

ENERGICITY CUSTOMER DATA ANALYTICS BY MARIE MCNAMARA

- Covid-19 customer analysis
- Creating new segments/ separating the data by week
- Hourly profile analysis
- Creating and outage analysis
- Implementing Tableau dashboard

DELINQUENCY/NEGATIVE CUSTOMER ANALYSIS: TABULATED COMPARISONS

The following table is a depiction of the percentage of negative balances, the highlighted Covid-19 column shows the project and energy segment in which there was an increase in delinquency

		January 2020		February 2020		March 2020		April 2020		May 2020	
Project	Segment	% Neg Calc	Number of Cusstoemrs	% Neg Calc	Number of Cusstoemrs	% Neg Calc	Number of Cusstoemrs	% Neg Calc	Number of Cusstoemrs	% Neg Calc	Number of Cusstoemrs
Barmoi Munu	high	28.0%	3.0	17.8%	6.1	19.4%	7.1	36.7%	7.3	34.7%	8.0
	low	50.9%	29.0	71.3%	37.8	73.8%	37.4	69.8%	33.2	85.4%	32.0
	mid-high	44.4%	4.0	10.3%	1.0	11.3%	2.0		0.0	55.6%	2.0
	mid-low	19.2%	74.0	16.5%	64.3	12.8%	59.6	17.1%	64.3	14.3%	59.0
Conakry Dee	high	29.7%	9.0	9.9%	14.1	21.9%	15.9	32.7%	15.0	23.1%	12.0
	low	42.2%	74.7	35.5%	76.8	28.9%	63.5	37.3%	61.2	32.8%	80.0
	mid-high	27.3%	12.9	3.9%	15.2	12.9%	11.7	14.8%	9.0	26.4%	8.0
	mid-low	18.1%	103.6	7.9%	93.9	7.2%	105.9	10.7%	100.3	7.5%	85.0
Kamasundo	high					0.5%	6.0	2.7%	5.0	7.4%	6.0
	low					26.0%	18.0	24.9%	23.0	39.4%	22.0
	mid-high					0.9%	7.0	1.5%	9.0	0.0%	7.0
	mid-low					4.2%	49.0	6.6%	43.0	6.7%	45.0
Kychom	high	39.8%	20.4	8.6%	16.2	9.2%	22.0	18.1%	18.0	29.6%	18.0
	low	43.2%	34.7	39.8%	35.4	32.2%	32.0	29.2%	31.0	23.6%	40.0
	mid-high	36.4%	14.3	20.3%	10.1	20.2%	11.0	21.8%	11.0	21.0%	9.0
	mid-low	15.3%	71.5	11.3%	60.2	5.8%	69.0	12.7%	73.0	8.1%	66.0
Malekurary	high	71.0%	1.0								
	low	27.6%	14.0	47.8%	21.0	43.5%	21.3	52.2%	24.0	54.5%	21.0
	mid-high	66.7%	3.0	14.9%	3.0	0.0%	2.0	26.7%	2		
	mid-low	10.4%	66.0	11.2%	60.0	15.5%	59.8	8.0%	54.0	8.9%	59.0
Masimera	high					10.8%	3.0	80.7%	1.4	50.0%	2.0
	low			11.1%	51.2	38.9%	21.0	51.7%	23.1	42.5%	23.0
	mid-high							69.7%	5.1		
	mid-low			33.3%	2.8	11.4%	33.0	54.4%	26.8	6.1%	31.0
Petifu Junction	high	38.7%	9.0	6.4%	14.1	15.2%	15.1	8.8%	15.8	9.4%	19.0
	low	68.6%	42.2	67.5%	56.4	43.9%	45.2	47.1%	38.4	38.8%	55.0
	mid-high	18.9%	21.1	22.0%	16.1	13.8%	15.1	27.1%	15.8	6.1%	11.0
	mid-low	28.0%	91.3	12.6%	74.6	11.9%	78.6	12.0%	76.8	12.3%	63.0

Highlighted if there was an increase in delequency compaired to pre-COVID-19 (March)

