)	$0.00	$68.76
	Usage Cost Using EV(Electricity)	$0.00	$15.16
	Total Fuel Saving	$0.00	$53.59
Other Cost Saving	CV Costs	$0.00	$38.63
	EV Costs	$0.00	$16.46
	Total Other Cost Saving	$0.00	$22.16
Overall Economic Savings		$0.00	$75.76

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**0.00**	**633.22**
Energy Consumed (kWh)		**0.00**	**185.59**
Co2 Emissions (lbs.)	**CV (Gas)**	**0.00**	**494.27**
	EV (Electricity)	**0.00**	**279.11**
	Total Fuel Saving	**0.00**	**215.16**
Co Emissions (lbs.)	**CV (Gas)**	**0.0000**	**3.9941**
	EV (Electricity)	**0.0000**	**0.1875**
	Total Fuel Saving	**0.0000**	**3.8066**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.0059**
	EV (Electricity)	**0.0000**	**0.5101**
	Total Fuel Saving	**0.0000**	**(0.5043)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.1675**
	EV (Electricity)	**0.0000**	**0.8728**
	Total Fuel Saving	**0.0000**	**(0.7053)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.0094**
	EV (Electricity)	**0.0000**	**0.0225**
	Total Fuel Saving	**0.0000**	**(0.0132)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.2351**
	EV (Electricity)	**0.0000**	**0.0049**
	Total Fuel Saving	**0.0000**	**0.2302**

Ashland

Charging stations: One Level-2 station & One Fast DC charging station
The price of electricity per kWh: $0.0898

SUMMARY OF ALL STATIONS
Total Economic Saving Data (Fuel & Maintenance Cost Savings):

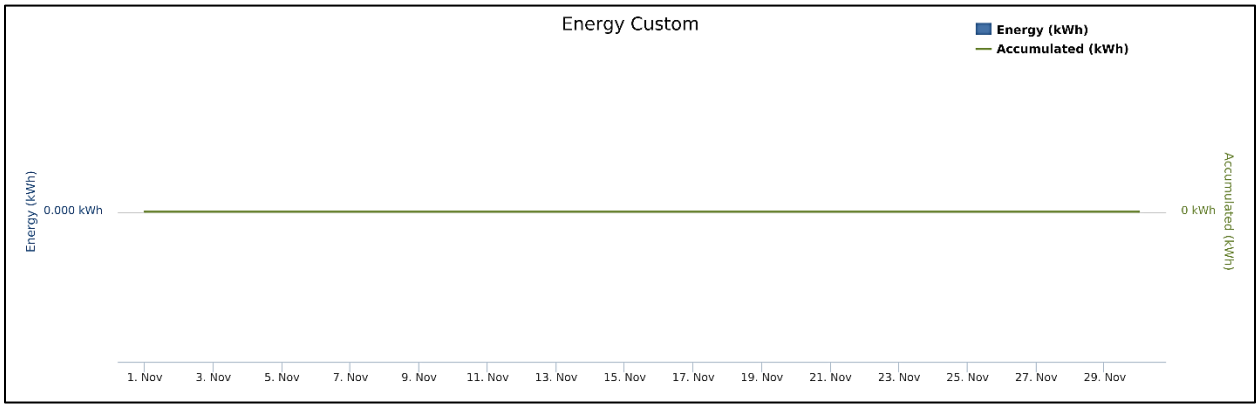
		This Month (November)	All Time
Miles Driven		**0.00**	**40,237.78**
Energy Consumed(kWh)		**0.00**	**11,989.30**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$0.00**	**$4,086.25**
	Usage Cost Using EV(Electricity)	**$0.00**	**$1,085.11**
	Total Fuel Saving	**$0.00**	**$3,001.15**
Other Cost Saving	**CV Costs**	**$0.00**	**$1,964.90**
	EV Costs	**$0.00**	**$727.21**
	Total Other Cost Saving	**$0.00**	**$1,237.69**
Overall Economic Savings		**$0.00**	**$4,238.83**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**0.00**	**40,237.78**
Energy Consumed (kWh)		**0.00**	**11,989.30**
Co2 Emissions (lbs.)	**CV (Gas)**	**0.00**	**32,557.27**
	EV (Electricity)	**0.00**	**17,119.63**
	Total Fuel Saving	**0.00**	**15,437.64**
Co Emissions (lbs.)	**CV (Gas)**	**0.0000**	**279.9479**
	EV (Electricity)	**0.0000**	**14.3907**
	Total Fuel Saving	**0.0000**	**265.5571**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.4436**
	EV (Electricity)	**0.0000**	**38.2285**
	Total Fuel Saving	**0.0000**	**(37.7849)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0000**	**12.9346**
	EV (Electricity)	**0.0000**	**27.1960**
	Total Fuel Saving	**0.0000**	**(14.2614)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**1.4183**
	EV (Electricity)	**0.0000**	**1.4956**
	Total Fuel Saving	**0.0000**	**(0.0773)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0000**	**15.0971**
	EV (Electricity)	**0.0000**	**0.2913**
	Total Fuel Saving	**0.0000**	**14.8058**

Energy Consumption Data

November 2021



Ashland (Fast DC charging):

Economic Saving Data (Fuel & Maintenance Cost Savings):

		This Month (November)	All Time
Miles Driven		**0.00**	**25,888.21**
Energy Consumed(kWh)		**0.00**	**7,715.34**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$0.00**	**$2,665.85**
	Usage Cost Using EV(Electricity)	**$0.00**	**$700.35**
	Total Fuel Saving	**$0.00**	**$1,965.49**
Other Cost Saving	**CV Costs**	**$0.00**	**$1,257.23**
	EV Costs	**$0.00**	**$471.29**
	Total Other Cost Saving	**$0.00**	**$785.94**
Overall Economic Savings		**$0.00**	**$2,751.44**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**0.00**	**25,888.21**
Energy Consumed(kWh)		**0.00**	**7,715.34**
Co2 Emissions (lbs.)	**CV (Gas)**	**0.00**	**20,967.81**
	EV (Electricity)	**0.00**	**10,859.22**
	Total Fuel Saving	**0.00**	**10,108.59**
Co Emissions (lbs.)	**CV (Gas)**	**0.0000**	**184.4468**
	EV (Electricity)	**0.0000**	**9.1385**
	Total Fuel Saving	**0.0000**	**175.3083**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.2972**
	EV (Electricity)	**0.0000**	**24.6222**
	Total Fuel Saving	**0.0000**	**(24.3249)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0000**	**8.7015**
	EV (Electricity)	**0.0000**	**17.3757**
	Total Fuel Saving	**0.0000**	**(8.6742)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.9429**
	EV (Electricity)	**0.0000**	**0.9410**
	Total Fuel Saving	**0.0000**	**0.0020**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0000**	**9.7402**
	EV (Electricity)	**0.0000**	**0.1862**
	Total Fuel Saving	**0.0000**	**9.5540**

Ashland (One Level-2 station):

Economic Saving Data (Fuel & Maintenance Cost Savings):

		This Month (November)	All Time
Miles Driven		**0.00**	**14,263.85**
Energy Consumed(kWh)		**0.00**	**4,248.87**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$0.00**	**$1,413.45**
	Usage Cost Using EV(Electricity)	**$0.00**	**$382.62**
	Total Fuel Saving	**$0.00**	**$1,030.83**
Other Cost Saving	**CV Costs**	**$0.00**	**$702.44**
	EV Costs	**$0.00**	**$253.70**
	Total Other Cost Saving	**$0.00**	**$448.74**
Overall Economic Savings		**$0.00**	**$1,479.57**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**0.00**	**14,263.85**
Energy Consumed (kWh)		**0.00**	**4,248.87**
Co2 Emissions (lbs.)	**CV (Gas)**	**0.00**	**11,522.56**
	EV (Electricity)	**0.00**	**6,217.86**
	Total Fuel Saving	**0.00**	**5,304.69**
Co Emissions (lbs.)	**CV (Gas)**	**0.0000**	**94.6067**
	EV (Electricity)	**0.0000**	**5.2208**
	Total Fuel Saving	**0.0000**	**89.3860**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.1456**
	EV (Electricity)	**0.0000**	**13.5391**
	Total Fuel Saving	**0.0000**	**(13.3935)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0000**	**4.2105**
	EV (Electricity)	**0.0000**	**9.7564**
	Total Fuel Saving	**0.0000**	**(5.5459)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.4725**
	EV (Electricity)	**0.0000**	**0.5507**
	Total Fuel Saving	**0.0000**	**(0.0782)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0000**	**5.3171**
	EV (Electricity)	**0.0000**	**0.1043**
	Total Fuel Saving	**0.0000**	**5.2128**

Bellevue

Charging stations: one Level-2 station
The price of electricity per kWh: $0.0898

Economic Saving Data (Fuel & Maintenance Cost Savings):

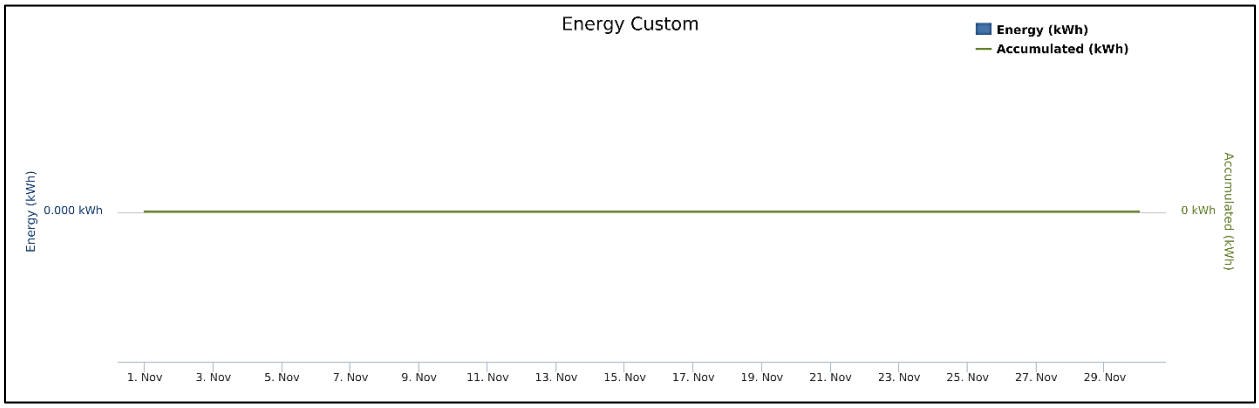
		This Month (November)	All Time
Miles Driven		**0.00**	**40,714.44**
Energy Consumed(kWh)		**0.00**	**12,079.62**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$0.00**	**$4,224.53**
	Usage Cost Using EV(Electricity)	**$0.00**	**$1,120.68**
	Total Fuel Saving	**$0.00**	**$3,103.85**
Other Cost Saving	**CV Costs**	**$0.00**	**$1,933.43**
	EV Costs	**$0.00**	**$1,078.36**
	Total Other Cost Saving	**$0.00**	**$855.07**
Overall Economic Savings		**$0.00**	**$3,958.93**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**0**	**40714.44179**
Energy Consumed (kWh)		**0**	**12079.624**
Co2 Emissions (lbs.)	**CV (Gas)**	**0.00**	**35,305.75**
	EV (Electricity)	**0.00**	**9,711.81**
	Total Fuel Saving	**0.00**	**25,593.94**
Co Emissions (lbs.)	**CV (Gas)**	**0.00**	**581.10**
	EV (Electricity)	**0.00**	**9.89**
	Total Fuel Saving	**0.00**	**571.21**
So2 Emissions (lbs.)	**CV (Gas)**	**0.00**	**1.26**
	EV (Electricity)	**0.00**	**34.95**
	Total Fuel Saving	**0.00**	**(33.69)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.00**	**39.19**
	EV (Electricity)	**0.00**	**20.72**
	Total Fuel Saving	**0.00**	**18.47**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.00**	**2.67**
	EV (Electricity)	**0.00**	**0.81**
	Total Fuel Saving	**0.00**	**1.87**
VOC Emissions (lbs.)	**CV (Gas)**	**0.00**	**17.16**
	EV (Electricity)	**0.00**	**0.25**
	Total Fuel Saving	**0.00**	**16.91**

Energy Consumption Data

November 2021



B & R Stores

Charging stations: Four Level-2 stations
The price of electricity per kWh: $0.0853

Economic Saving Data (Fuel & Maintenance Cost Savings):

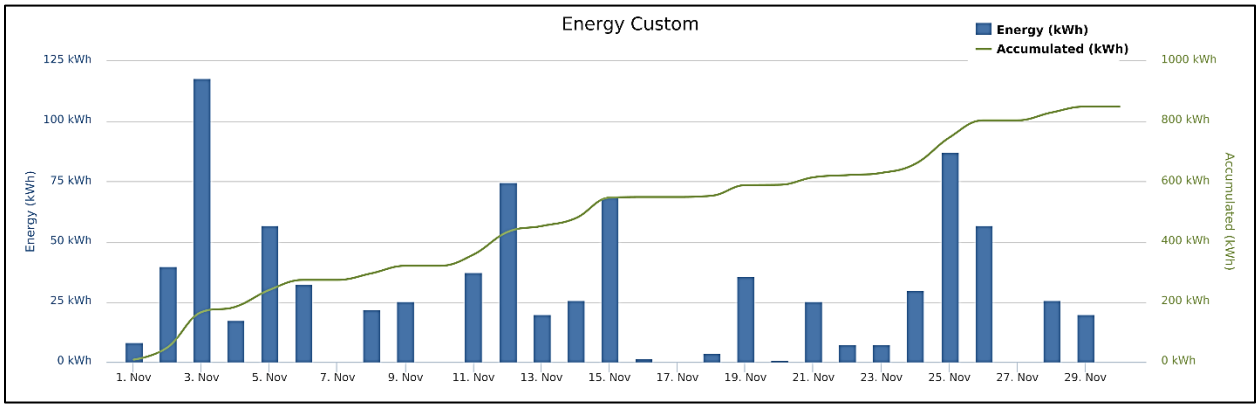
		This Month (November)	All Time
Miles Driven		**2,896.61**	**24,621.05**
Energy Consumed(kWh)		**848.95**	**7,216.02**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$373.91**	**$2,914.03**
	Usage Cost Using EV(Electricity)	**$66.47**	**$565.01**
	Total Fuel Saving	**$307.43**	**$2,349.01**
Other Cost Saving	**CV Costs**	**$176.69**	**$1,501.88**
	EV Costs	**$75.31**	**$640.15**
	Total Other Cost Saving	**$101.38**	**$861.74**
Overall Economic Savings		**$408.81**	**$3,210.75**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**2,896.61**	**24,621.05**
Energy Consumed (kWh)		**848.95**	**7,216.02**
Co2 Emissions (lbs.)	**CV (Gas)**	**2,261.00**	**19,218.40**
	EV (Electricity)	**1,862.17**	**15,828.33**
	Total Fuel Saving	**398.83**	**3,390.07**
Co Emissions (lbs.)	**CV (Gas)**	**18.2708**	**155.3007**
	EV (Electricity)	**1.1900**	**10.1153**
	Total Fuel Saving	**17.0808**	**145.1854**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0268**	**0.2280**
	EV (Electricity)	**2.2306**	**18.9602**
	Total Fuel Saving	**(2.2038)**	**(18.7323)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.7663**	**6.5136**
	EV (Electricity)	**2.0696**	**17.5912**
	Total Fuel Saving	**(1.3033)**	**(11.0776)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0428**	**0.3637**
	EV (Electricity)	**0.2361**	**2.0068**
	Total Fuel Saving	**(0.1933)**	**(1.6431)**
VOC Emissions (lbs.)	**CV (Gas)**	**1.0754**	**9.1408**
	EV (Electricity)	**0.0136**	**0.1152**
	Total Fuel Saving	**1.0618**	**9.0255**

Energy Consumption Data

November 2021



B & R Stores (two DC stations)

Economic Saving Data (Fuel & Maintenance Cost Savings):

		This Month (November)	All Time
Miles Driven		**2,735.26**	**23,341.55**
Energy Consumed(kWh)		**801.66**	**6,841.02**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$353.08**	**$2,763.14**
	Usage Cost Using EV(Electricity)	**$62.77**	**$535.65**
	Total Fuel Saving	**$290.31**	**$2,227.49**
Other Cost Saving	**CV Costs**	**$166.85**	**$1,423.83**
	EV Costs	**$71.12**	**$606.88**
	Total Other Cost Saving	**$95.73**	**$816.95**
Overall Economic Savings		**$386.04**	**$3,044.44**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**2,735.26**	**23,341.55**
Energy Consumed (kWh)		**801.66**	**6,841.02**
Co2 Emissions (lbs.)	**CV (Gas)**	**2,135.06**	**18,219.66**
	EV (Electricity)	**1,758.44**	**15,005.77**
	Total Fuel Saving	**376.62**	**3,213.89**
Co Emissions (lbs.)	**CV (Gas)**	**17.2530**	**147.2301**
	EV (Electricity)	**1.1237**	**9.5896**
	Total Fuel Saving	**16.1293**	**137.6405**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0253**	**0.2161**
	EV (Electricity)	**2.1064**	**17.9749**
	Total Fuel Saving	**(2.0810)**	**(17.7588)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.7236**	**6.1751**
	EV (Electricity)	**1.9543**	**16.6770**
	Total Fuel Saving	**(1.2307)**	**(10.5019)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0404**	**0.3448**
	EV (Electricity)	**0.2229**	**1.9025**
	Total Fuel Saving	**(0.1825)**	**(1.5577)**
VOC Emissions (lbs.)	**CV (Gas)**	**1.0155**	**8.6657**
	EV (Electricity)	**0.0128**	**0.1093**
	Total Fuel Saving	**1.0027**	**8.5565**

B & R Stores (two level 2 stations)

Economic Saving Data (Fuel & Maintenance Cost Savings):

		This Month (November)	All Time
Miles Driven		**161.35**	**1,279.50**
Energy Consumed(kWh)		**47.29**	**375.00**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$20.83**	**$150.89**
	Usage Cost Using EV(Electricity)	**$3.70**	**$29.36**
	Total Fuel Saving	**$17.13**	**$121.52**
Other Cost Saving	**CV Costs**	**$9.84**	**$78.05**
	EV Costs	**$4.20**	**$33.27**
	Total Other Cost Saving	**$5.65**	**$44.78**
Overall Economic Savings		**$22.77**	**$166.31**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**161.35**	**1,279.50**
Energy Consumed (kWh)		**47.29**	**375.00**
Co2 Emissions (lbs.)	**CV (Gas)**	**125.95**	**998.74**
	EV (Electricity)	**103.73**	**822.56**
	Total Fuel Saving	**22.22**	**176.17**
Co Emissions (lbs.)	**CV (Gas)**	**1.02**	**8.07**
	EV (Electricity)	**0.07**	**0.53**
	Total Fuel Saving	**0.9515**	**7.5450**
So2 Emissions (lbs.)	**CV (Gas)**	**0.00**	**0.01**
	EV (Electricity)	**0.12**	**0.99**
	Total Fuel Saving	**(0.1228)**	**(0.9735)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.04**	**0.34**
	EV (Electricity)	**0.12**	**0.91**
	Total Fuel Saving	**(0.0726)**	**(0.5757)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.00**	**0.02**
	EV (Electricity)	**0.01**	**0.10**
	Total Fuel Saving	**(0.0108)**	**(0.0854)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.06**	**0.48**
	EV (Electricity)	**0.00**	**0.01**
	Total Fuel Saving	**0.0591**	**0.4690**

Central City

Charging stations: One Level-2 station
The price of electricity per kWh: $0.0853

Economic Saving Data (Fuel & Maintenance Cost Savings):

		This Month (November)	All Time
Miles Driven		**0.00**	**1,773.37**
Energy Consumed(kWh)		**0.00**	**522.08**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$0.00**	**$188.58**
	Usage Cost Using EV(Electricity)	**$0.00**	**$51.92**
	Total Fuel Saving	**$0.00**	**$136.66**
Other Cost Saving	**CV Costs**	**$0.00**	**$89.44**
	EV Costs	**$0.00**	**$63.39**
	Total Other Cost Saving	**$0.00**	**$26.05**
Overall Economic Savings		**$0.00**	**$162.71**

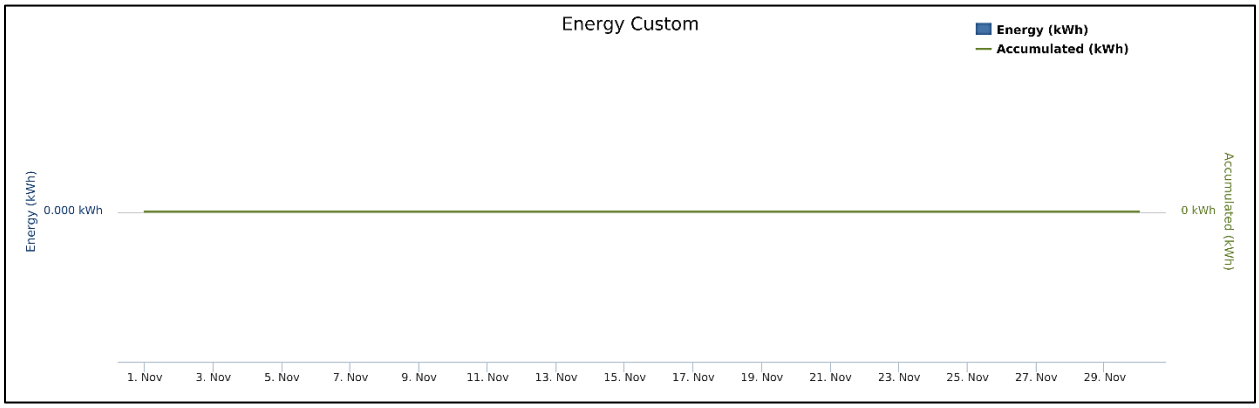
*Data was provided from the electrical car mileage

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**0.00**	**1,773.37**
Energy Consumed (kWh)		**0.00**	**522.08**
Co2 Emissions (lbs.)	**CV (Gas)**	**0.00**	**1,536.18**
	EV (Electricity)	**0.00**	**272.13**
	Total Fuel Saving	**0.00**	**1,264.05**
Co Emissions (lbs.)	**CV (Gas)**	**0.0000**	**31.6729**
	EV (Electricity)	**0.0000**	**0.2370**
	Total Fuel Saving	**0.0000**	**31.4360**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.0032**
	EV (Electricity)	**0.0000**	**1.1869**
	Total Fuel Saving	**0.0000**	**(1.1836)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0000**	**2.2643**
	EV (Electricity)	**0.0000**	**0.6715**
	Total Fuel Saving	**0.0000**	**1.5928**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.1387**
	EV (Electricity)	**0.0000**	**0.0093**
	Total Fuel Saving	**0.0000**	**0.1294**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.7871**
	EV (Electricity)	**0.0000**	**0.0087**
	Total Fuel Saving	**0.0000**	**0.7784**

Energy Consumption Data

November 2021



(Data was provided from the electrical car mileage)

Central Community College

Charging stations: Two Level-2 station
The price of electricity per kWh: $0.0783

Economic Saving Data (Fuel & Maintenance Cost Savings):

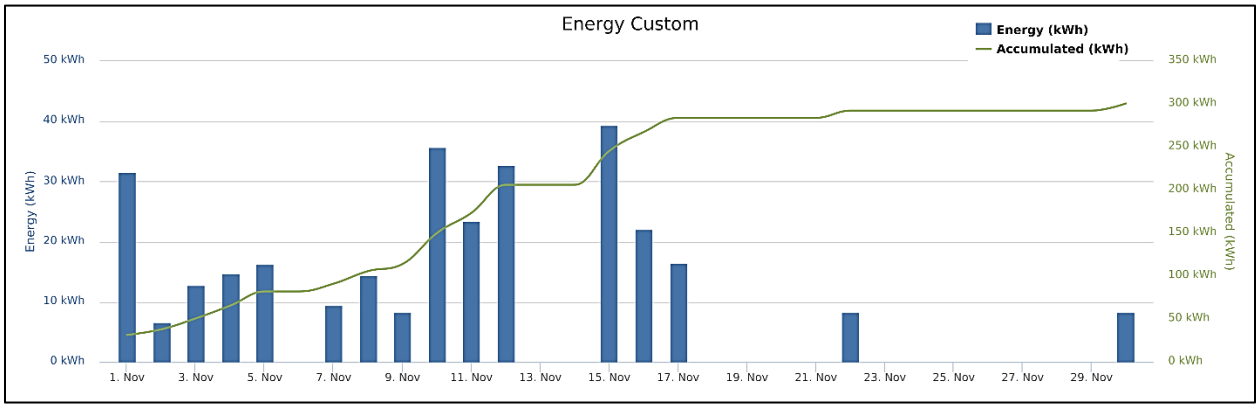
		This Month (November)	All Time
Miles Driven		**1,025.87**	**10,135.37**
Energy Consumed(kWh)		**300.67**	**2,970.51**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$132.42**	**$1,205.83**
	Usage Cost Using EV(Electricity)	**$24.56**	**$242.69**
	Total Fuel Saving	**$107.86**	**$963.14**
Other Cost Saving	**CV Costs**	**$62.58**	**$618.26**
	EV Costs	**$26.67**	**$263.52**
	Total Other Cost Saving	**$35.91**	**$354.74**
Overall Economic Savings		**$143.76**	**$1,317.87**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**1,025.87**	**10,135.37**
Energy Consumed (kWh)		**300.67**	**2,970.51**
Co2 Emissions (lbs.)	**CV (Gas)**	**800.76**	**7,911.35**
	EV (Electricity)	**452.18**	**4,467.43**
	Total Fuel Saving	**348.58**	**3,443.92**
Co Emissions (lbs.)	**CV (Gas)**	**6.4708**	**63.9303**
	EV (Electricity)	**0.3037**	**3.0004**
	Total Fuel Saving	**6.1671**	**60.9299**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0095**	**0.0938**
	EV (Electricity)	**0.8265**	**8.1654**
	Total Fuel Saving	**(0.8170)**	**(8.0716)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.2714**	**2.6814**
	EV (Electricity)	**1.4140**	**13.9702**
	Total Fuel Saving	**(1.1426)**	**(11.2889)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0152**	**0.1497**
	EV (Electricity)	**0.0365**	**0.3606**
	Total Fuel Saving	**(0.0213)**	**(0.2109)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.3809**	**3.7628**
	EV (Electricity)	**0.0079**	**0.0781**
	Total Fuel Saving	**0.3730**	**3.6848**

Energy Consumption Data

November 2021



Dakota County

Charging stations: One Level-2 station
The price of electricity per kWh: $0.0853

Economic Saving Data (Fuel & Maintenance Cost Savings):

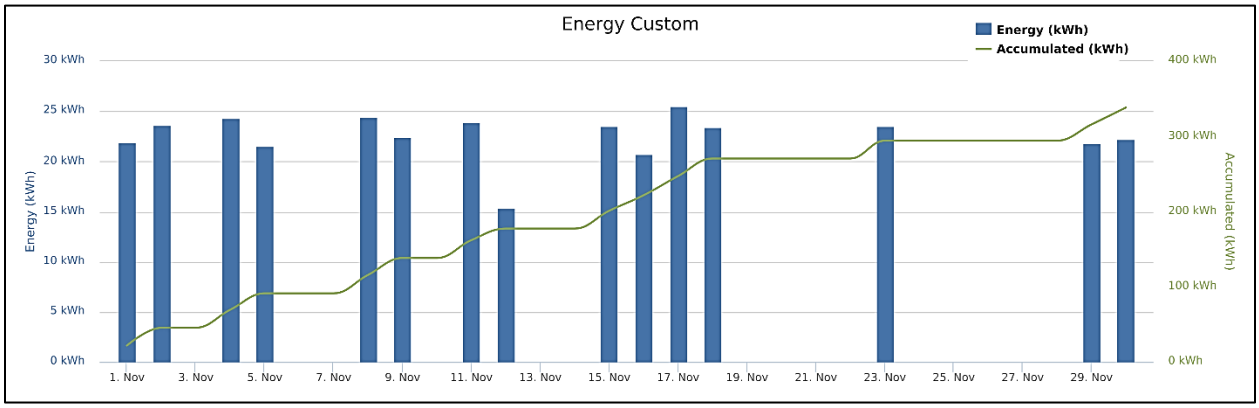
		This Month (November)	All Time
Miles Driven		**1,154.12**	**18,442.04**
Energy Consumed(kWh)		**338.25**	**5,450.77**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$146.40**	**$1,938.12**
	Usage Cost Using EV(Electricity)	**$28.85**	**$450.21**
	Total Fuel Saving	**$117.55**	**$1,487.91**
Other Cost Saving	**CV Costs**	**$70.40**	**$993.18**
	EV Costs	**$30.01**	**$423.68**
	Total Other Cost Saving	**$40.39**	**$569.50**
Overall Economic Savings		**$157.94**	**$2,057.41**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**1,154.12**	**18,442.04**
Energy Consumed (kWh)		**338.25**	**5,450.77**
Co2 Emissions (lbs.)	**CV (Gas)**	**900.87**	**15,015.47**
	EV (Electricity)	**508.71**	**6,720.80**
	Total Fuel Saving	**392.16**	**8,294.67**
Co Emissions (lbs.)	**CV (Gas)**	**7.2797**	**153.8520**
	EV (Electricity)	**0.3417**	**4.9706**
	Total Fuel Saving	**6.9381**	**148.8813**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0107**	**0.2728**
	EV (Electricity)	**0.9298**	**14.3051**
	Total Fuel Saving	**(0.9191)**	**(14.0323)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.3053**	**8.1672**
	EV (Electricity)	**1.5908**	**20.7668**
	Total Fuel Saving	**(1.2855)**	**(12.5996)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0170**	**0.6015**
	EV (Electricity)	**0.0411**	**0.5091**
	Total Fuel Saving	**(0.0240)**	**0.0924**
VOC Emissions (lbs.)	**CV (Gas)**	**0.4285**	**7.0826**
	EV (Electricity)	**0.0089**	**0.1180**
	Total Fuel Saving	**0.4196**	**6.9646**

Energy Consumption Data

November 2021



Ferguson House Station

Charging stations: One Level-2 station

The price of electricity per kWh: $0.0757

Economic Saving Data (Fuel & Maintenance Cost Savings):

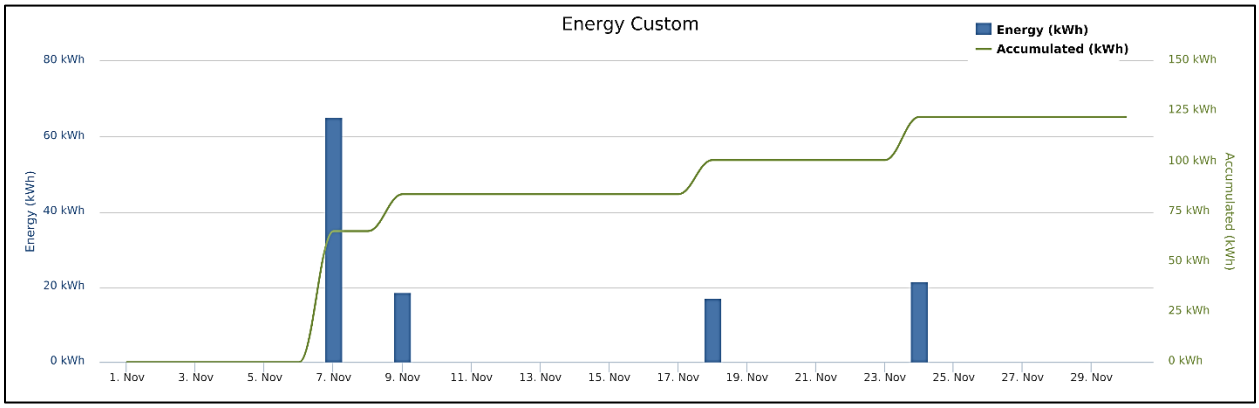
		This Month (November)	All Time
Miles Driven		**416.91**	**18,692.49**
Energy Consumed(kWh)		**122.19**	**5,530.58**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$53.82**	**$1,976.10**
	Usage Cost Using EV(Electricity)	**$9.25**	**$410.52**
	Total Fuel Saving	**$44.57**	**$1,565.58**
Other Cost Saving	**CV Costs**	**$25.43**	**$967.29**
	EV Costs	**$10.84**	**$456.87**
	Total Other Cost Saving	**$14.59**	**$510.42**
Overall Economic Savings		**$59.16**	**$2,076.00**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**416.91**	**18,692.49**
Energy Consumed (kWh)		**122.19**	**5,530.58**
Co2 Emissions (lbs.)	**CV (Gas)**	**325.42**	**15,523.98**
	EV (Electricity)	**148.04**	**6,571.18**
	Total Fuel Saving	**177.38**	**8,952.80**
Co Emissions (lbs.)	**CV (Gas)**	**2.6297**	**194.0771**
	EV (Electricity)	**0.1056**	**3.2934**
	Total Fuel Saving	**2.5241**	**190.7837**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0039**	**0.3805**
	EV (Electricity)	**0.1085**	**6.9463**
	Total Fuel Saving	**(0.1046)**	**(6.5658)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.1103**	**11.6198**
	EV (Electricity)	**0.1514**	**20.8563**
	Total Fuel Saving	**(0.0411)**	**(9.2365)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0062**	**0.8242**
	EV (Electricity)	**0.0104**	**0.2600**
	Total Fuel Saving	**(0.0043)**	**0.5642**
VOC Emissions (lbs.)	**CV (Gas)**	**0.1548**	**7.4188**
	EV (Electricity)	**0.0028**	**0.1424**
	Total Fuel Saving	**0.1520**	**7.2764**

Energy Consumption Data

November 2021



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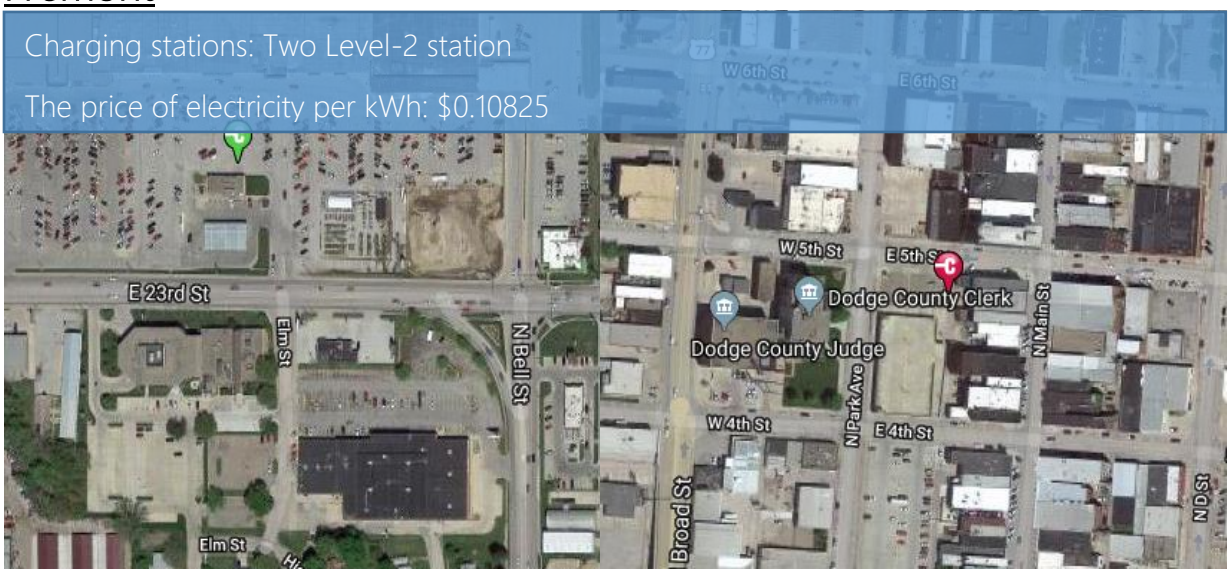


Economic Saving Data (Fuel & Maintenance Cost Savings):

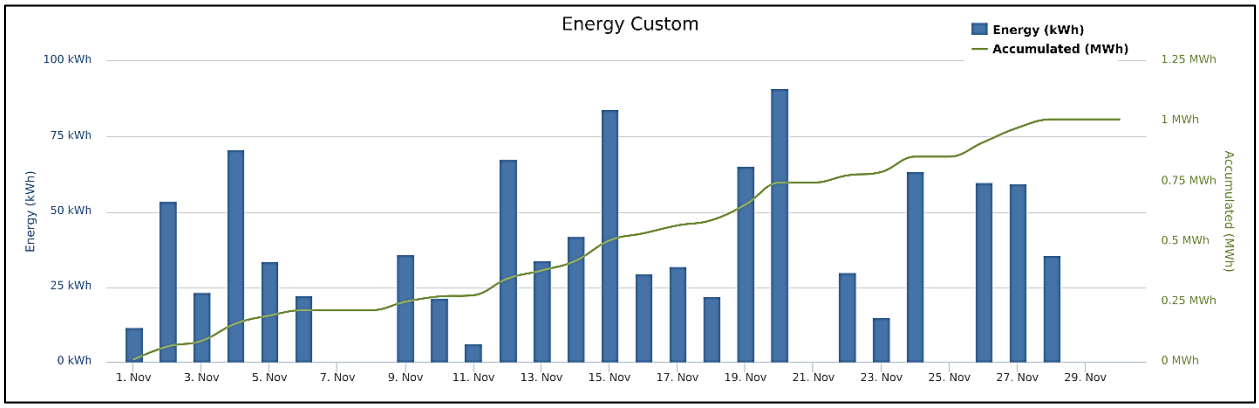
		This Month (November)	All Time
Miles Driven		**3,438.33**	**83,233.95**
Energy Consumed(kWh)		**1,007.72**	**24,695.18**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$435.76**	**$8,718.12**
	Usage Cost Using EV(Electricity)	**$99.26**	**$2,545.44**
	Total Fuel Saving	**$336.50**	**$6,172.68**
Other Cost Saving	**CV Costs**	**$209.74**	**$4,368.79**
	EV Costs	**$89.40**	**$1,532.61**
	Total Other Cost Saving	**$120.34**	**$2,836.18**
Overall Economic Savings		**$456.84**	**$9,008.86**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**3,438.33**	**83,233.95**
Energy Consumed (kWh)		**1,007.72**	**24,695.18**
Co2 Emissions (lbs.)	**CV (Gas)**	**2,683.8499**	**67,417.0365**
	EV (Electricity)	**1,475.7442**	**38,760.7575**
	Total Fuel Saving	**1,208.1056**	**28,656.2790**
Co Emissions (lbs.)	**CV (Gas)**	**21.6877**	**525.0097**
	EV (Electricity)	**1.3574**	**43.2187**
	Total Fuel Saving	**20.3303**	**481.7909**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0318**	**0.7707**
	EV (Electricity)	**2.3975**	**61.0362**
	Total Fuel Saving	**(2.3657)**	**(60.2655)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.9096**	**22.0199**
	EV (Electricity)	**1.5785**	**46.1111**
	Total Fuel Saving	**(0.6688)**	**(24.0912)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0508**	**2.1292**
	EV (Electricity)	**0.2121**	**6.0610**
	Total Fuel Saving	**(0.1613)**	**(3.9318)**
VOC Emissions (lbs.)	**CV (Gas)**	**1.2765**	**30.9013**
	EV (Electricity)	**0.0155**	**0.4898**
	Total Fuel Saving	**1.2610**	**30.4115**

Energy Consumption Data

November 2021



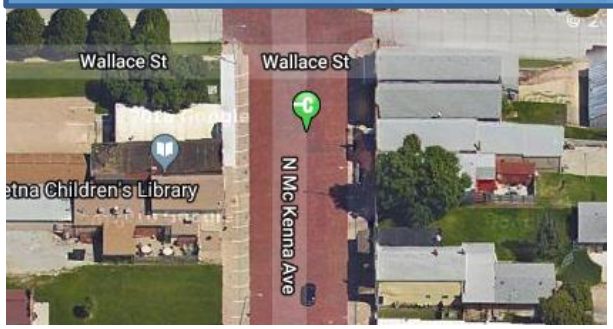
Gothenburg

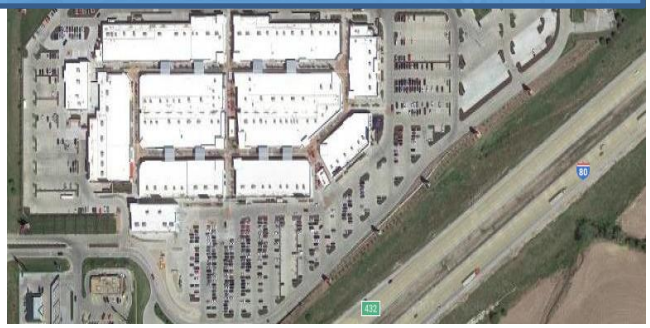
AFV: One Nissan Leaf Car
Charging stations: 0
The price of electricity per kWh: $0.082
NOTE:
Data is calculated based on Mileage provided (7,882 Miles as of November 3, 2018.)

Total CO2 emission reductions is 6,020.03 lbs.
Total CO reduction is 155.11 lbs.
Total SO2 reduction is (5.30 lbs.)
Total NOx reduction is 8.68 lbs.
Total CH4 reduction is 0.6359 lbs.
Total VOC reduction is 3.556 lbs.
Total Cost benefits savings $719.928

Gretna

Charging stations: Two Level-2 station
The price of electricity per kWh: $0.0898





Economic Saving Data (Fuel & Maintenance Cost Savings):

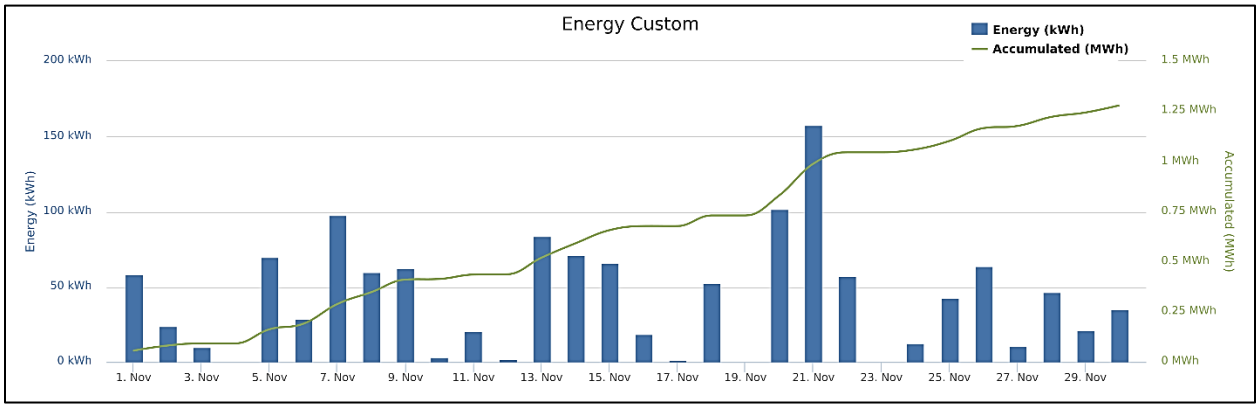
		This Month (November)	All Time
Miles Driven		**4,363.54**	**90,702.54**
Energy Consumed(kWh)		**1278.881**	**26,787.07**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$553.24**	**$9,510.28**
	Usage Cost Using EV(Electricity)	**$108.70**	**$2,348.72**
	Total Fuel Saving	**$444.54**	**$7,161.56**
Other Cost Saving	**CV Costs**	**$266.18**	**$4,988.15**
	EV Costs	**$113.45**	**$2,065.72**
	Total Other Cost Saving	**$152.72**	**$2,922.43**
Overall Economic Savings		**$597.26**	**$10,084.00**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**4,363.54**	**90,702.54**
Energy Consumed (Kwh)		**1,278.88**	**26,787.07**
Co2 Emissions (lbs.)	**CV (Gas)**	**3,406.04**	**72,726.64**
	EV (Electricity)	**2,163.03**	**40,561.20**
	Total Fuel Saving	**1,243.01**	**32,165.43**
Co Emissions (lbs.)	**CV (Gas)**	**27.5236**	**664.6562**
	EV (Electricity)	**1.6309**	**32.5176**
	Total Fuel Saving	**25.8927**	**632.1386**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0404**	**1.0916**
	EV (Electricity)	**3.4244**	**77.6722**
	Total Fuel Saving	**(3.3840)**	**(76.5806)**
Nox Emissions (lbs.)	**CV (Gas)**	**1.1544**	**32.1037**
	EV (Electricity)	**2.9497**	**60.0478**
	Total Fuel Saving	**(1.7953)**	**(27.9441)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0645**	**2.4799**
	EV (Electricity)	**0.1959**	**3.6337**
	Total Fuel Saving	**(0.1315)**	**(1.1538)**
VOC Emissions (lbs.)	**CV (Gas)**	**1.6200**	**29.8234**
	EV (Electricity)	**0.0335**	**0.6690**
	Total Fuel Saving	**1.5865**	**29.1544**