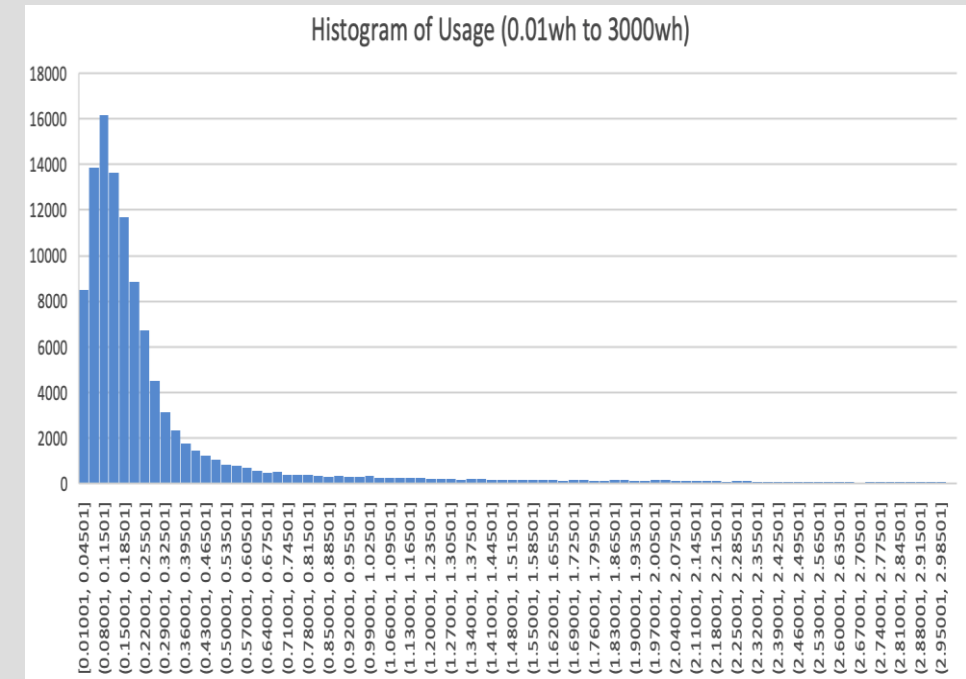
Highlighted if there was a drop off of customers in a given segement

SEGMENTATION

Segmentation Findings

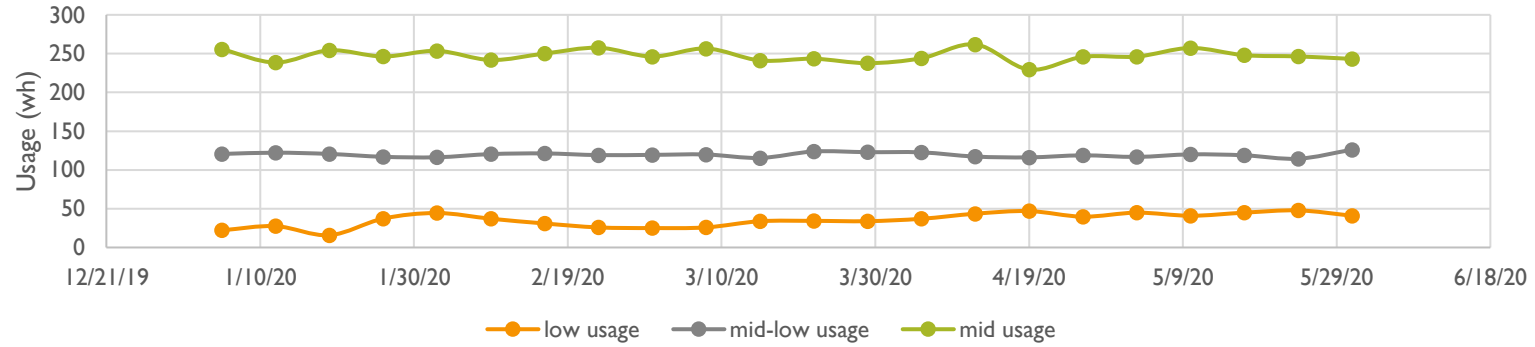
- Customers that use above 400wh a day represent 68% of the total energy usage on average but represent only 17% of the customer base
- High use customers that use above 2000wh a day represent 30% of the energy usage and only 3% of the customer base (typically there are 4-5 customers a community in this segment bracket)
- Usage is right skewed – more frequent low usage readings