Energy Consumption Data

November 2021



Gretna (Fast DC charging):

Economic Saving Data (Fuel & Maintenance Cost Savings):

		This Month (November)	All Time
Miles Driven		**4,008.96**	**56,134.20**
Energy Consumed(kWh)		**1,174.96**	**16,519.01**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$508.36**	**$5,973.92**
	Usage Cost Using EV(Electricity)	**$99.87**	**$1,416.51**
	Total Fuel Saving	**$408.49**	**$4,557.41**
Other Cost Saving	**CV Costs**	**$244.55**	**$3,266.30**
	EV Costs	**$104.23**	**$1,318.76**
	Total Other Cost Saving	**$140.31**	**$1,947.54**
Overall Economic Savings		**$548.80**	**$6,504.95**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**4,008.96**	**56,134.20**
Energy Consumed (kWh)		**1,174.96**	**16,519.01**
Co2 Emissions (lbs.)	**CV (Gas)**	**3,129.27**	**44,361.94**
	EV (Electricity)	**1,987.26**	**27,284.61**
	Total Fuel Saving	**1,142.00**	**17,077.33**
Co Emissions (lbs.)	**CV (Gas)**	**25.2871**	**354.0743**
	EV (Electricity)	**1.4984**	**21.3680**
	Total Fuel Saving	**23.7887**	**332.7062**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0371**	**0.5198**
	EV (Electricity)	**3.1461**	**46.3988**
	Total Fuel Saving	**(3.1090)**	**(45.8790)**
Nox Emissions (lbs.)	**CV (Gas)**	**1.0606**	**14.8506**
	EV (Electricity)	**2.7100**	**38.4256**
	Total Fuel Saving	**(1.6494)**	**(23.5750)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0592**	**1.0297**
	EV (Electricity)	**0.1800**	**2.5134**
	Total Fuel Saving	**(0.1208)**	**(1.4837)**
VOC Emissions (lbs.)	**CV (Gas)**	**1.4884**	**20.8403**
	EV (Electricity)	**0.0308**	**0.4295**
	Total Fuel Saving	**1.4576**	**20.4108**

Gretna (Two Level-2 stations):

Economic Saving Data (Fuel & Maintenance Cost Savings):

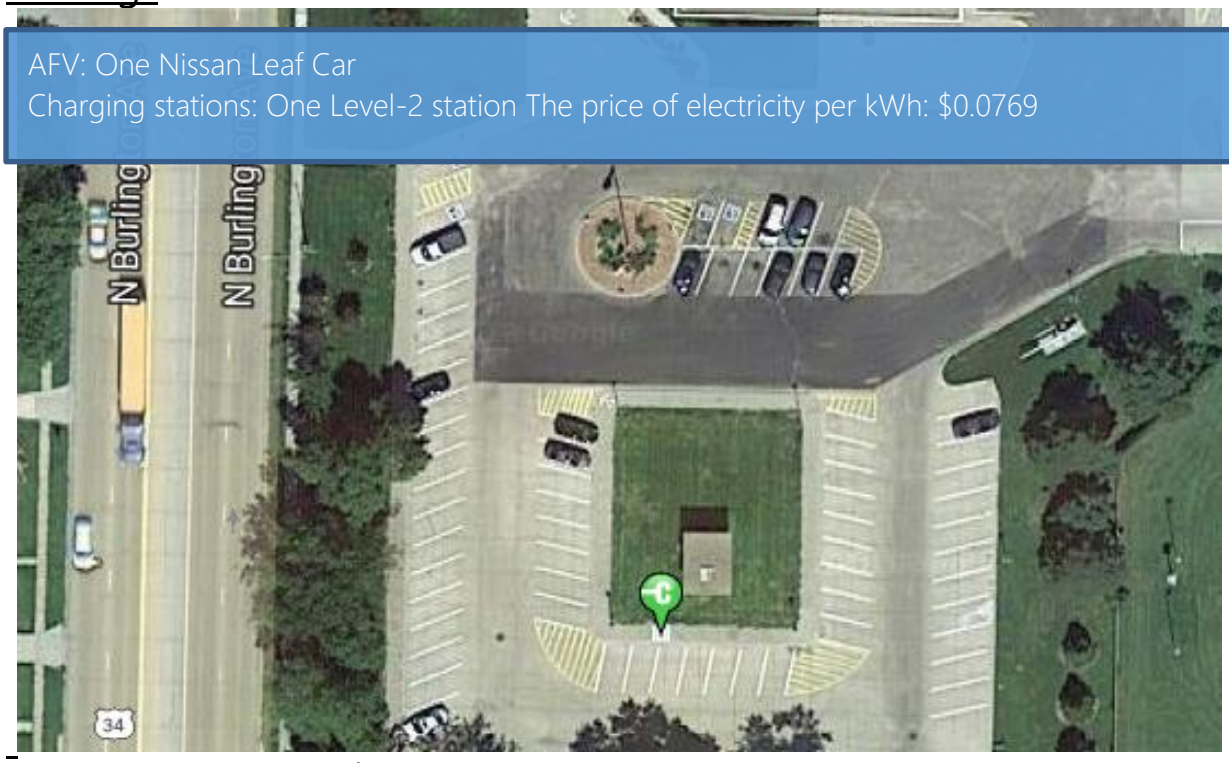
		This Month (November)	All Time
Miles Driven		**354.58**	**34,568.33**
Energy Consumed(kWh)		**103.92**	**10,268.06**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$44.88**	**$3,536.36**
	Usage Cost Using EV(Electricity)	**$8.83**	**$932.21**
	Total Fuel Saving	**$36.05**	**$2,604.15**
Other Cost Saving	**CV Costs**	**$21.63**	**$1,721.85**
	EV Costs	**$9.22**	**$746.95**
	Total Other Cost Saving	**$12.41**	**$974.90**
Overall Economic Savings		**$48.46**	**$3,579.05**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**354.58**	**34,568.33**
Energy Consumed (kWh)		**103.92**	**10,268.06**
Co2 Emissions (lbs.)	**CV (Gas)**	**276.78**	**28,364.70**
	EV (Electricity)	**175.77**	**13,276.59**
	Total Fuel Saving	**101.01**	**15,088.11**
Co Emissions (lbs.)	**CV (Gas)**	**2.2366**	**310.5820**
	EV (Electricity)	**0.1325**	**11.1496**
	Total Fuel Saving	**2.1040**	**299.4324**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0033**	**0.5718**
	EV (Electricity)	**0.2783**	**31.2734**
	Total Fuel Saving	**(0.2750)**	**(30.7016)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0938**	**17.2532**
	EV (Electricity)	**0.2397**	**21.6222**
	Total Fuel Saving	**(0.1459)**	**(4.3690)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0052**	**1.4502**
	EV (Electricity)	**0.0159**	**1.1203**
	Total Fuel Saving	**(0.0107)**	**0.3299**
VOC Emissions (lbs.)	**CV (Gas)**	**0.1316**	**8.9831**
	EV (Electricity)	**0.0027**	**0.2395**
	Total Fuel Saving	**0.1289**	**8.7436**

Hastings

AFV: One Nissan Leaf Car
Charging stations: One Level-2 station The price of electricity per kWh: $0.0769



Economic Saving Data (Fuel & Maintenance Cost Savings):

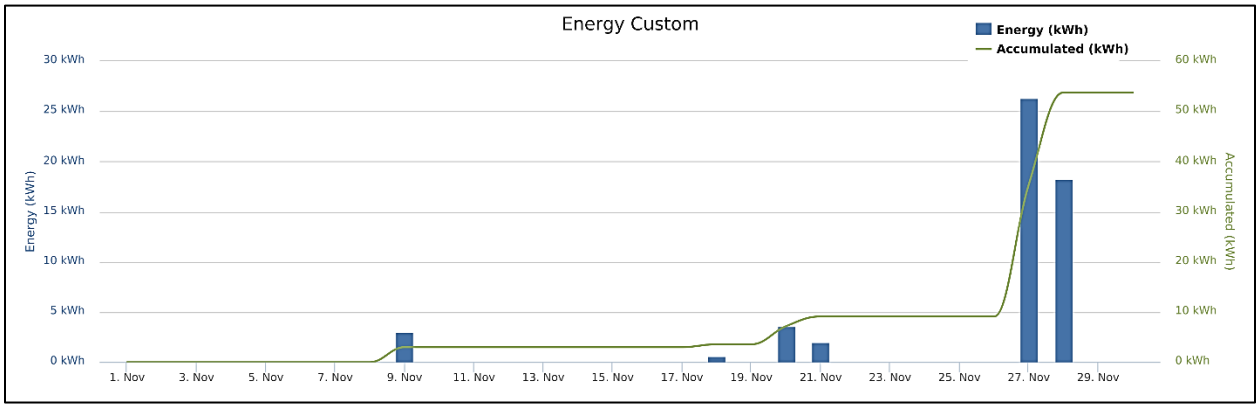
		This Month (November)	All Time
Miles Driven		**183.26**	**4909.70**
Energy Consumed(kWh)		**53.71**	**1455.70**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$23.66**	**$532.16**
	Usage Cost Using EV(Electricity)	**$4.21**	**$112.72**
	Total Fuel Saving	**$19.45**	**$419.44**
Other Cost Saving	**CV Costs**	**$11.18**	**$256.03**
	EV Costs	**$4.76**	**$101.80**
	Total Other Cost Saving	**$6.41**	**$154.23**
Overall Economic Savings		**$25.86**	**$573.67**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**183.26**	**4,909.70**
Energy Consumed (kWh)		**53.71**	**1,455.70**
Co2 Emissions (lbs.)	**CV (Gas)**	**143.05**	**3,969.59**
	EV (Electricity)	**117.81**	**2,762.82**
	Total Fuel Saving	**25.23**	**1,206.77**
Co Emissions (lbs.)	**CV (Gas)**	**1.1559**	**36.3054**
	EV (Electricity)	**0.0753**	**2.1135**
	Total Fuel Saving	**1.0806**	**34.1919**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0017**	**0.0599**
	EV (Electricity)	**0.1411**	**3.8264**
	Total Fuel Saving	**(0.1394)**	**(3.7664)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0485**	**1.7664**
	EV (Electricity)	**0.1309**	**2.3910**
	Total Fuel Saving	**(0.0825)**	**(0.6246)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0027**	**0.1557**
	EV (Electricity)	**0.0149**	**0.1959**
	Total Fuel Saving	**(0.0122)**	**(0.0402)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0680**	**1.8559**
	EV (Electricity)	**0.0009**	**0.0281**
	Total Fuel Saving	**0.0672**	**1.8278**

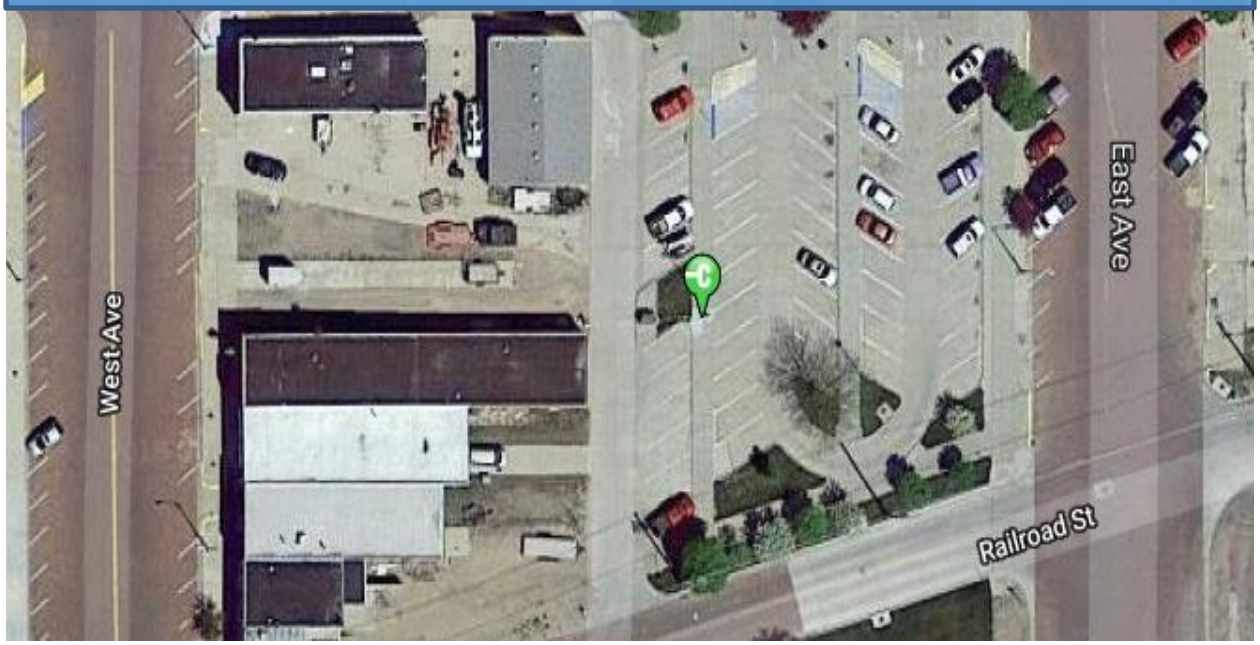
Energy Consumption Data

November 2021



City of Holdrege

Charging stations: One Level-2 station
The price of electricity per kWh: $0.09282



Economic Saving Data (Fuel & Maintenance Cost Savings):

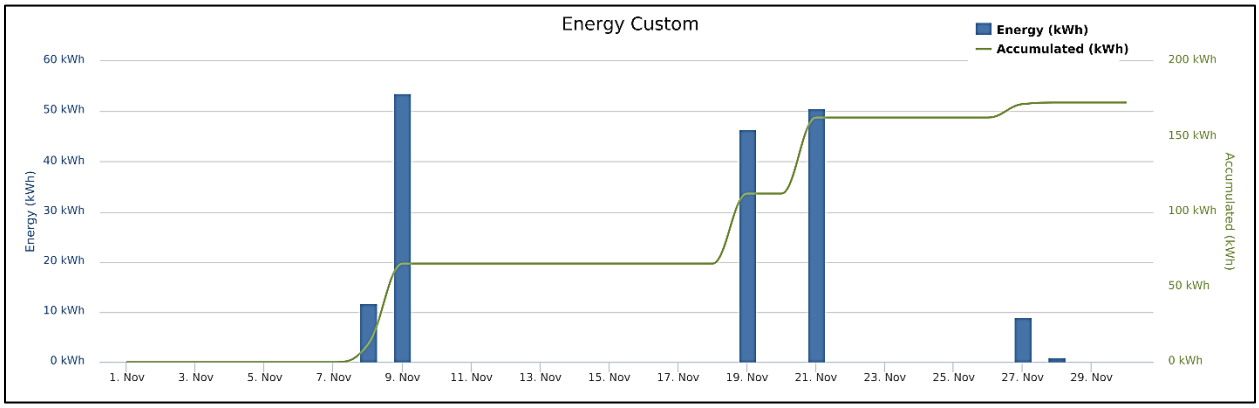
		This Month (November)	All Time
Miles Driven		**588.01**	**4,270.67**
Energy Consumed(kWh)		**172.34**	**1,260.60**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$75.90**	**$477.38**
	Usage Cost Using EV(Electricity)	**$16.80**	**$118.99**
	Total Fuel Saving	**$59.10**	**$358.39**
Other Cost Saving	**CV Costs**	**$35.87**	**$232.05**
	EV Costs	**$15.29**	**$106.61**
	Total Other Cost Saving	**$20.58**	**$125.44**
Overall Economic Savings		**$79.68**	**$483.83**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**588.01**	**4,270.67**
Energy Consumed (kWh)		**172.34**	**1,260.60**
Co2 Emissions (lbs.)	**CV (Gas)**	**458.98**	**3,451.30**
	EV (Electricity)	**259.18**	**1,510.09**
	Total Fuel Saving	**199.80**	**1,941.20**
Co Emissions (lbs.)	**CV (Gas)**	**3.7089**	**37.7459**
	EV (Electricity)	**0.1741**	**1.0761**
	Total Fuel Saving	**3.5349**	**36.6698**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0054**	**0.0690**
	EV (Electricity)	**0.4737**	**3.2177**
	Total Fuel Saving	**(0.4683)**	**(3.1487)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.1556**	**2.0769**
	EV (Electricity)	**0.8105**	**4.4716**
	Total Fuel Saving	**(0.6549)**	**(2.3947)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0087**	**0.1496**
	EV (Electricity)	**0.0209**	**0.1079**
	Total Fuel Saving	**(0.0122)**	**0.0418**
VOC Emissions (lbs.)	**CV (Gas)**	**0.2183**	**1.6532**
	EV (Electricity)	**0.0045**	**0.0268**
	Total Fuel Saving	**0.2138**	**1.6264**

Energy Consumption Data

November 2021



Kearney

Charging stations: Three Level-2 station and Two DC stations
The price of electricity per kWh: $0.0853

Economic Saving Data (Fuel & Maintenance Cost Savings):

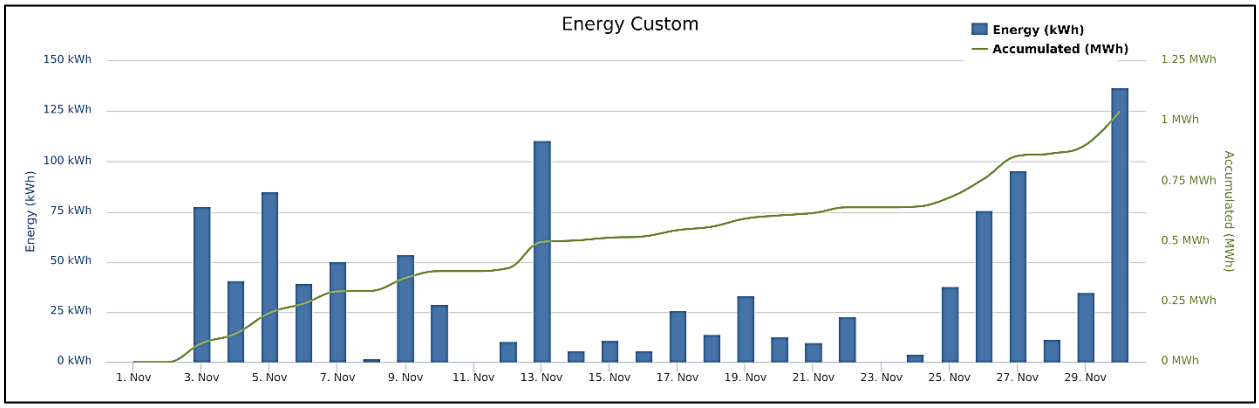
		This Month (November)	All Time
Miles Driven		**3,543.40**	**92,086.29**
Energy Consumed(kWh)		**1,038.51**	**27,250.21**
Fuel Cost Caving	**Usage Cost Using CV(Gas)**	**$462.43**	**$10,071.01**
	Usage Cost Using EV(Electricity)	**$88.59**	**$2,344.40**
	Total Fuel Saving	**$373.84**	**$7,726.62**
Other Cost Saving	**CV Costs**	**$216.15**	**$4,909.73**
	EV Costs	**$92.13**	**$2,054.29**
	Total Other Cost Saving	**$124.02**	**$2,855.44**
Overall Economic Savings		**$497.86**	**$10,582.05**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**3,543.40**	**92,086.29**
Energy Consumed (kWh)		**1,038.51**	**27,250.21**
Co2 Emissions (lbs.)	**CV (Gas)**	**2,765.87**	**74,125.41**
	EV (Electricity)	**1,561.85**	**34,017.78**
	Total Fuel Saving	**1,204.02**	**40,107.63**
Co Emissions (lbs.)	**CV (Gas)**	**22.3505**	**706.1389**
	EV (Electricity)	**1.0489**	**24.5288**
	Total Fuel Saving	**21.3016**	**681.6101**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0328**	**1.1935**
	EV (Electricity)	**2.8547**	**69.1615**
	Total Fuel Saving	**(2.8219)**	**(67.9680)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.9374**	**35.3392**
	EV (Electricity)	**4.8841**	**101.6832**
	Total Fuel Saving	**(3.9467)**	**(66.3440)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0523**	**2.9009**
	EV (Electricity)	**0.1261**	**2.4762**
	Total Fuel Saving	**(0.0737)**	**0.4248**
VOC Emissions (lbs.)	**CV (Gas)**	**1.3155**	**34.9687**
	EV (Electricity)	**0.0273**	**0.5711**
	Total Fuel Saving	**1.2882**	**34.3977**

Energy Consumption Data

November 2021



Kearney (Fast DC charging):

Economic Saving Data (Fuel & Maintenance Cost Savings):

YOUNES NORTH& NORTH2		This Month (November)	All Time
Miles Driven		412.46	6,052.49
Energy Consumed(kWh)		120.88	1,773.88
Fuel Cost Caving	Usage Cost Using CV(Gas)	53.73	722.31
	Usage Cost Using EV(Electricity)	10.31	151.31
	Total Fuel Saving	43.42	571.00
Other Cost Saving	CV Costs	25.16	369.20
	EV Costs	10.72	157.36
	Total Other Cost Saving	14.44	211.84
Overall Economic Savings		57.86	782.83

Environmental Saving Data (Reduction in Emissions):

YOUNES NORTH& NORTH2		This Month (November)	All Time
Miles Driven		412.46	6,052.49
Energy Consumed (kWh)		120.88	1,773.88
Co2 Emissions (lbs.)	CV (Gas)	321.950	4,724.378
	EV (Electricity)	181.801	2,667.791
	Total Fuel Saving	140.149	2,056.587
Co Emissions (lbs.)	CV (Gas)	2.602	38.177
	EV (Electricity)	0.122	1.792
	Total Fuel Saving	2.480	36.385
So2 Emissions (lbs.)	CV (Gas)	0.004	0.056
	EV (Electricity)	0.332	4.876
	Total Fuel Saving	-0.328	-4.820
Nox Emissions (lbs.)	CV (Gas)	0.109	1.601
	EV (Electricity)	0.569	8.343
	Total Fuel Saving	-0.459	-6.741
CH4 Emissions (lbs.)	CV (Gas)	0.006	0.089
	EV (Electricity)	0.015	0.215
	Total Fuel Saving	-0.009	-0.126
VOC Emissions (lbs.)	CV (Gas)	0.153	2.247
	EV (Electricity)	0.003	0.047
	Total Fuel Saving	0.150	2.200

Kearney (Level-2 stations):

Economic Saving Data (Fuel & Maintenance Cost Savings):

-		This Month (November)	All Time
Miles Driven		**3,130.95**	**86,033.81**
Energy Consumed(kWh)		**917.63**	**25,476.32**
Fuel Cost Caving	**Usage Cost Using CV(Gas)**	**408.69**	**9,348.70**
	Usage Cost Using EV(Electricity)	**78.27**	**2,193.09**
	Total Fuel Saving	**330.42**	**7,155.62**
Other Cost Saving	**CV Costs**	**190.99**	**4,540.52**
	EV Costs	**81.40**	**1,896.92**
	Total Other Cost Saving	**109.58**	**2,643.60**
Overall Economic Savings		**440.00**	**9,799.22**

Environmental Saving Data (Reduction in Emissions):

-		This Month (November)	All Time
Miles Driven		**3,130.95**	**86,033.81**
Energy Consumed (kWh)		**917.63**	**25,476.32**
Co2 Emissions (lbs.)	**CV (Gas)**	**2,443.92**	**69,401.03**
	EV (Electricity)	**1,380.05**	**31,349.99**
	Total Fuel Saving	**1,063.87**	**38,051.04**
Co Emissions (lbs.)	**CV (Gas)**	**19.75**	**667.96**
	EV (Electricity)	**0.93**	**22.74**
	Total Fuel Saving	**18.82**	**645.22**
So2 Emissions (lbs.)	**CV (Gas)**	**0.03**	**1.14**
	EV (Electricity)	**2.52**	**64.29**
	Total Fuel Saving	**(2.49)**	**(63.15)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.83**	**33.74**
	EV (Electricity)	**4.32**	**93.34**
	Total Fuel Saving	**(3.49)**	**(59.60)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.05**	**2.81**
	EV (Electricity)	**0.11**	**2.26**
	Total Fuel Saving	**(0.07)**	**0.55**
VOC Emissions (lbs.)	**CV (Gas)**	**1.16**	**32.72**
	EV (Electricity)	**0.02**	**0.52**
	Total Fuel Saving	**1.14**	**32.20**

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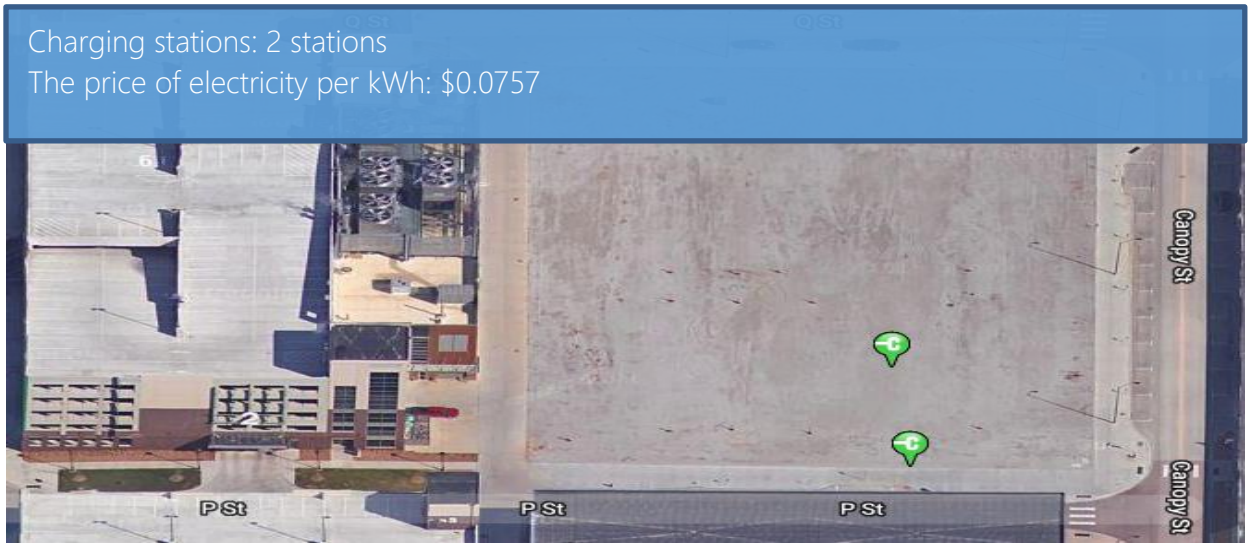


Economic Saving Data (Fuel & Maintenance Cost Savings):

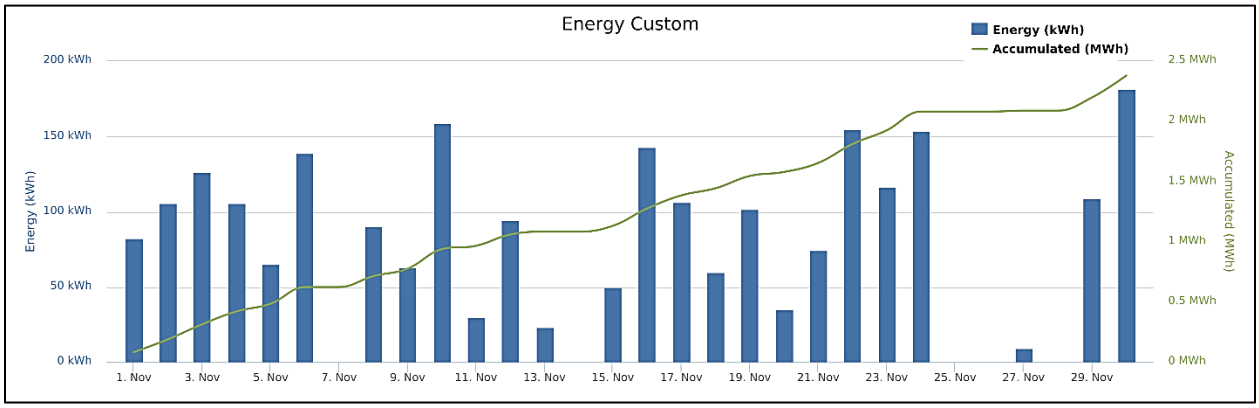
		This Month (November)	All Time
Miles Driven		**8,114.86**	**128,903.80**
Energy Consumed(kWh)		**2378.328**	**38,296.70**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$1,047.50**	**$14,242.82**
	Usage Cost Using EV(Electricity)	**$332.97**	**$3,756.63**
	Total Fuel Saving	**$714.53**	**$10,486.19**
Other Cost Saving	**CV Costs**	**$495.01**	**$6,512.19**
	EV Costs	**$210.99**	**$2,507.24**
	Total Other Cost Saving	**$284.02**	**$4,004.95**
Overall Economic Savings		**$998.55**	**$14,491.15**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**8,114.86**	**128,903.80**
Energy Consumed (kWh)		**2,378.33**	**38,296.70**
Co2 Emissions (lbs.)	**CV (Gas)**	**6,334.19**	**105,895.24**
	EV (Electricity)	**2,881.49**	**56,630.11**
	Total Fuel Saving	**3,452.71**	**49,265.13**
Co Emissions (lbs.)	**CV (Gas)**	**51.1856**	**1,013.4798**
	EV (Electricity)	**2.0554**	**23.0131**
	Total Fuel Saving	**49.1302**	**990.4667**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0751**	**1.7389**
	EV (Electricity)	**2.1121**	**27.4087**
	Total Fuel Saving	**(2.0370)**	**(25.6698)**
Nox Emissions (lbs.)	**CV (Gas)**	**2.1468**	**51.6608**
	EV (Electricity)	**2.9465**	**198.5610**
	Total Fuel Saving	**(0.7996)**	**(146.9002)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.1199**	**4.5211**
	EV (Electricity)	**0.2026**	**1.9910**
	Total Fuel Saving	**(0.0827)**	**2.5301**
VOC Emissions (lbs.)	**CV (Gas)**	**3.0127**	**49.1139**
	EV (Electricity)	**0.0542**	**1.1173**
	Total Fuel Saving	**2.9585**	**47.9966**

Energy Consumption Data

November 2021



Lexington

Charging stations: Two Level-2 station
The price of electricity per kWh: $0.1405

Economic Saving Data (Fuel & Maintenance Cost Savings):

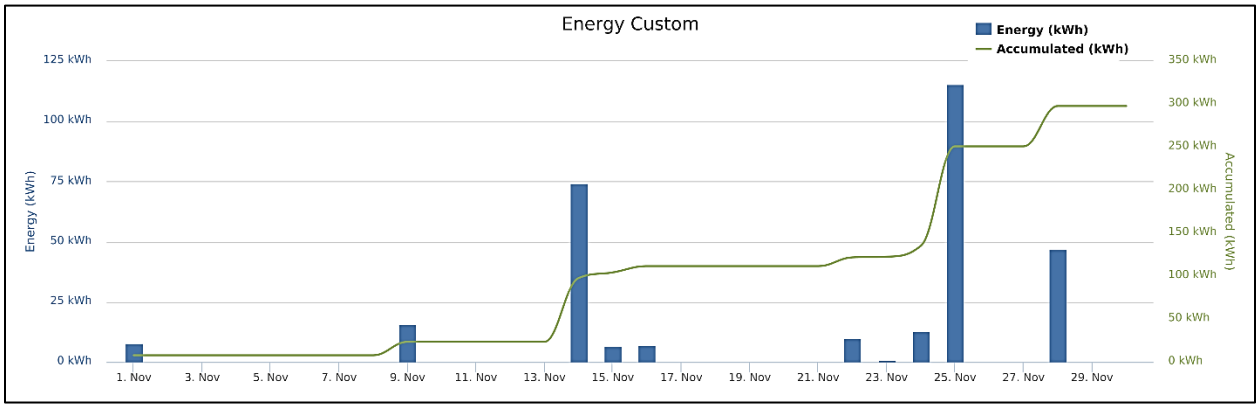
		This Month (November)	All Time
Miles Driven		**1,015.76**	**39,688.96**
Energy Consumed(kWh)		**297.702**	**11,748.76**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$131.12**	**$4,090.79**
	Usage Cost Using EV(Electricity)	**$22.54**	**$1,219.04**
	Total Fuel Saving	**$108.58**	**$2,871.75**
Other Cost Saving	**CV Costs**	**$61.96**	**$2,071.17**
	EV Costs	**$26.41**	**$923.17**
	Total Other Cost Saving	**$35.55**	**$1,147.99**
Overall Economic Savings		**$144.13**	**$4,019.75**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**1,015.76**	**39,688.96**
Energy Consumed (kWh)		**297.70**	**11,748.76**
Co2 Emissions (lbs.)	**CV (Gas)**	**792.87**	**32,549.79**
	EV (Electricity)	**447.72**	**13,525.68**
	Total Fuel Saving	**345.15**	**19,024.11**
Co Emissions (lbs.)	**CV (Gas)**	**6.4070**	**364.3192**
	EV (Electricity)	**0.3007**	**10.0276**
	Total Fuel Saving	**6.1063**	**354.2916**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0094**	**0.6777**
	EV (Electricity)	**0.8183**	**29.6262**
	Total Fuel Saving	**(0.8089)**	**(28.9485)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.2687**	**20.4867**
	EV (Electricity)	**1.4001**	**40.2470**
	Total Fuel Saving	**(1.1314)**	**(19.7604)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0150**	**1.5413**
	EV (Electricity)	**0.0361**	**0.9588**
	Total Fuel Saving	**(0.0211)**	**0.5826**
VOC Emissions (lbs.)	**CV (Gas)**	**0.3771**	**15.4502**
	EV (Electricity)	**0.0078**	**0.2375**
	Total Fuel Saving	**0.3693**	**15.2127**

Energy Consumption Data

November 2021



Lincoln

Charging stations: Eleven Level-2 stations
The price of electricity per kWh: $0.0757

Economic Saving Data (Fuel & Maintenance Cost Savings):

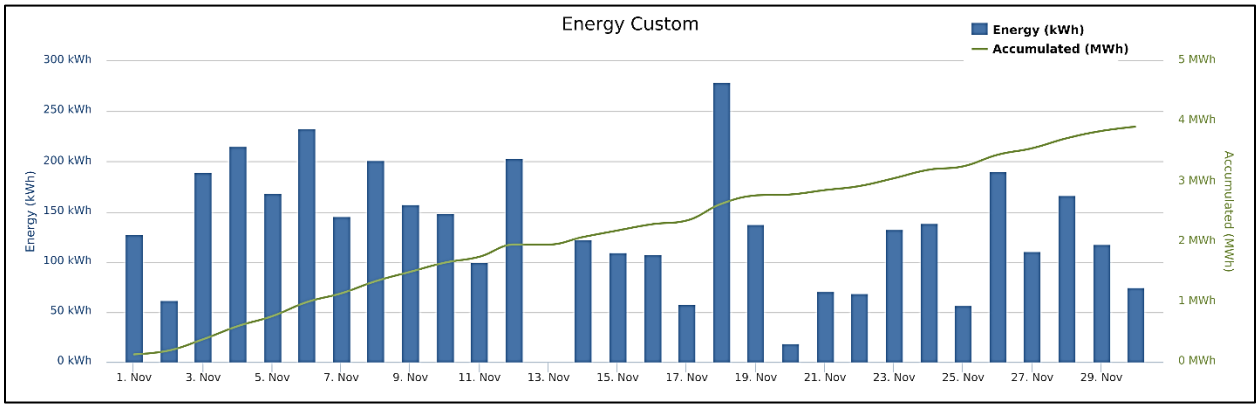
		This Month (November)	All Time
Miles Driven		**13,345.37**	**302,012.54**
Energy Consumed(kWh)		**3,911.30**	**89,740.69**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$1,722.67**	**$32,720.23**
	Usage Cost Using EV(Electricity)	**$296.09**	**$6,762.90**
	Total Fuel Saving	**$1,426.58**	**$25,957.34**
Other Cost Saving	**CV Costs**	**$814.07**	**$15,342.76**
	EV Costs	**$346.98**	**$5,866.17**
	Total Other Cost Saving	**$467.09**	**$9,476.59**
Overall Economic Savings		**$1,893.67**	**$35,433.93**

Environmental Saving Data (Reduction in Emissions):

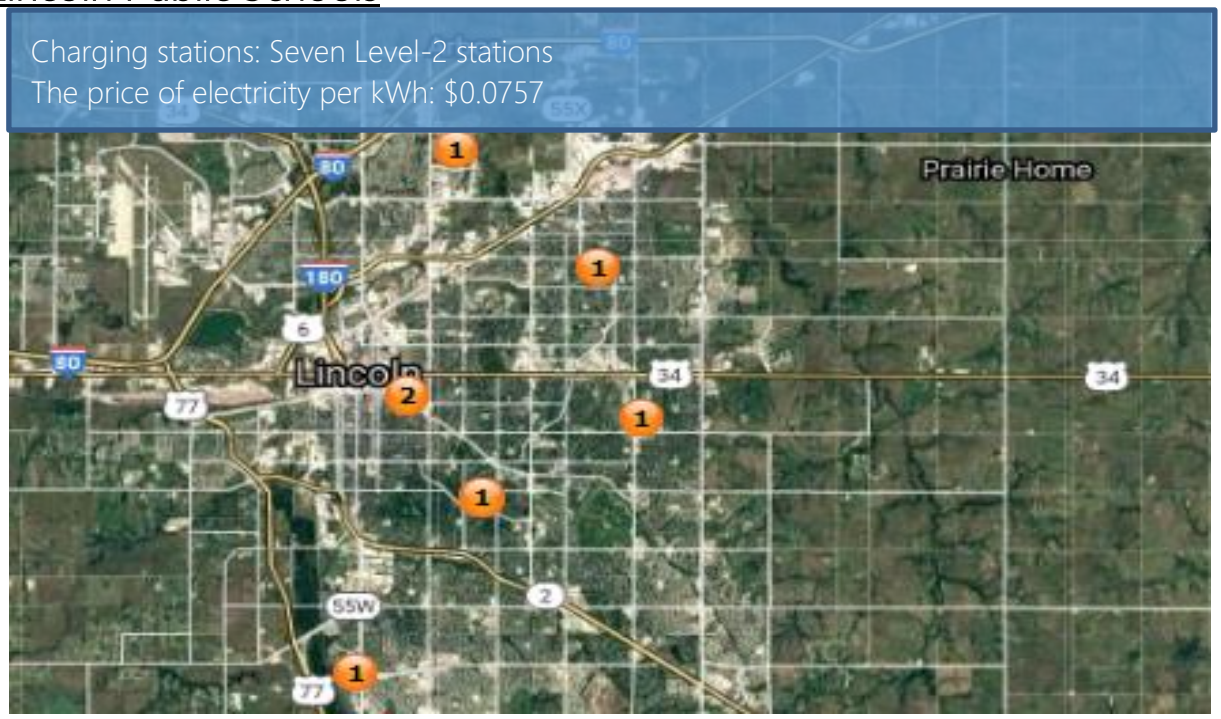
		This Month (November)	All Time
Miles Driven		**13,345.37**	**302,012.54**
Energy Consumed (kWh)		**3,911.30**	**89,740.69**
Co2 Emissions (lbs.)	**CV (Gas)**	**10,416.96**	**243,618.19**
	EV (Electricity)	**4,738.78**	**138,045.81**
	Total Fuel Saving	**5,678.19**	**105,572.37**
Co Emissions (lbs.)	**CV (Gas)**	**84.1778**	**2,113.3447**
	EV (Electricity)	**3.3802**	**53.4357**
	Total Fuel Saving	**80.7976**	**2,059.9091**
So2 Emissions (lbs.)	**CV (Gas)**	**0.1236**	**3.3630**
	EV (Electricity)	**3.4735**	**68.1824**
	Total Fuel Saving	**(3.3499)**	**(64.8194)**
Nox Emissions (lbs.)	**CV (Gas)**	**3.5306**	**98.1484**
	EV (Electricity)	**4.8456**	**469.7295**
	Total Fuel Saving	**(1.3150)**	**(371.5811)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.1971**	**9.7709**
	EV (Electricity)	**0.3332**	**4.5959**
	Total Fuel Saving	**(0.1361)**	**5.1750**
VOC Emissions (lbs.)	**CV (Gas)**	**4.9546**	**113.4015**
	EV (Electricity)	**0.0891**	**2.6610**
	Total Fuel Saving	**4.8654**	**110.7405**

Energy Consumption Data

November 2021



Lincoln Public Schools



Economic Saving Data (Fuel & Maintenance Cost Savings):

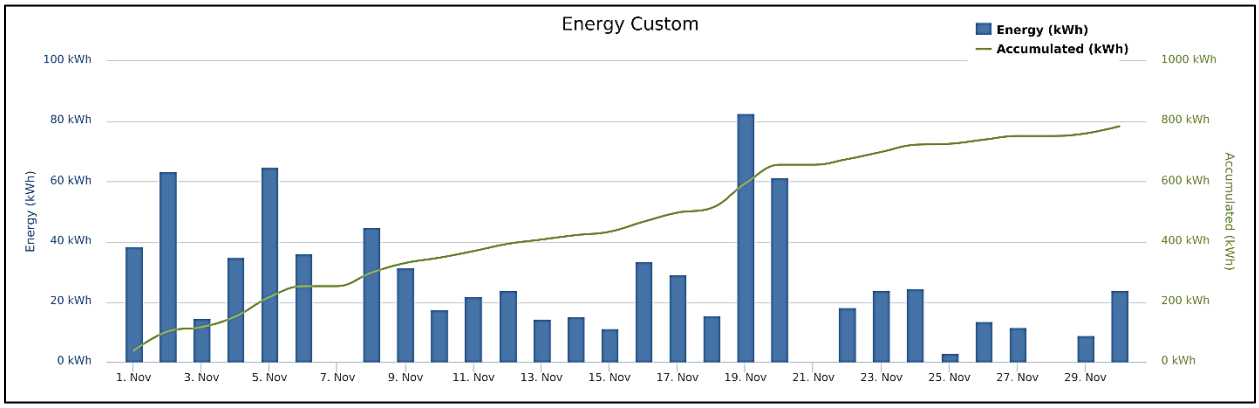
		This Month (November)	All Time
Miles Driven		**2,673.62**	**20,347.79**
Energy Consumed(kWh)		**783.59**	**5,963.60**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$345.12**	**$2,375.59**
	Usage Cost Using EV(Electricity)	**$59.32**	**$451.44**
	Total Fuel Saving	**$285.80**	**$1,924.15**
Other Cost Saving	**CV Costs**	**$163.09**	**$1,241.21**
	EV Costs	**$69.51**	**$529.04**
	Total Other Cost Saving	**$93.58**	**$712.17**
Overall Economic Savings		**$379.38**	**$2,636.32**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**2,673.62**	**20,347.79**
Energy Consumed (kWh)		**783.59**	**5,963.60**
Co2 Emissions (lbs.)	**CV (Gas)**	**2,086.94**	**15,882.83**
	EV (Electricity)	**949.37**	**7,225.25**
	Total Fuel Saving	**1,137.57**	**8,657.58**
Co Emissions (lbs.)	**CV (Gas)**	**16.8642**	**128.3465**
	EV (Electricity)	**0.6772**	**5.1538**
	Total Fuel Saving	**16.1870**	**123.1927**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0248**	**0.1884**
	EV (Electricity)	**0.6959**	**5.2960**
	Total Fuel Saving	**(0.6711)**	**(5.1076)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.7073**	**5.3831**
	EV (Electricity)	**0.9708**	**7.3881**
	Total Fuel Saving	**(0.2635)**	**(2.0051)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0395**	**0.3006**
	EV (Electricity)	**0.0668**	**0.5080**
	Total Fuel Saving	**(0.0273)**	**(0.2075)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.9926**	**7.5543**
	EV (Electricity)	**0.0179**	**0.1359**
	Total Fuel Saving	**0.9747**	**7.4184**

Energy Consumption Data

November 2021



Metropolitan Community College

Charging stations: Two Level-2 station (same location)
The price of electricity per kWh: $0.0898

Economic Saving Data (Fuel & Maintenance Cost Savings):