Usage segments	
0-90	Low
90-150	Mid-low
150-400	Mid
400-2000	Mid-high
2000-5000	High

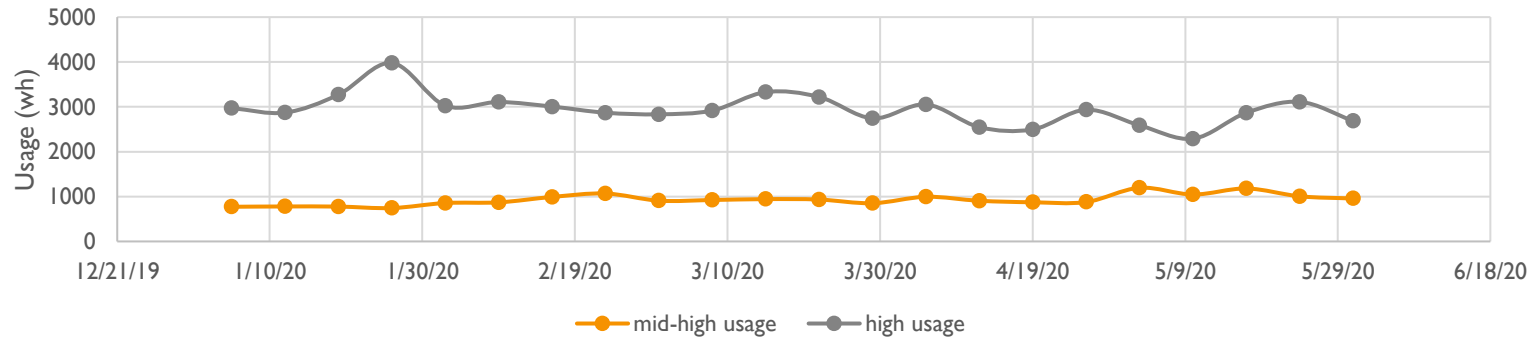


Overall Statistics of all Seven Projects from Jan-April	
25% / 1st Quartile	0.043
Median	0.126
Mean	0.317
75% / 3rd Quartile	0.245