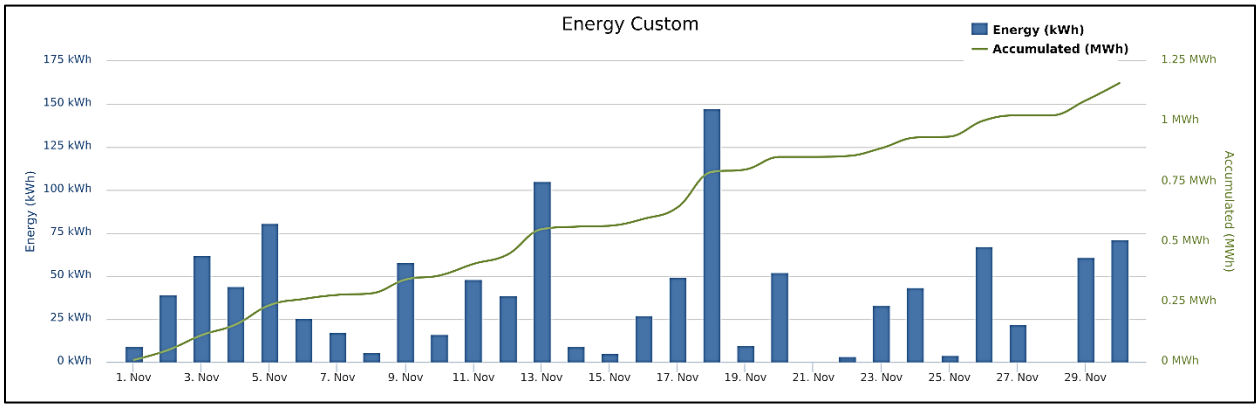
		This Month (November)	All Time
Miles Driven		**3,950.59**	**92,899.71**
Energy Consumed(kWh)		**1,157.85**	**27,625.05**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$500.83**	**$9,914.87**
	Usage Cost Using EV(Electricity)	**$98.42**	**$2,429.60**
	Total Fuel Saving	**$402.41**	**$7,485.27**
Other Cost Saving	**CV Costs**	**$240.99**	**$4,726.38**
	EV Costs	**$102.72**	**$1,601.95**
	Total Other Cost Saving	**$138.27**	**$3,124.42**
Overall Economic Savings		**$540.68**	**$10,609.69**

Environmental Saving Data (Reduction in Emissions):

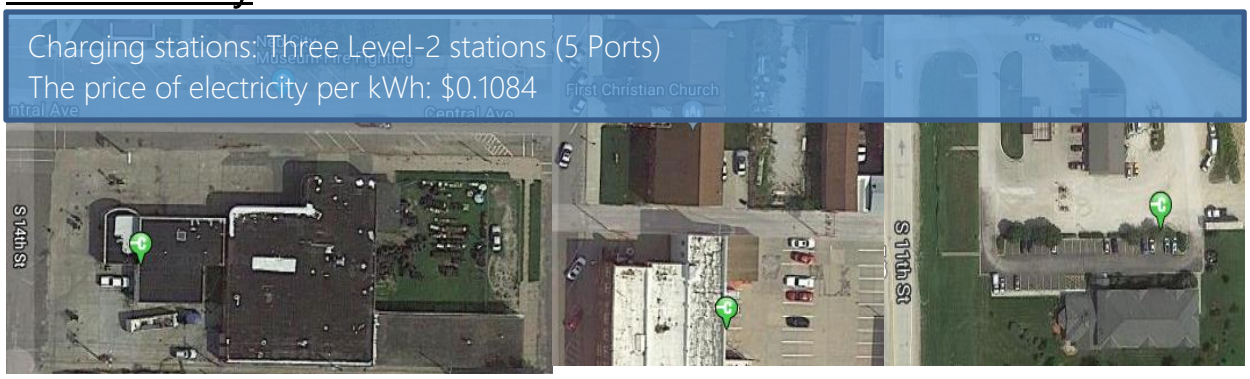
		This Month (November)	All Time
Miles Driven		**3,950.59**	**92,899.71**
Energy Consumed (kWh)		**1,157.85**	**27,625.05**
Co2 Emissions (lbs.)	**CV (Gas)**	**3,083.707**	**75,544.376**
	EV (Electricity)	**1,958.329**	**42,677.374**
	Total Fuel Saving	**1,125.378**	**32,867.002**
Co Emissions (lbs.)	**CV (Gas)**	**24.9189**	**585.9912**
	EV (Electricity)	**1.4766**	**36.6018**
	Total Fuel Saving	**23.4423**	**549.3894**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0366**	**0.8602**
	EV (Electricity)	**3.1003**	**86.8138**
	Total Fuel Saving	**(3.0637)**	**(85.9536)**
Nox Emissions (lbs.)	**CV (Gas)**	**1.0451**	**24.5777**
	EV (Electricity)	**2.6705**	**65.3946**
	Total Fuel Saving	**(1.6254)**	**(40.8170)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0584**	**2.5965**
	EV (Electricity)	**0.1774**	**4.0618**
	Total Fuel Saving	**(0.1190)**	**(1.4652)**
VOC Emissions (lbs.)	**CV (Gas)**	**1.4667**	**34.4879**
	EV (Electricity)	**0.0303**	**0.7014**
	Total Fuel Saving	**1.4364**	**33.7865**

Energy Consumption Data

November 2021



Nebraska City



Data from Two existing charging station with three ports

		This Month (November)	All Time
Miles Driven		**3,969.58**	**80,219.58**
Energy Consumed(kWh)		**1163.418**	**23,733.38**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$507.18**	**$8,647.05**
	Usage Cost Using EV(Electricity)	**$126.11**	**$2,545.48**
	Total Fuel Saving	**$381.07**	**$6,101.57**
Other Cost Saving	**CV Costs**	**$242.14**	**$4,242.97**
	EV Costs	**$103.21**	**$1,829.56**
	Total Other Cost Saving	**$138.94**	**$2,413.41**
Overall Economic Savings		**$520.00**	**$8,514.97**

Environmental Saving Data (Reduction in Emissions):

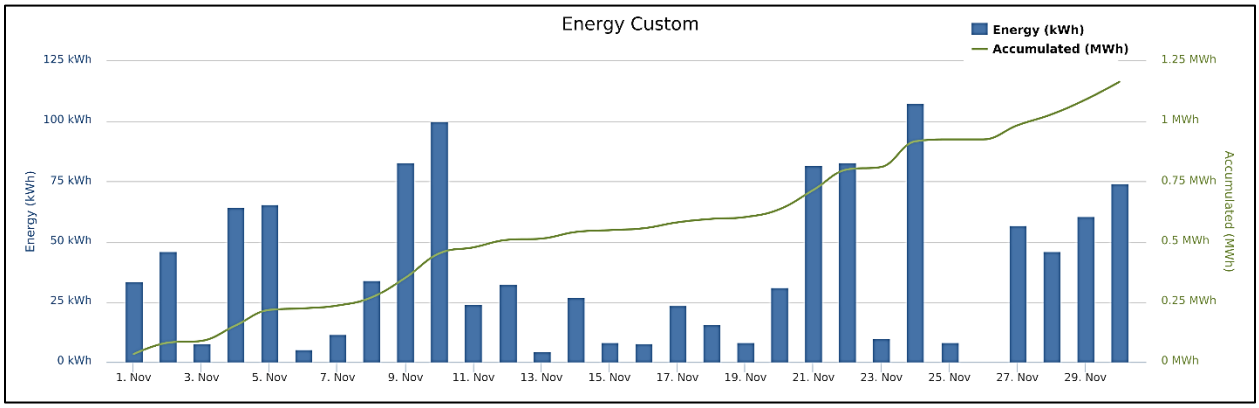
		This Month (November)	All Time
Miles Driven		**3,969.58**	**80,219.58**
Energy Consumed (kWh)		**1,163.42**	**23,733.38**
Co2 Emissions (lbs.)	**CV (Gas)**	**3,098.53**	**65,748.13**
	EV (Electricity)	**857.21**	**18,929.52**
	Total Fuel Saving	**2,241.32**	**46,818.61**
Co Emissions (lbs.)	**CV (Gas)**	**25.0387**	**703.9623**
	EV (Electricity)	**0.8349**	**18.6239**
	Total Fuel Saving	**24.2038**	**685.3384**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0368**	**1.2817**
	EV (Electricity)	**1.4896**	**39.5540**
	Total Fuel Saving	**(1.4528)**	**(38.2723)**
Nox Emissions (lbs.)	**CV (Gas)**	**1.0502**	**38.5690**
	EV (Electricity)	**0.4688**	**14.7196**
	Total Fuel Saving	**0.5814**	**23.8494**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0586**	**2.8631**
	EV (Electricity)	**0.1233**	**1.7852**
	Total Fuel Saving	**(0.0647)**	**1.0780**
VOC Emissions (lbs.)	**CV (Gas)**	**1.4737**	**31.0268**
	EV (Electricity)	**0.0095**	**0.2801**
	Total Fuel Saving	**1.4642**	**30.7467**

CNG Data – No new data for November 2021, this is from previous calculations.

		Total
Miles driven		36,520.0
Fuel cost Savings:	Usage Cost Using CV (Gas)	$4,512.16
	Usage Cost Using CNG (Natural gas)	$2,834.56
	Total Fuel Savings	$1,677.60
CO2 Emissions (lbs.)	CV (Gas)	37,613.59
	CNG (Natural Gas)	30,048.11
	Overall Emission Reductions	7,565.48
CO Emissions (lbs.)	CV (Gas)	799.68
	CNG (Natural Gas)	1,439.27
	Overall Emission Reductions	(639.59)
SO2 Emissions (lbs.)	CV (Gas)	1.029
	CNG (Natural Gas)	0.1527
	Overall Emission Reductions	0.8763
NOx Emissions (lbs.)	CV (Gas)	22.09
	CNG (Natural Gas)	27.69
	Overall Emission Reductions	(5.6)
CH4 Emissions (lbs.)	CV (Gas)	1.31
	CNG (Natural Gas)	49.68
	Overall Emission Reductions	(48.37)
VOC Emissions (lbs.)	CV (Gas)	19.39
	CNG (Natural Gas)	22.52
	Overall Emission Reductions	(3.13)

Energy Consumption Data

November 2021



Nebraska City

- Data from one existing charging station with two ports

Economic Saving Data (Fuel & Maintenance Cost Savings):

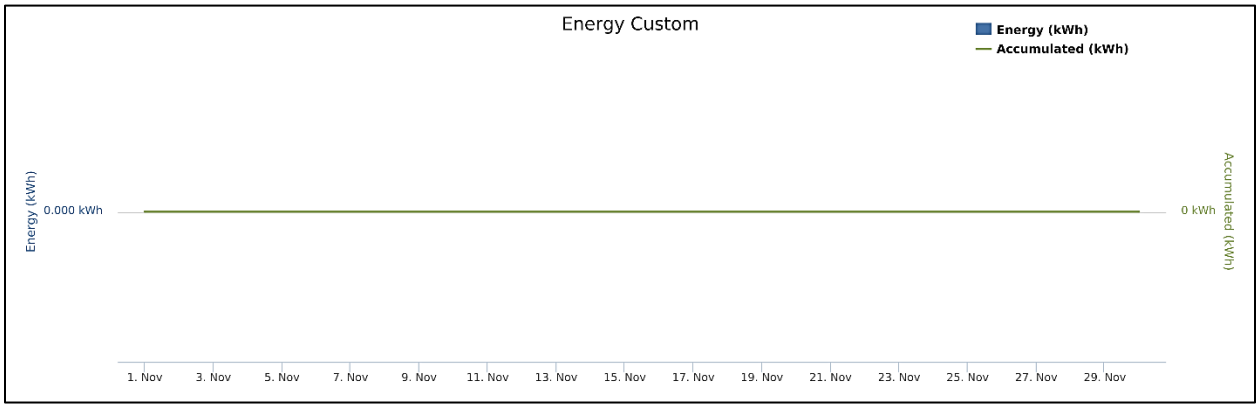
		This Month (November)	All Time
Miles driven		**0**	5,861.28
Energy consumed (kWh)		**0**	1,723.9
Fuel cost Savings:	Usage Cost Using CV (Gas)	**$0**	**$618.62**
	Usage Cost Using EV (Electricity)	**$0**	**$176.3**
	Total Fuel Savings	**$0**	**$442.32**
Other Cost Savings:	CV Costs	**$0**	**$293.75**
	EV Costs	**$0**	**$216.76**
	Total Other Cost Savings	**$0**	**$76.99**
Overall Economic Savings		**$0**	**$519.31**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles driven		0	5,861.28
Energy consumed (kWh)		0	1,723.9
CO2 Emissions (lbs.)	CV (Gas)	0	5,623.17
	EV (Electricity)	0	681.15
	Overall Emission Reductions	0	4,942.02
CO Emissions (lbs.)	CV (Gas)	0	125.4104
	EV (Electricity)	0	0.8314
	Overall Emission Reductions	0	124.579
SO2 Emissions (lbs.)	CV (Gas)	0	0.2916
	EV (Electricity)	0	4.5738
	Overall Emission Reductions	(0)	(4.2822)
NOx Emissions (lbs.)	CV (Gas)	0	9.1734
	EV (Electricity)	0	2.2423
	Overall Emission Reductions	(0)	6.9311
CH4 Emissions (lbs.)	CV (Gas)	0	0.5377
	EV (Electricity)	0	0.0286
	Overall Emission Reductions	0	0.5091
VOC Emissions (lbs.)	CV (Gas)	0	2.8789
	EV (Electricity)	0	0.0335
	Overall Emission Reductions	0	2.8454

Energy Consumption Data

November 2021



Nebraska City Savings Summary

Overall Economic Savings		$10,711.88
Overall Emission Reductions (lbs.)	CO2	59,326.1054
	CO	809.9174
	SO2	(42.5545)
	NOX	30.7805
	CH4	1.5871
	VOC	33.5921

Norfolk

Charging stations: One Level-2 station
The price of electricity per kWh: $0.0898

Total Economic Saving Data (Fuel & Maintenance Cost Savings):

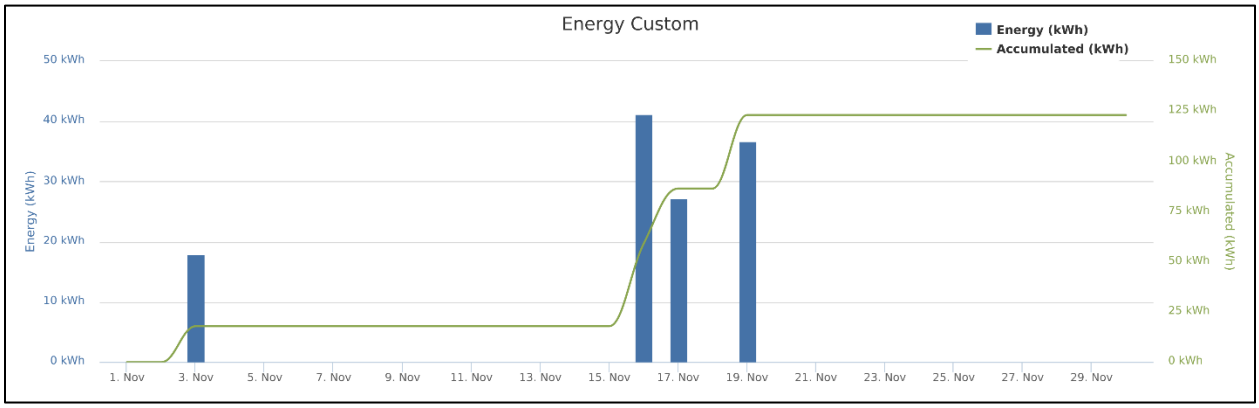
		This Month (November)	All Time
Miles Driven		**420.105912**	**2,302.27**
Energy Consumed(kWh)		**123.126**	**674.76**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$52.42**	**$215.70**
	Usage Cost Using EV(Electricity)	**$14.39**	**$78.88**
	Total Fuel Saving	**$38.02**	**$136.82**
Other Cost Saving	**CV Costs**	**$25.63**	**$140.44**
	EV Costs	**$10.92**	**$59.86**
	Total other cost Saving	**$14.70**	**$80.58**
Overall Economic Savings		**$52.73**	**$217.40**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**420.1059**	**2,302.27**
Energy Consumed (kWh)		**123.1260**	**674.76**
Co2 Emissions (lbs.)	**CV (Gas)**	**327.921**	**1797.078**
	EV (Electricity)	**116.733**	**639.723**
	Total Fuel Saving	**211.188**	**1157.356**
Co Emissions (lbs.)	**CV (Gas)**	**2.650**	**14.522**
	EV (Electricity)	**0.023**	**0.123**
	Total Fuel Saving	**2.627**	**14.399**
So2 Emissions (lbs.)	**CV (Gas)**	**0.004**	**0.021**
	EV (Electricity)	**0.207**	**1.135**
	Total Fuel Saving	**(0.2033)**	**(1.1140)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.111**	**0.609**
	EV (Electricity)	**2.297**	**12.589**
	Total Fuel Saving	**(2.1860)**	**(11.9796)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.006**	**0.034**
	EV (Electricity)	**0.005**	**0.026**
	Total Fuel Saving	**0.0014**	**0.0079**
VOC Emissions (lbs.)	**CV (Gas)**	**0.156**	**0.855**
	EV (Electricity)	**0.003**	**0.016**
	Total Fuel Saving	**0.1531**	**0.8389**

Energy Consumption Data

November 2021



Nebraska Safety Center at UNK

Charging stations: One Level-2 station
The price of electricity per kWh: $0.0898

Total Economic Saving Data (Fuel & Maintenance Cost Savings):

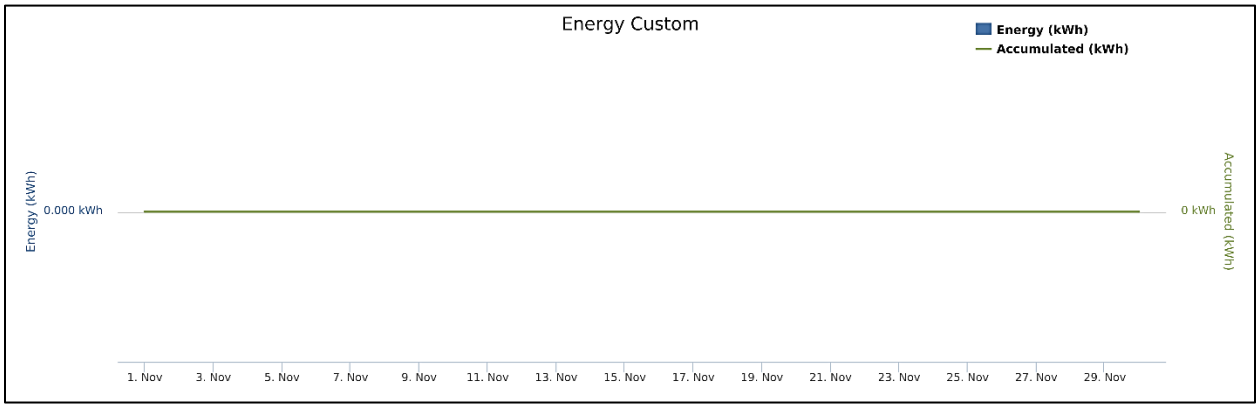
		This Month (November)	All Time
Miles Driven		**0.00**	**842.27**
Energy Consumed(kWh)		**0.00**	**248.86**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$0.00**	**$87.51**
	Usage Cost Using EV(Electricity)	**$0.00**	**$21.23**
	Total Fuel Saving	**$0.00**	**$66.29**
Other Cost Saving	**CV Costs**	**$0.00**	**$46.65**
	EV Costs	**$0.00**	**$17.69**
	Total Other Cost Saving	**$0.00**	**$28.97**
Overall Economic Savings		**$0.00**	**$95.25**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**0.00**	**842.27**
Energy Consumed (kWh)		**0.00**	**248.86**
Co2 Emissions (lbs.)	**CV (Gas)**	**0.00**	**673.77**
	EV (Electricity)	**0.00**	**351.87**
	Total Fuel Saving	**0.00**	**321.90**
Co Emissions (lbs.)	**CV (Gas)**	**0.0000**	**5.3127**
	EV (Electricity)	**0.0000**	**0.2508**
	Total Fuel Saving	**0.0000**	**5.0619**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.0078**
	EV (Electricity)	**0.0000**	**0.6561**
	Total Fuel Saving	**0.0000**	**(0.6483)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.2228**
	EV (Electricity)	**0.0000**	**1.0908**
	Total Fuel Saving	**0.0000**	**(0.8680)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.0184**
	EV (Electricity)	**0.0000**	**0.0276**
	Total Fuel Saving	**0.0000**	**(0.0091)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.3127**
	EV (Electricity)	**0.0000**	**0.0058**
	Total Fuel Saving	**0.0000**	**0.3069**

Energy Consumption Data

November 2021



NP Dodge

Charging stations: Two Level-2 stations
The price of electricity per kWh: $ 0.085

Total Economic Saving Data (Fuel & Maintenance Cost Savings):

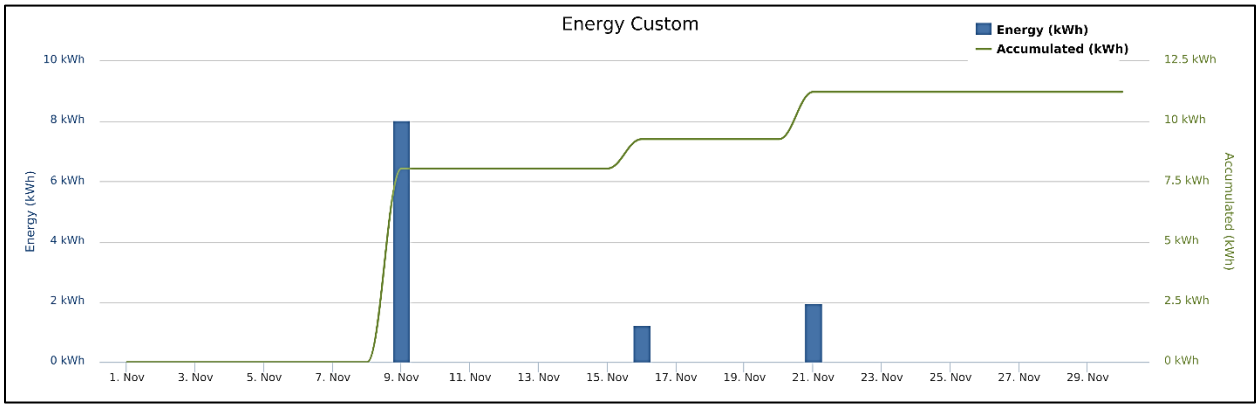
		This Month (November)	All Time
Miles Driven		**38.28**	**10,766.55**
Energy Consumed(KWh)		**11.22**	**3,190.01**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$4.86**	**$1,018.20**
	Usage Cost Using EV(Electricity)	**$0.95**	**$277.53**
	Total Fuel Saving	**$3.91**	**$740.67**
Other Cost Saving	**CV Costs**	**$2.34**	**$575.44**
	EV Costs	**$1.00**	**$207.45**
	Total Other Cost Saving	**$1.34**	**$367.99**
Overall Economic Savings		**$5.25**	**$1,108.66**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**38.28**	**10,766.55**
Energy Consumed (kWh)		**11.22**	**3,190.01**
Co2 Emissions (lbs.)	**CV (Gas)**	**29.88**	**8,684.91**
	EV (Electricity)	**18.98**	**5,058.20**
	Total Fuel Saving	**10.91**	**3,626.71**
Co Emissions (lbs.)	**CV (Gas)**	**0.2415**	**67.9115**
	EV (Electricity)	**0.0143**	**4.2235**
	Total Fuel Saving	**0.2272**	**63.6880**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0004**	**0.0997**
	EV (Electricity)	**0.0300**	**9.6577**
	Total Fuel Saving	**(0.0297)**	**(9.5580)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0101**	**2.8483**
	EV (Electricity)	**0.0259**	**7.5252**
	Total Fuel Saving	**(0.0158)**	**(4.6769)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0006**	**0.2623**
	EV (Electricity)	**0.0017**	**0.4798**
	Total Fuel Saving	**(0.0012)**	**(0.2175)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0142**	**3.9972**
	EV (Electricity)	**0.0003**	**0.0819**
	Total Fuel Saving	**0.0139**	**3.9153**

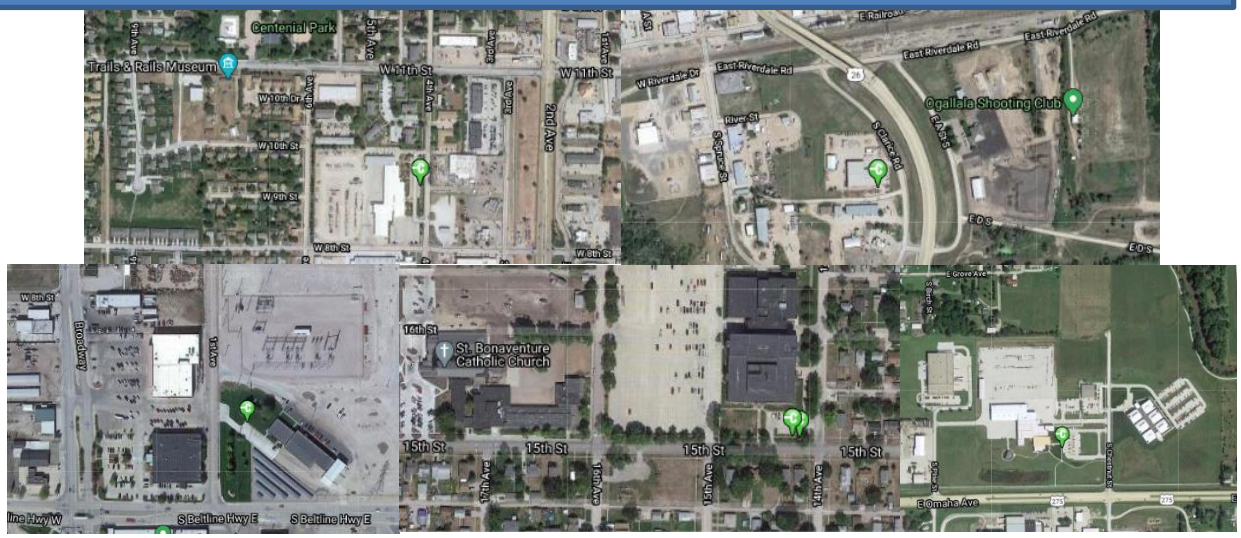
Energy Consumption Data

November 2021



NPPD

Charging stations: Six Level-2 stations
The price of electricity per kWh: $0.0975



Total Economic Saving Data (Fuel & Maintenance Cost Savings):

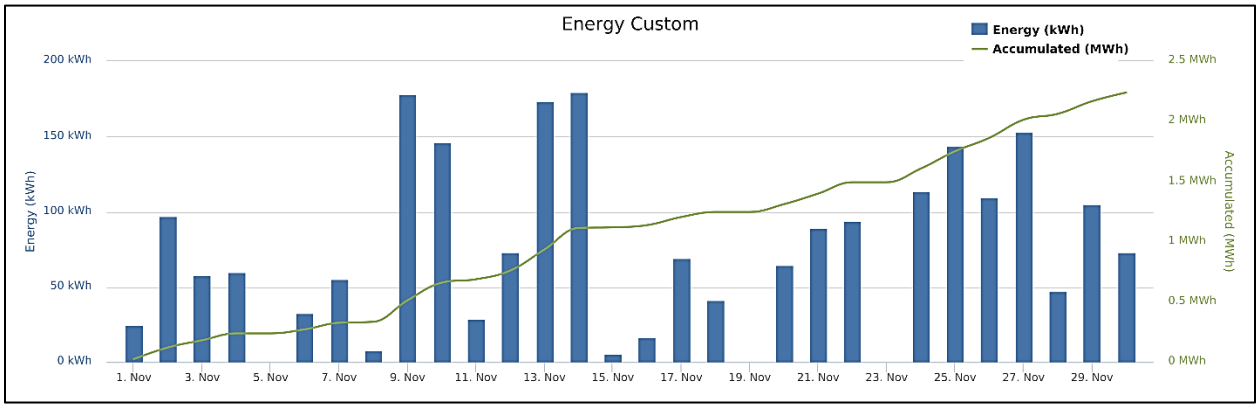
		This Month (November)	All Time
Miles Driven		**7,637.57**	**74,836.71**
Energy Consumed(kWh)		**2,238.44**	**21,933.39**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$985.89**	**$8,049.70**
	Usage Cost Using EV(Electricity)	**$169.45**	**$1,660.36**
	Total Fuel Saving	**$816.44**	**$6,389.35**
Other Cost Saving	**CV Costs**	**$465.89**	**$4,565.04**
	EV Costs	**$198.58**	**$1,945.75**
	Total Other Cost Saving	**$267.31**	**$2,619.28**
Overall Economic Savings		**$1,083.75**	**$9,008.63**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**7,637.57**	**74,836.71**
Energy Consumed (kWh)		**2,238.44**	**21,933.39**
Co2 Emissions (lbs.)	**CV (Gas)**	**5,961.64**	**58,415.13**
	EV (Electricity)	**2,712.01**	**26,573.60**
	Total Fuel Saving	**3,249.63**	**31,841.53**
Co Emissions (lbs.)	**CV (Gas)**	**48.1750**	**472.0429**
	EV (Electricity)	**1.9345**	**18.9550**
	Total Fuel Saving	**46.2405**	**453.0879**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0707**	**0.6929**
	EV (Electricity)	**1.9879**	**19.4782**
	Total Fuel Saving	**(1.9172)**	**(18.7852)**
Nox Emissions (lbs.)	**CV (Gas)**	**2.0206**	**19.7984**
	EV (Electricity)	**2.7732**	**27.1727**
	Total Fuel Saving	**(0.7526)**	**(7.3743)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.1128**	**1.1054**
	EV (Electricity)	**0.1907**	**1.8684**
	Total Fuel Saving	**(0.0779)**	**(0.7630)**
VOC Emissions (lbs.)	**CV (Gas)**	**2.8355**	**27.7837**
	EV (Electricity)	**0.0510**	**0.4998**
	Total Fuel Saving	**2.7845**	**27.2839**

Energy Consumption Data

November 2021



Minden

Charging stations: One Level-2 stations
The price of electricity per kWh: $0.0975

Total Economic Saving Data (Fuel & Maintenance Cost Savings):

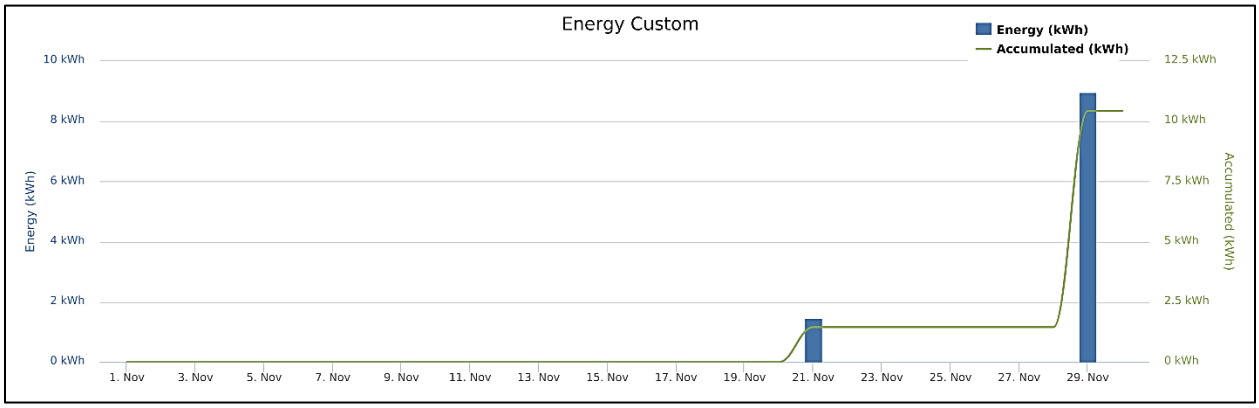
		This Month (November)	All Time
Miles Driven		**35.57**	**1,268.19**
Energy Consumed(kWh)		**10.43**	**371.69**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$4.59**	**$144.48**
	Usage Cost Using EV(Electricity)	**$1.02**	**$36.24**
	Total Fuel Saving	**$3.58**	**$108.24**
Other Cost Saving	**CV Costs**	**$2.17**	**$77.36**
	EV Costs	**$0.92**	**$32.97**
	Total Other Cost Saving	**$1.24**	**$44.39**
Overall Economic Savings		**$4.82**	**$152.62**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**35.57**	**1,268.19**
Energy Consumed (kWh)		**10.43**	**371.69**
Co2 Emissions (lbs.)	**CV (Gas)**	**27.76**	**989.91**
	EV (Electricity)	**15.68**	**558.99**
	Total Fuel Saving	**12.09**	**430.92**
Co Emissions (lbs.)	**CV (Gas)**	**0.2244**	**7.9993**
	EV (Electricity)	**0.0105**	**0.3754**
	Total Fuel Saving	**0.2138**	**7.6239**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0003**	**0.0117**
	EV (Electricity)	**0.0287**	**1.0217**
	Total Fuel Saving	**(0.0283)**	**(1.0100)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0094**	**0.3355**
	EV (Electricity)	**0.0490**	**1.7480**
	Total Fuel Saving	**(0.0396)**	**(1.4125)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0005**	**0.0187**
	EV (Electricity)	**0.0013**	**0.0451**
	Total Fuel Saving	**(0.0007)**	**(0.0264)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0132**	**0.4708**
	EV (Electricity)	**0.0003**	**0.0098**
	Total Fuel Saving	**0.0129**	**0.4611**

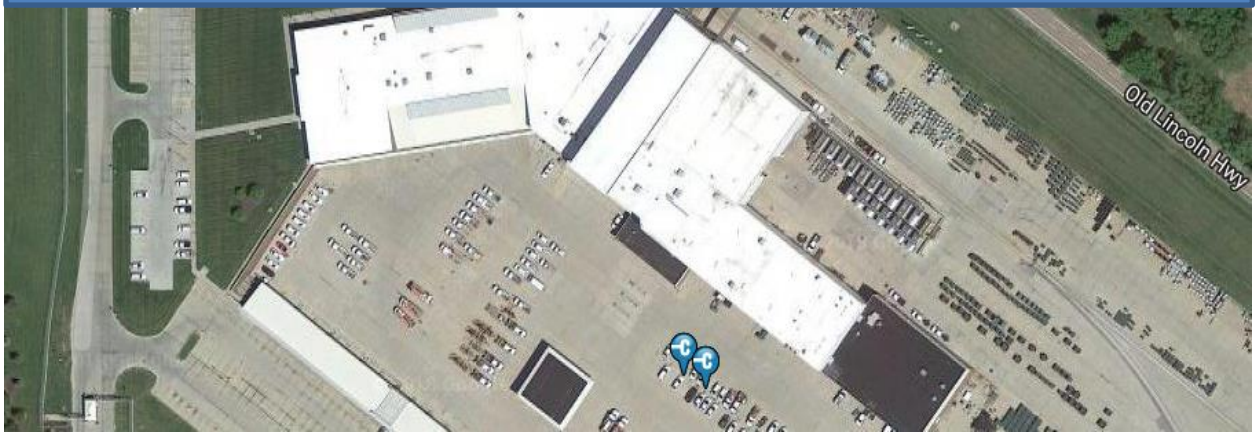
Energy Consumption Data

November 2021



OPPD

Charging stations: Two Level-2 stations
The price of electricity per kWh: $0.0898



Data from two existing charging stations Purchased via NET/NCEA Grant.

Economic Saving Data (Fuel & Maintenance Cost Savings):

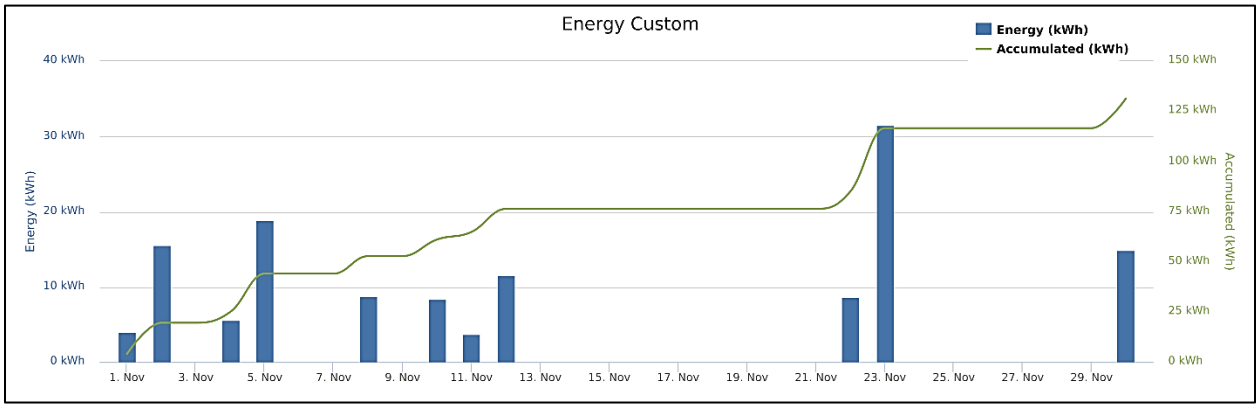
		This Month (November)	All Time
Miles Driven		**448.40**	**78,778.92**
Energy Consumed(kWh)		**131.42**	**23,404.74**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$56.82**	**$7,984.54**
	Usage Cost Using EV(Electricity)	**$11.17**	**$2,086.68**
	Total Fuel Saving	**$45.65**	**$5,897.87**
Other Cost Saving	**CV Costs**	**$27.35**	**$3,795.22**
	EV Costs	**$11.66**	**$1,885.77**
	Total Other Cost Saving	**$15.69**	**$1,909.45**
Overall Economic Savings		**$61.35**	**$7,807.32**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**448.402**	**78,778.919**
Energy Consumed (kWh)		**131.419**	**23,404.744**
Co2 Emissions (lbs.)	**CV (Gas)**	**350.01**	**65,903.47**
	EV (Electricity)	**222.27**	**24,459.97**
	Total Fuel Saving	**127.73**	**41,443.50**
Co Emissions (lbs.)	**CV (Gas)**	**2.8284**	**890.4032**
	EV (Electricity)	**0.1676**	**21.7758**
	Total Fuel Saving	**2.6608**	**868.6274**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0042**	**1.8004**
	EV (Electricity)	**0.3519**	**72.6514**
	Total Fuel Saving	**(0.3477)**	**(70.8510)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.1186**	**55.3200**
	EV (Electricity)	**0.3031**	**44.7764**
	Total Fuel Saving	**(0.1845)**	**10.5436**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0066**	**4.2541**
	EV (Electricity)	**0.0201**	**1.9549**
	Total Fuel Saving	**(0.0135)**	**2.2992**
VOC Emissions (lbs.)	**CV (Gas)**	**0.1665**	**31.7138**
	EV (Electricity)	**0.0034**	**0.5096**
	Total Fuel Saving	**0.1630**	**31.2041**

Energy Consumption Data

November 2021



OPPD

- Data from one existing charging stations with two ports.

Economic Saving Data (Fuel & Maintenance Cost Savings):

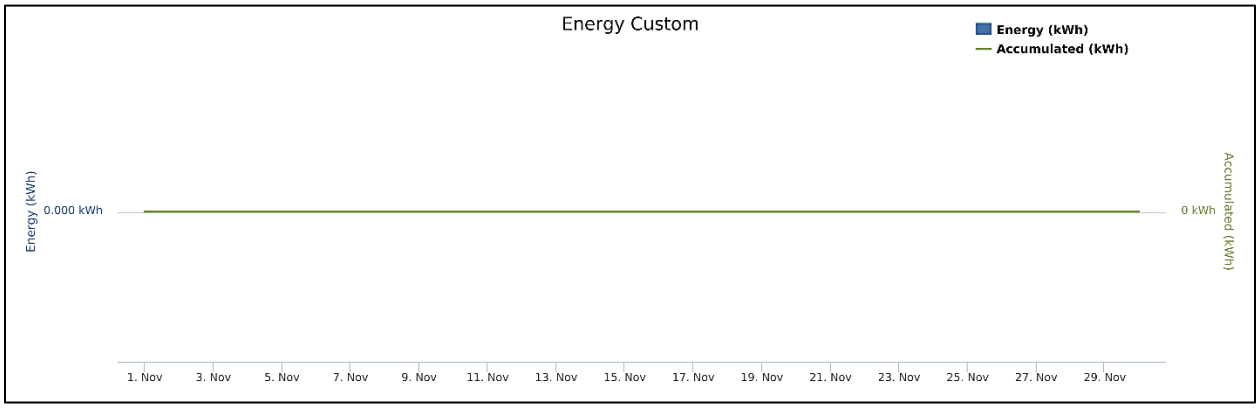
		This Month (November)	All Time
Miles driven		0	15,250.60
Energy consumed (kWh)		0	4,485.47
Fuel cost Savings:	Usage Cost Using CV (Gas)	$0	$1,587.95
	Usage Cost Using EV (Electricity)	$0	$376.78
	Total Fuel Savings	$0	$1,211.17
Other Cost Savings:	CV Costs	$0	$755.95
	EV Costs	$0	$564.27
	Total Other Cost Savings	$0	$191.68
Overall Economic Savings		$0	$1,402.85

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles driven		0	15,250.60
Energy consumed (kWh)		0	4,485.47
CO2 Emissions (lbs.)	CV (Gas)	0	13,817.04
	EV (Electricity)	0	1,295.40
	Overall Emission Reductions	0	12,521.64
CO Emissions (lbs.)	CV (Gas)	0	316.0458
	EV (Electricity)	0	2.0173
	Overall Emission Reductions	0	314.0285
SO2 Emissions (lbs.)	CV (Gas)	0	0.7397
	EV (Electricity)	0	12.4400
	Overall Emission Reductions	0	(11.7003)
NOx Emissions (lbs.)	CV (Gas)	0	23.2999
	EV (Electricity)	0	5.3459
	Overall Emission Reductions	0	17.954
CH4 Emissions (lbs.)	CV (Gas)	0	1.3449
	EV (Electricity)	0	0.0672
	Overall Emission Reductions	0	1.2777
VOC Emissions (lbs.)	CV (Gas)	0	7.0471
	EV (Electricity)	0	0.0773
	Overall Emission Reductions	0	6.9698

Energy Consumption Data

November 2021



OPPD summary savings

Overall Economic Savings		$9,210.17
Overall Emission Reductions (lbs.)	CO2	53,965.14
	CO	1,182.66
	SO2	(82.5513)
	NOX	28.4976
	CH4	3.5769
	VOC	38.1739

City of Omaha

Charging stations: One Level-2 station
The price of electricity per kWh: $0.0898

Economic Saving Data (Fuel & Maintenance Cost Savings):

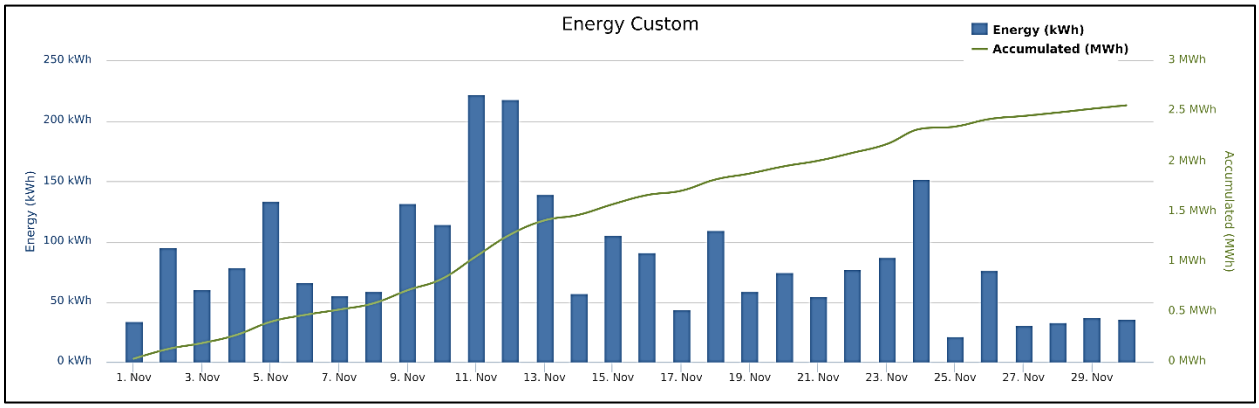
		This Month (November)	All Time
Miles Driven		**8,733.74**	**54,903.58**
Energy Consumed(kWh)		**2,559.71**	**16,133.40**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$1,107.71**	**$6,122.74**
	Usage Cost Using EV(Electricity)	**$217.58**	**$1,371.83**
	Total Fuel Saving	**$890.14**	**$4,750.91**
Other Cost Saving	**CV Costs**	**$532.76**	**$3,249.97**
	EV Costs	**$227.08**	**$1,339.12**
	Total Other Cost Saving	**$305.68**	**$1,910.85**
Overall Economic Savings		**$1,195.82**	**$6,661.76**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**8733.7408**	**54903.5769**
Energy Consumed (kWh)		**2559.7130**	**16133.3990**
Co2 Emissions (lbs.)	**CV (Gas)**	**6,817.28**	**43,198.44**
	EV (Electricity)	**3,849.62**	**23,793.51**
	Total Fuel Saving	**2,967.65**	**19,404.93**
Co Emissions (lbs.)	**CV (Gas)**	**55.0893**	**346.3119**
	EV (Electricity)	**2.5854**	**16.2842**
	Total Fuel Saving	**52.5038**	**330.0277**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0809**	**0.5084**
	EV (Electricity)	**7.0362**	**43.7602**
	Total Fuel Saving	**(6.9553)**	**(43.2519)**
Nox Emissions (lbs.)	**CV (Gas)**	**2.3105**	**14.5250**
	EV (Electricity)	**12.0383**	**74.2063**
	Total Fuel Saving	**(9.7277)**	**(59.6814)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.1290**	**0.9369**
	EV (Electricity)	**0.3107**	**1.9030**
	Total Fuel Saving	**(0.1817)**	**(0.9661)**
VOC Emissions (lbs.)	**CV (Gas)**	**3.2425**	**20.3834**
	EV (Electricity)	**0.0673**	**0.4076**
	Total Fuel Saving	**3.1752**	**19.9758**

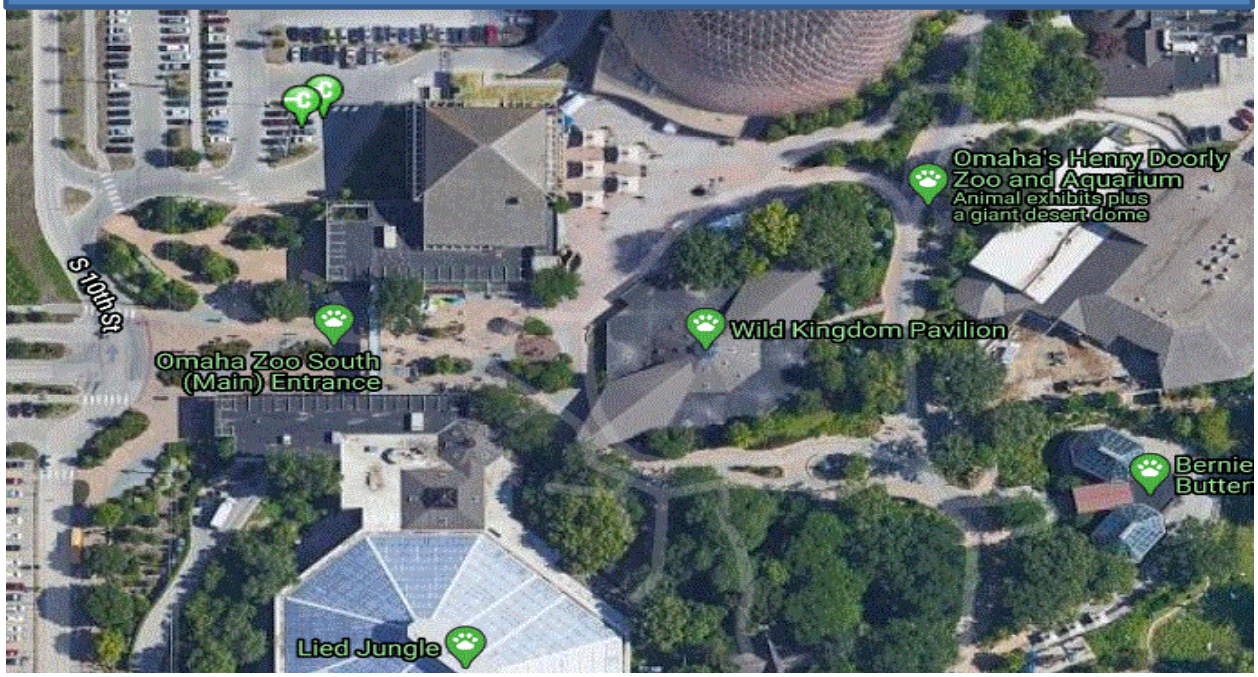
Energy Consumption Data

November 2021



Omaha Zoological Society

Charging stations: Two Level-2 stations
The price of electricity per kWh: $0.0898



Total Economic Saving Data (Fuel & Maintenance Cost Savings):

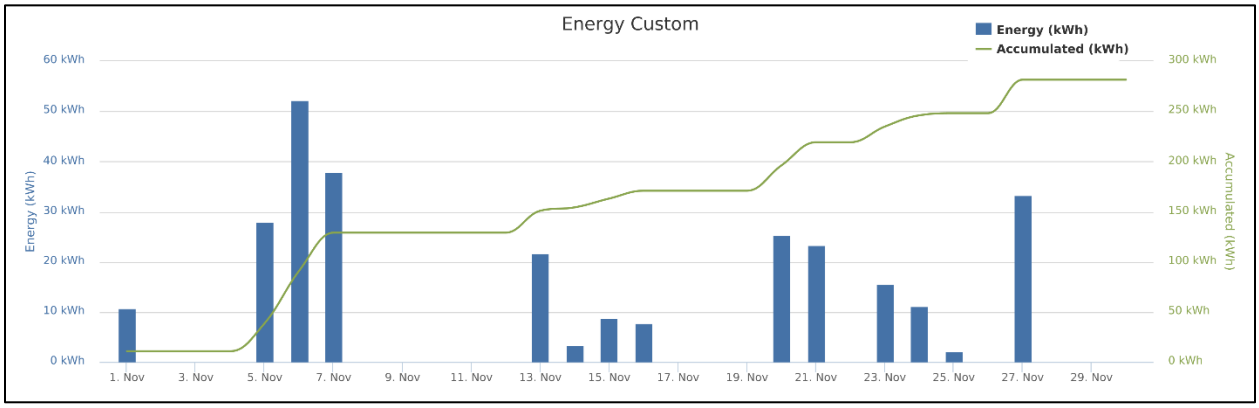
		This Month (November)	All Time
Miles Driven		**959.78**	**20309.45**
Energy Consumed(kWh)		**281.30**	**5978.32**
Fuel Cost Saving	**Usage Cost Using Cv(Gas)**	**$121.81**	**$2,219.63**
	Usage Cost Using EV(Electricity)	**$23.91**	**$512.96**
	Total Fuel Saving	**$97.90**	**$1,706.67**
Other Cost Saving	**Cv Costs**	**$58.55**	**$1,177.72**
	EV Costs	**$24.95**	**$473.54**
	Total Other Cost Saving	**$33.59**	**$704.18**
Overall Economic Savings		**$131.50**	**$2,410.85**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**959.78**	**20,309.45**
Energy Consumed (kWh)		**281.30**	**5,978.32**
Co2 Emissions (lbs.)	**CV (Gas)**	**749.17**	**16,064.15**
	EV (Electricity)	**475.77**	**9,857.80**
	Total Fuel Saving	**273.41**	**6,206.35**
Co Emissions (lbs.)	**CV (Gas)**	**6.0540**	**128.1047**
	EV (Electricity)	**0.3587**	**7.7409**
	Total Fuel Saving	**5.6952**	**120.3638**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0089**	**0.1881**
	EV (Electricity)	**0.7532**	**16.8471**
	Total Fuel Saving	**(0.7443)**	**(16.6590)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.2539**	**5.3730**
	EV (Electricity)	**0.6488**	**13.9147**
	Total Fuel Saving	**(0.3949)**	**(8.5418)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0142**	**0.3777**
	EV (Electricity)	**0.0431**	**0.9092**
	Total Fuel Saving	**(0.0289)**	**(0.5315)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.3563**	**7.5400**
	EV (Electricity)	**0.0074**	**0.1553**
	Total Fuel Saving	**0.3490**	**7.3847**

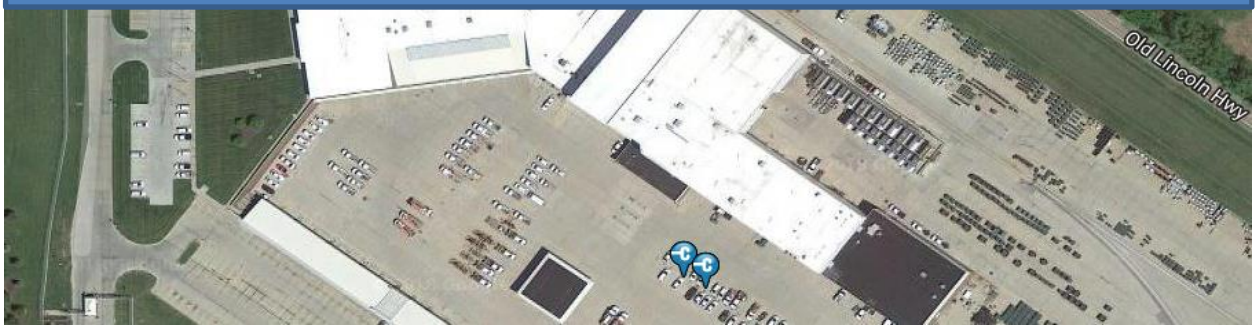
Energy Consumption Data

November 2021



Papio-Missouri NRD

Charging stations: One Level-2 stations
The price of electricity per kWh: $0.0898



Economic Saving Data (Fuel & Maintenance Cost Savings):

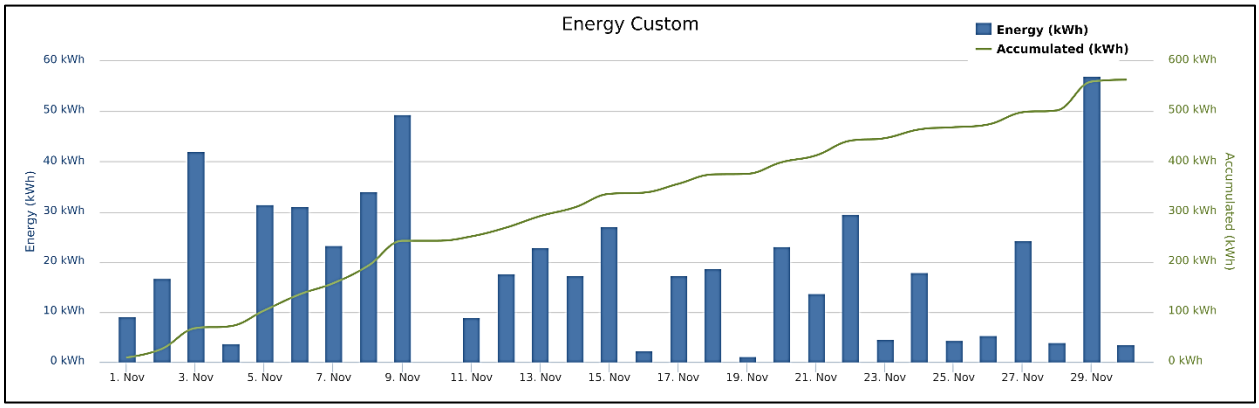
		This Month (November)	All Time
Miles Driven		**1,919.74**	**81,673.24**
Energy Consumed(kWh)		**562.643**	**24,330.01**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$243.44**	**$8,644.63**
	Usage Cost Using EV(Electricity)	**$47.82**	**$2,140.72**
	Total Fuel Saving	**$195.62**	**$6,503.91**
Other Cost Saving	**CV Costs**	**$117.10**	**$4,056.24**
	EV Costs	**$49.91**	**$1,298.31**
	Total Other Cost Saving	**$67.19**	**$2,757.93**
Overall Economic Savings		**$262.81**	**$9,261.84**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**1,919.74**	**81,673.24**
Energy Consumed (kWh)		**562.64**	**24,330.01**
Co2 Emissions (lbs.)	**CV (Gas)**	**1,498.49**	**66,949.59**
	EV (Electricity)	**951.62**	**37,311.23**
	Total Fuel Saving	**546.86**	**29,638.36**
Co Emissions (lbs.)	**CV (Gas)**	**12.1090**	**515.1653**
	EV (Electricity)	**0.7175**	**32.7965**
	Total Fuel Saving	**11.3915**	**482.3688**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0178**	**0.7562**
	EV (Electricity)	**1.5066**	**77.8537**
	Total Fuel Saving	**(1.4888)**	**(77.0974)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.5079**	**21.6070**
	EV (Electricity)	**1.2977**	**58.0248**
	Total Fuel Saving	**(0.7898)**	**(36.4178)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0284**	**2.3822**
	EV (Electricity)	**0.0862**	**3.6264**
	Total Fuel Saving	**(0.0578)**	**(1.2442)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.7127**	**30.3218**
	EV (Electricity)	**0.0147**	**0.6179**
	Total Fuel Saving	**0.6980**	**29.7039**

Energy Consumption Data

November 2021



Seward

Charging stations: Five Level-2 stations (9 Ports)
The price of electricity per kWh: $0.0995

Economic Saving Data (Fuel & Maintenance Cost Savings):

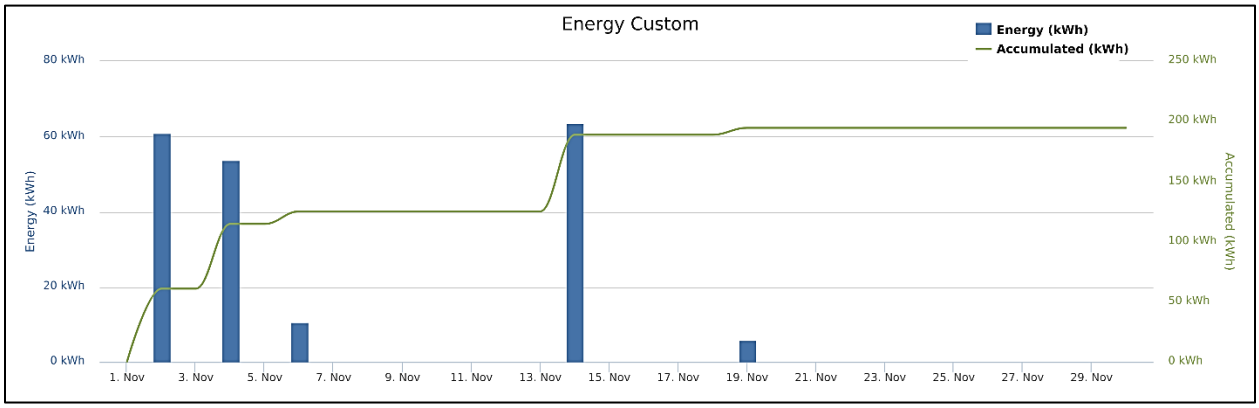
		This Month (November)	All Time
Miles Driven		**663.91**	**47,339.68**
Energy Consumed(kWh)		**194.58**	**14,016.15**
Fuel Cost Saving	**Usage Cost Using Cv(Gas)**	**$84.54**	**$4,807.14**
	Usage Cost Using EV(Electricity)	**$19.07**	**$1,369.73**
	Total Fuel Saving	**$65.47**	**$3,437.41**
Other Cost Saving	**Cv Costs**	**$40.50**	**$2,436.13**
	EV Costs	**$17.26**	**$1,149.84**
	Total Other Cost Saving	**$23.24**	**$1,286.29**
Overall Economic Savings		**$88.71**	**$4,723.70**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**663.91**	**47,339.68**
Energy Consumed (kWh)		**194.58**	**14,016.15**
Co2 Emissions (lbs.)	**CV (Gas)**	**518.23**	**39,025.97**
	EV (Electricity)	**292.64**	**15,021.55**
	Total Fuel Saving	**225.59**	**24,004.43**
Co Emissions (lbs.)	**CV (Gas)**	**4.1877**	**476.0014**
	EV (Electricity)	**0.1965**	**11.2296**
	Total Fuel Saving	**3.9912**	**464.7719**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0061**	**0.9212**
	EV (Electricity)	**0.5349**	**34.8526**
	Total Fuel Saving	**(0.5287)**	**(33.9314)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.1756**	**28.0674**
	EV (Electricity)	**0.9151**	**43.7593**
	Total Fuel Saving	**(0.7395)**	**(15.6919)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0098**	**2.0742**
	EV (Electricity)	**0.0236**	**1.0148**
	Total Fuel Saving	**(0.0138)**	**1.0594**
VOC Emissions (lbs.)	**CV (Gas)**	**0.2465**	**18.6881**
	EV (Electricity)	**0.0051**	**0.2717**
	Total Fuel Saving	**0.2414**	**18.4164**

Energy Consumption Data

November 2021



South Sioux City

Charging stations: Three Level-2 stations
The price of electricity per kWh: $0.0853

Economic Saving Data (Fuel & Maintenance Cost Savings):

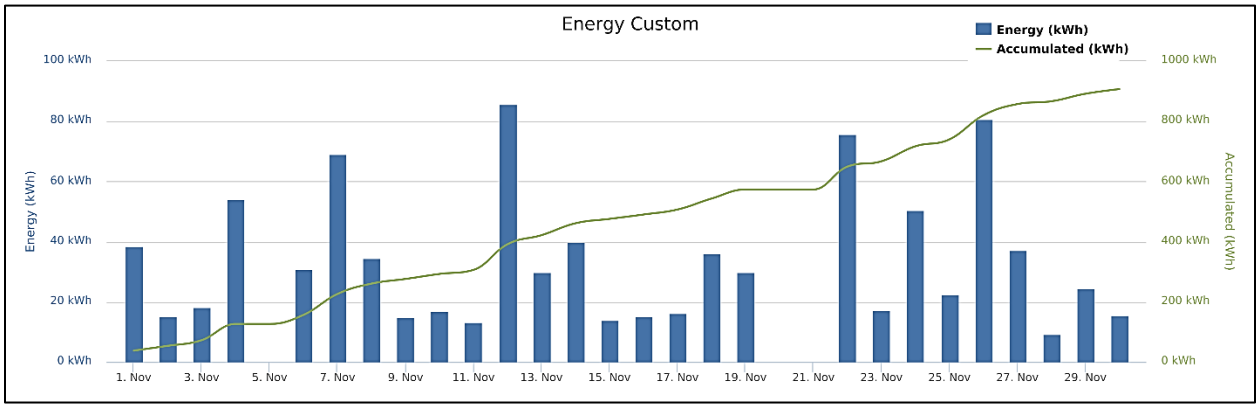
		This Month (November)	All Time
Miles Driven		**3,092.73**	**161,736.12**
Energy Consumed(KWh)		**906.428**	**47,927.57**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$391.86**	**$16,359.03**
	Usage Cost Using EV(Electricity)	**$77.32**	**$4,107.01**
	Total Fuel Saving	**$314.54**	**$12,252.02**
Other Cost Saving	**CV Costs**	**$188.66**	**$8,231.87**
	EV Costs	**$80.41**	**$3,801.83**
	Total Other Cost Saving	**$108.25**	**$4,430.05**
Overall Economic Savings		**$422.78**	**$16,682.06**

Environmental Saving Data (Reduction in Emissions):

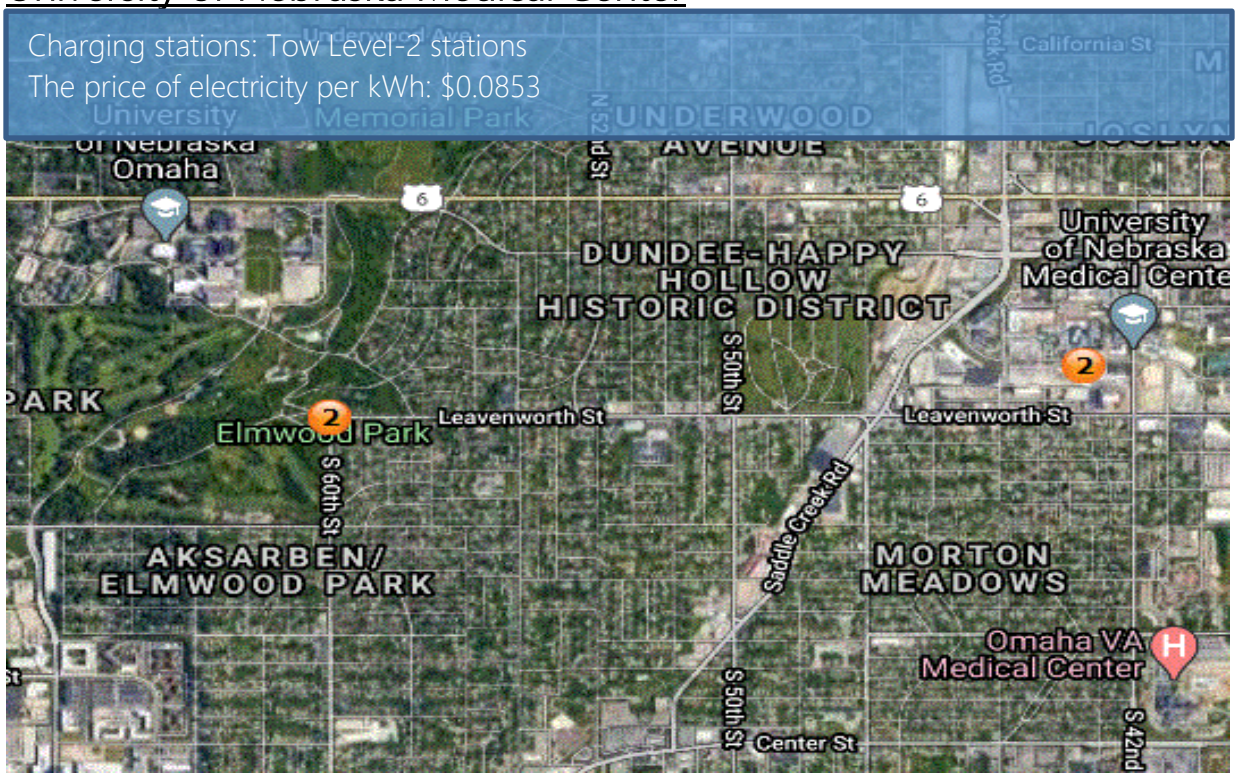
		This Month (November)	All Time
Miles Driven		**3092.7323**	**161736.1163**
Energy Consumed (Kwh)		**906.4280**	**47,927.57**
Co2 Emissions (lbs.)	**CV (Gas)**	**2,414.09**	**134,041.15**
	EV (Electricity)	**1,363.20**	**51,371.74**
	Total Fuel Saving	**1,050.89**	**82,669.40**
Co Emissions (lbs.)	**CV (Gas)**	**19.5078**	**1,625.6512**
	EV (Electricity)	**0.9155**	**39.0308**
	Total Fuel Saving	**18.5923**	**1,586.6204**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0286**	**3.1455**
	EV (Electricity)	**2.4916**	**119.2507**
	Total Fuel Saving	**(2.4630)**	**(116.1052)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.8182**	**95.8421**
	EV (Electricity)	**4.2629**	**141.2491**
	Total Fuel Saving	**(3.4447)**	**(45.4070)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0457**	**7.1451**
	EV (Electricity)	**0.1100**	**3.5145**
	Total Fuel Saving	**(0.0644)**	**3.6305**
VOC Emissions (lbs.)	**CV (Gas)**	**1.1482**	**63.8471**
	EV (Electricity)	**0.0238**	**0.9230**
	Total Fuel Saving	**1.1244**	**62.9241**

Energy Consumption Data

November 2021



University of Nebraska Medical Center



Total Economic Saving Data (Fuel & Maintenance Cost Savings):

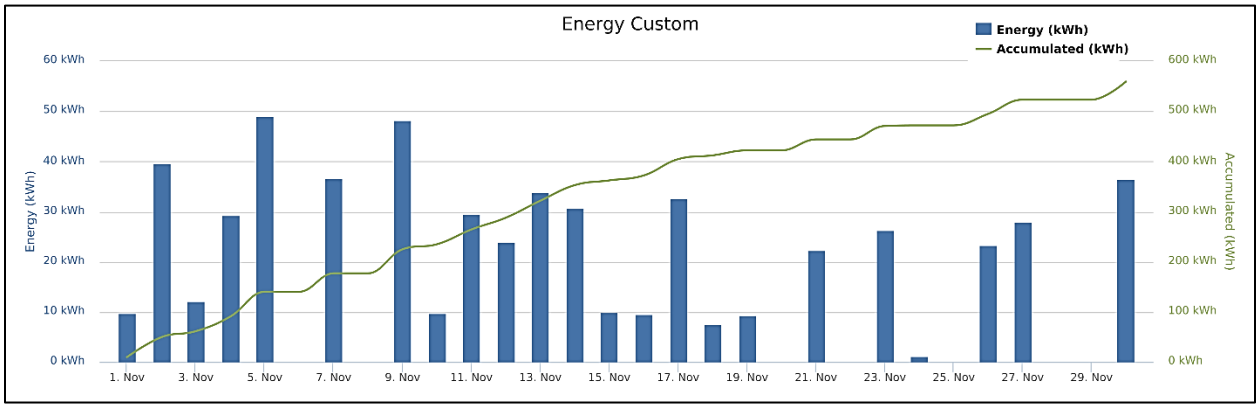
		This Month (November)	All Time
Miles Driven		**1,907.80**	**17,536.16**
Energy Consumed(kWh)		**559.144**	**5,165.11**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$242.11**	**$1,889.17**
	Usage Cost Using EV(Electricity)	**$47.53**	**$443.76**
	Total Fuel Saving	**$194.58**	**$1,445.41**
Other Cost Saving	**CV Costs**	**$116.38**	**$1,009.50**
	EV Costs	**$49.60**	**$402.28**
	Total Other Cost Saving	**$66.77**	**$607.22**
Overall Economic Savings		**$261.36**	**$2,052.63**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**1,907.80**	**17,536.16**
Energy Consumed (kWh)		**559.144**	**5,165.11**
Co2 Emissions (lbs.)	**CV (Gas)**	**1489.17**	**13896.13**
	EV (Electricity)	**945.71**	**8486.31**
	Total Fuel Saving	**543.46**	**5409.82**
Co Emissions (lbs.)	**CV (Gas)**	**12.0337**	**110.6117**
	EV (Electricity)	**0.7131**	**6.7020**
	Total Fuel Saving	**11.3206**	**103.9097**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0177**	**0.1624**
	EV (Electricity)	**1.4972**	**14.6566**
	Total Fuel Saving	**(1.4795)**	**(14.4942)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.5047**	**4.6393**
	EV (Electricity)	**1.2896**	**12.0371**
	Total Fuel Saving	**(0.7849)**	**(7.3979)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0282**	**0.3355**
	EV (Electricity)	**0.0857**	**0.7847**
	Total Fuel Saving	**(0.0575)**	**(0.4492)**
VOC Emissions (lbs.)	**CV (Gas)**	**0.7083**	**6.5104**
	EV (Electricity)	**0.0146**	**0.1341**
	Total Fuel Saving	**0.6936**	**6.3764**

Energy Consumption Data

November 2021



University of Nebraska at Omaha (UNO)

AFV: 0
Charging stations: Four Level-2 stations
The price of electricity per kWh: $0.0898

Economic Saving Data (Fuel & Maintenance Cost Savings)

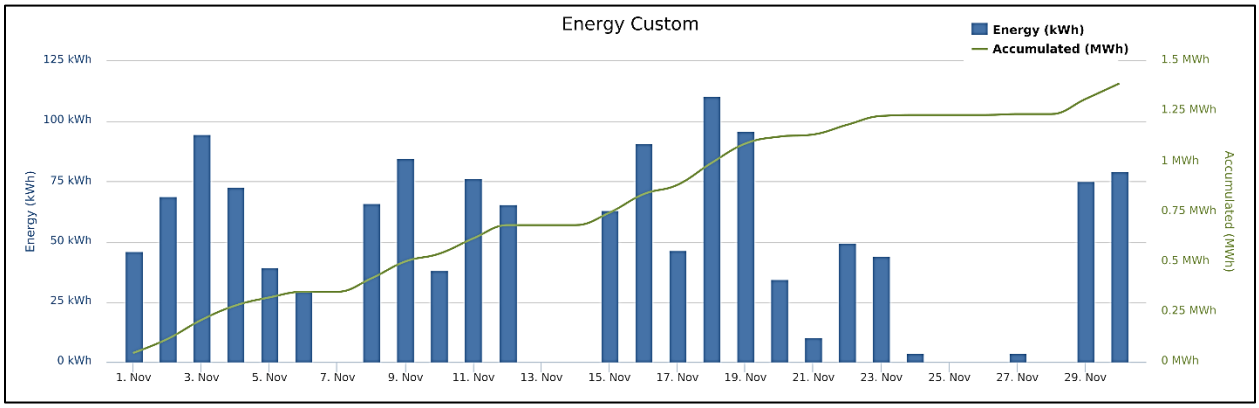
		This Month (November)	All Time
Miles Driven		**4,739.80**	**91,493.70**
Energy Consumed(kWh)		**1389.155**	**27,254.43**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$601.21**	**$9,515.11**
	Usage Cost Using EV(Electricity)	**$118.08**	**$2,441.20**
	Total Fuel Saving	**$483.13**	**$7,073.90**
Other Cost Saving	**CV Costs**	**$289.13**	**$4,527.31**
	EV Costs	**$123.23**	**$1,575.54**
	Total Other Cost Saving	**$165.89**	**$2,951.78**
Overall Economic Savings		**$649.03**	**$10,025.68**

Environmental Saving Data (Reduction in Emissions):

		This Month (November)	All Time
Miles Driven		**4,739.80**	**91,493.70**
Energy Consumed (kWh)		**1,389.16**	**27,254.43**
Co2 Emissions (lbs.)	**CV (Gas)**	**3,699.73**	**73,858.69**
	EV (Electricity)	**2,349.54**	**40,927.31**
	Total Fuel Saving	**1,350.19**	**32,931.38**
Co Emissions (lbs.)	**CV (Gas)**	**29.8969**	**577.1831**
	EV (Electricity)	**1.7716**	**34.4444**
	Total Fuel Saving	**28.1254**	**542.7387**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0439**	**0.8472**
	EV (Electricity)	**3.7196**	**87.0892**
	Total Fuel Saving	**(3.6758)**	**(86.2420)**
Nox Emissions (lbs.)	**CV (Gas)**	**1.2539**	**24.2090**
	EV (Electricity)	**3.2040**	**63.6093**
	Total Fuel Saving	**(1.9501)**	**(39.4004)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0700**	**2.8525**
	EV (Electricity)	**0.2128**	**4.0546**
	Total Fuel Saving	**(0.1428)**	**(1.2021)**
VOC Emissions (lbs.)	**CV (Gas)**	**1.7597**	**33.9576**
	EV (Electricity)	**0.0364**	**0.6777**
	Total Fuel Saving	**1.7233**	**33.2799**

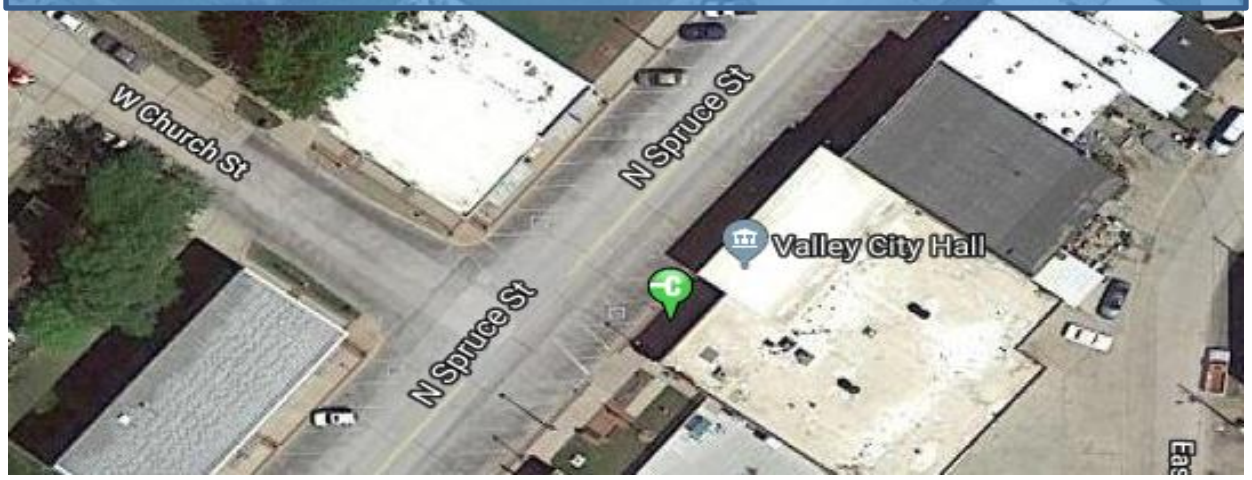
Energy Consumption Data

November 2021



Valley

Charging stations: One Level-2 station
The price of electricity per kWh: $0.0898



Economic Saving Data (Fuel & Maintenance Cost Savings):

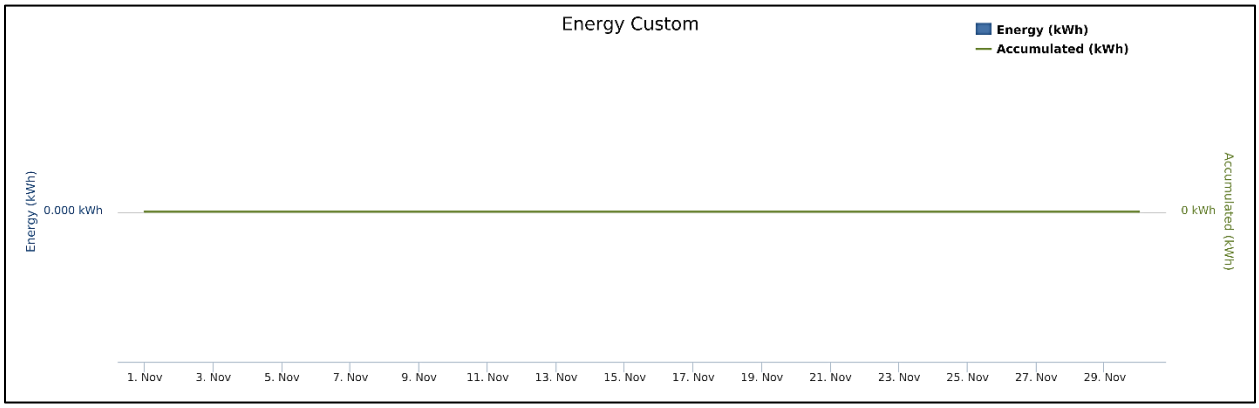
		This Month (November)	All Time
Miles Driven		**0.00**	**6,262.78**
Energy Consumed(kWh)		**0.00**	**1,861.71**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$0.00**	**$639.50**
	Usage Cost Using EV(Electricity)	**$0.00**	**$171.29**
	Total Fuel Saving	**$0.00**	**$468.21**
Other Cost Saving	**CV Costs**	**$0.00**	**$304.68**
	EV Costs	**$0.00**	**$140.29**
	Total Other Cost Saving	**$0.00**	**$164.40**
Overall Economic Savings		**$0.00**	**$632.61**

Environmental Saving Data (Reduction in Emissions):

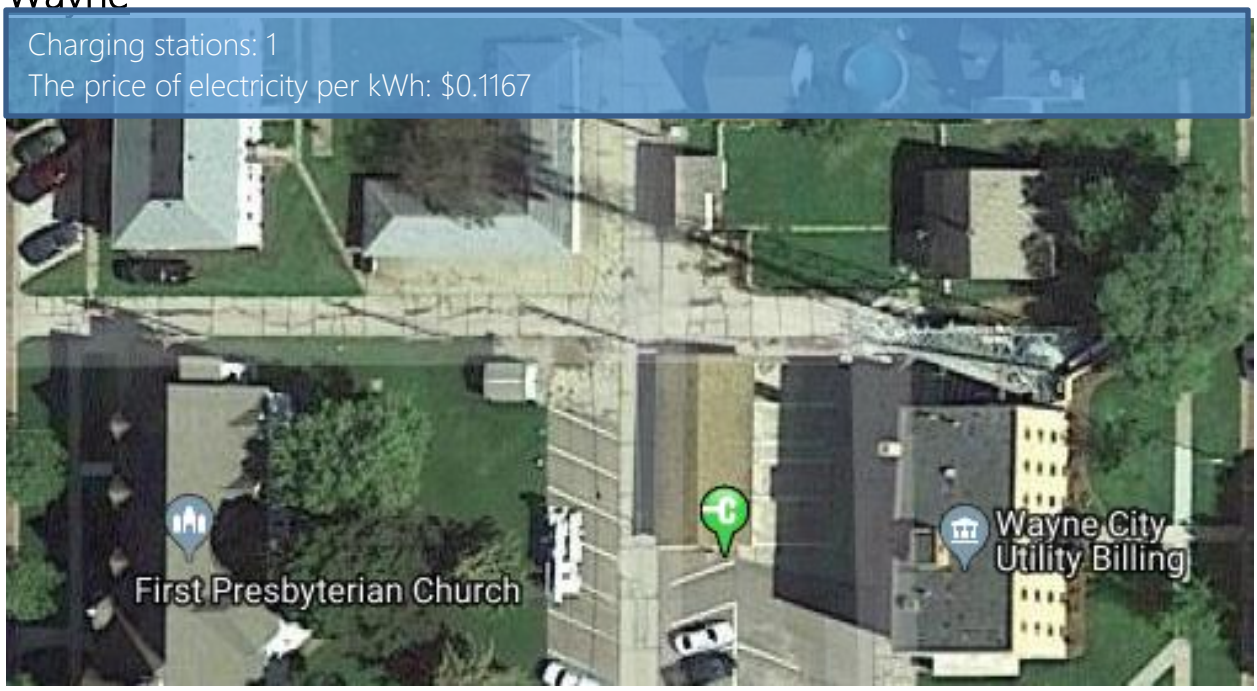
		This Month (November)	All Time
Miles Driven		**0.00**	**6,262.78**
Energy Consumed (kWh)		**0.00**	**1,861.71**
Co2 Emissions (lbs.)	**CV (Gas)**	**0.00**	**5,167.41**
	EV (Electricity)	**0.00**	**2,181.64**
	Total Fuel Saving	**0.00**	**2,985.77**
Co Emissions (lbs.)	**CV (Gas)**	**0.0000**	**61.7929**
	EV (Electricity)	**0.0000**	**1.8769**
	Total Fuel Saving	**0.0000**	**59.9159**
So2 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.1187**
	EV (Electricity)	**0.0000**	**5.8146**
	Total Fuel Saving	**0.0000**	**(5.6960)**
Nox Emissions (lbs.)	**CV (Gas)**	**0.0000**	**3.6098**
	EV (Electricity)	**0.0000**	**3.7663**
	Total Fuel Saving	**0.0000**	**(0.1564)**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.0000**	**0.2986**
	EV (Electricity)	**0.0000**	**0.1781**
	Total Fuel Saving	**0.0000**	**0.1205**
VOC Emissions (lbs.)	**CV (Gas)**	**0.0000**	**2.4644**
	EV (Electricity)	**0.0000**	**0.0420**
	Total Fuel Saving	**0.0000**	**2.4225**

Energy Consumption Data

November 2021



Wayne



Economic Saving Data (Fuel & Maintenance Cost Savings):

		This Month (November)	All Time
Miles Driven		**0**	**7,571.38**
Energy Consumed(kWh)		**0**	**2,262.30**
Fuel Cost Saving	**Usage Cost Using CV(Gas)**	**$0.00**	**$773.14**
	Usage Cost Using EV(Electricity)	**$0.00**	**$243.58**
	Total Fuel Saving	**$0.00**	**$529.57**
Other Cost Saving	**CV Costs**	**$0.00**	**$347.07**
	EV Costs	**$0.00**	**$136.56**
	Total other cost Saving	**$0.00**	**$210.51**
Overall Economic Savings		**$0.00**	**$740.08**

Environmental Saving Data (Reduction in Emissions):

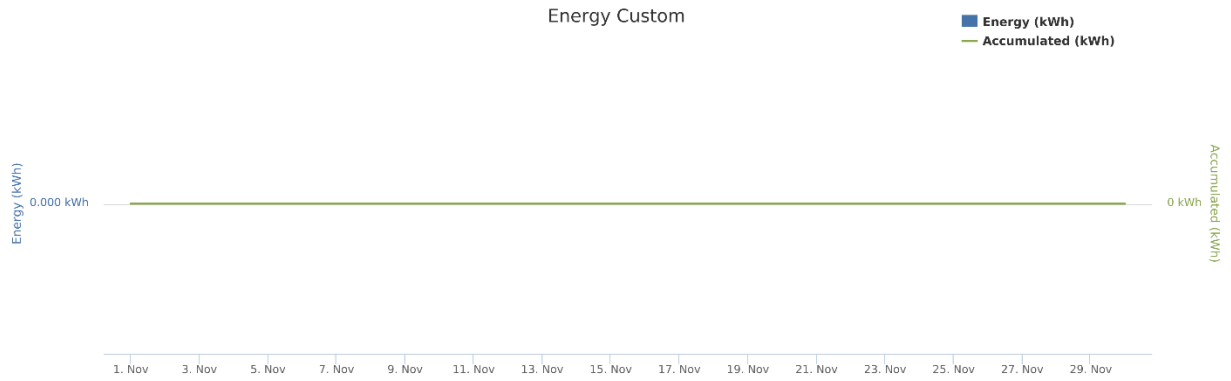
		This Month (November)	All Time
Miles Driven		**0.0000**	**7,571.38**
Energy Consumed (kWh)		**0.0000**	**2,262.30**
Co2 Emissions (lbs.)	**CV (Gas)**	**0.000**	**6258.399**
	EV (Electricity)	**0.000**	**2571.657**
	Total Fuel Saving	**0.000**	**3686.741**
Co Emissions (lbs.)	**CV (Gas)**	**0.000**	**64.837**
	EV (Electricity)	**0.000**	**0.671**
	Total Fuel Saving	**0.000**	**64.166**
So2 Emissions (lbs.)	**CV (Gas)**	**0.000**	**0.117**
	EV (Electricity)	**0.000**	**5.248**
	Total Fuel Saving	**0.000**	**-5.131**
Nox Emissions (lbs.)	**CV (Gas)**	**0.000**	**3.499**
	EV (Electricity)	**0.000**	**43.364**
	Total Fuel Saving	**0.000**	**-39.865**
CH4 Emissions (lbs.)	**CV (Gas)**	**0.000**	**0.348**
	EV (Electricity)	**0.000**	**0.096**
	Total Fuel Saving	**0.000**	**0.252**
VOC Emissions (lbs.)	**CV (Gas)**	**0.000**	**2.917**
	EV (Electricity)	**0.000**	**0.065**
	Total Fuel Saving	**0.000**	**2.852**

CNG data – No new data for November 2021, this is from previous calculations.

		Total
Miles driven		24,879.83
Fuel cost Savings:	Usage Cost Using CV (Gas)	$2,687.75
	Usage Cost Using CNG (Natural gas)	$1,538.65
	Total Fuel Savings	$1,149.10
CO2 Emissions (lbs.)	CV (Gas)	22,227.51
	CNG (Natural Gas)	17,127.65
	Overall Emission Reductions	5,099.86
CO Emissions (lbs.)	CV (Gas)	496
	CNG (Natural Gas)	924.54
	Overall Emission Reductions	(428.54)
SO2 Emissions (lbs.)	CV (Gas)	0.631
	CNG (Natural Gas)	0.084
	Overall Emission Reductions	0.547
NOx Emissions (lbs.)	CV (Gas)	13.44
	CNG (Natural Gas)	15.91
	Overall Emission Reductions	(2.47)
CH4 Emissions (lbs.)	CV (Gas)	0.73
	CNG (Natural Gas)	27.07
	Overall Emission Reductions	(26.34)
VOC Emissions (lbs.)	CV (Gas)	11.38
	CNG (Natural Gas)	12.98
	Overall Emission Reductions	(1.6)

Energy Consumption Data

November 2021



Wayne summary savings

Overall Economic Savings		$1,889.18
Overall Emission Reductions (lbs.)	CO2	8,786.60
	CO	64.17
	SO2	(5.1314)
	NOX	(39.8648)
	CH4	0.2522
	VOC	2.8521