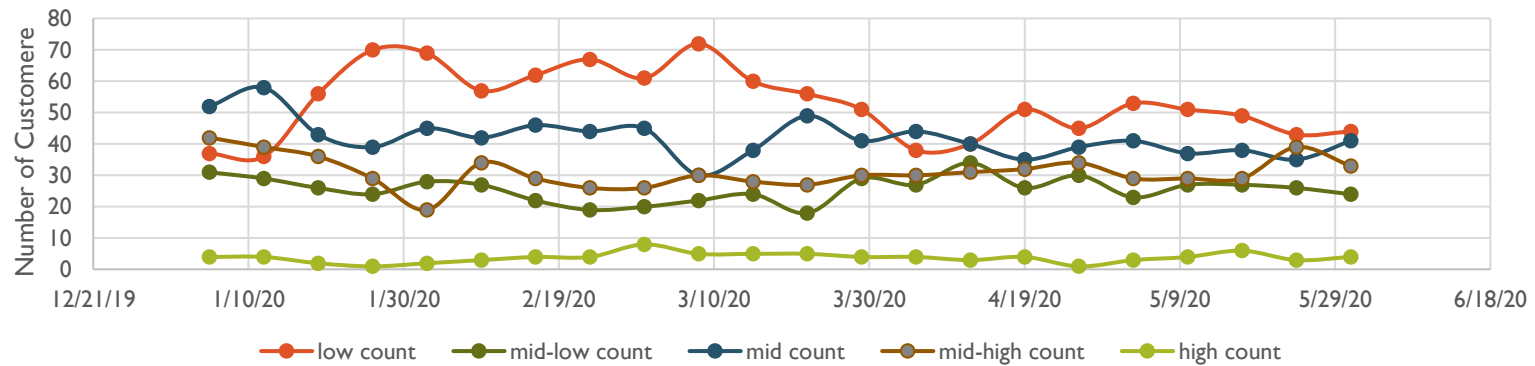
Low to Mid Segment usage



Mid-high and High Segment usage



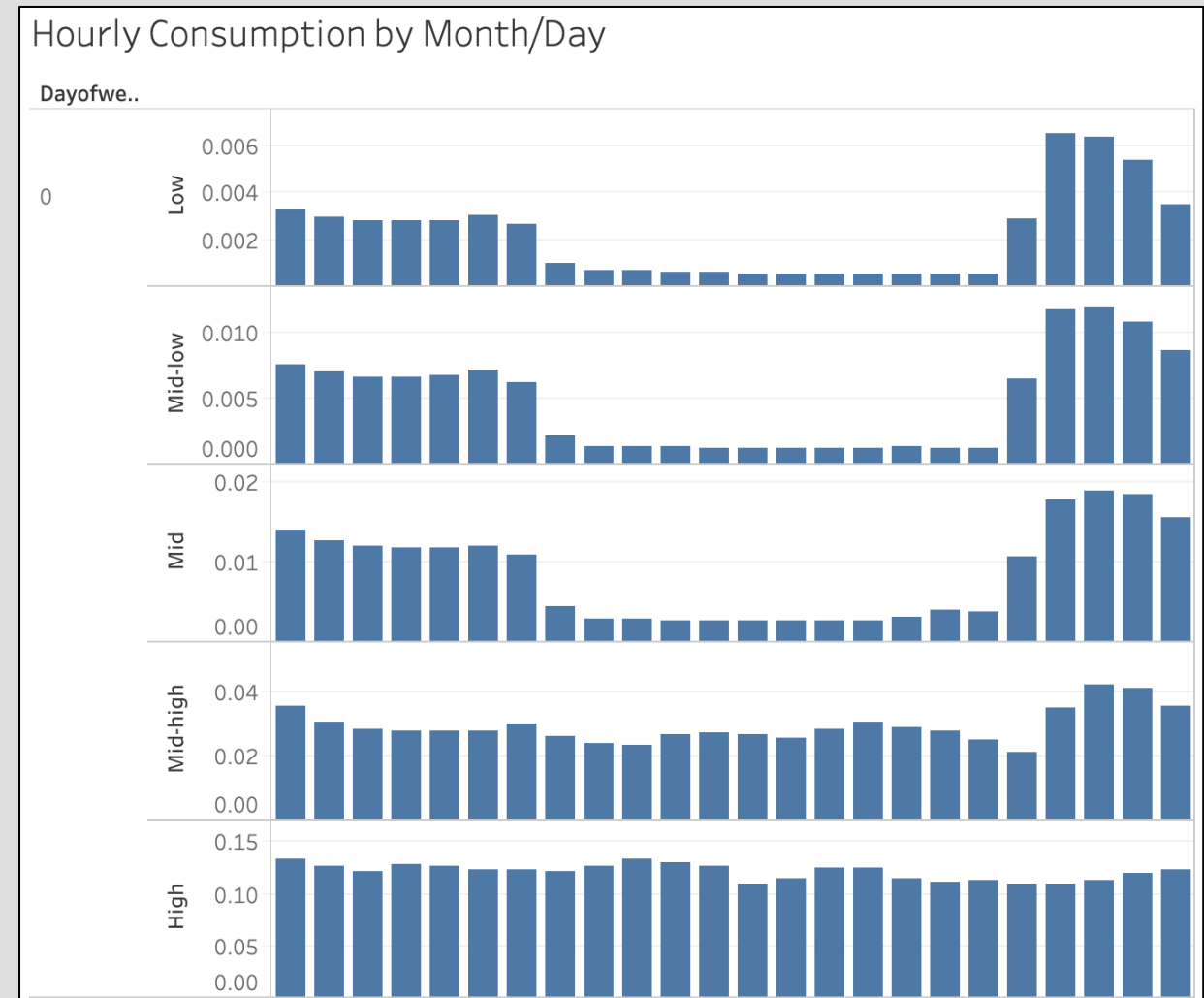
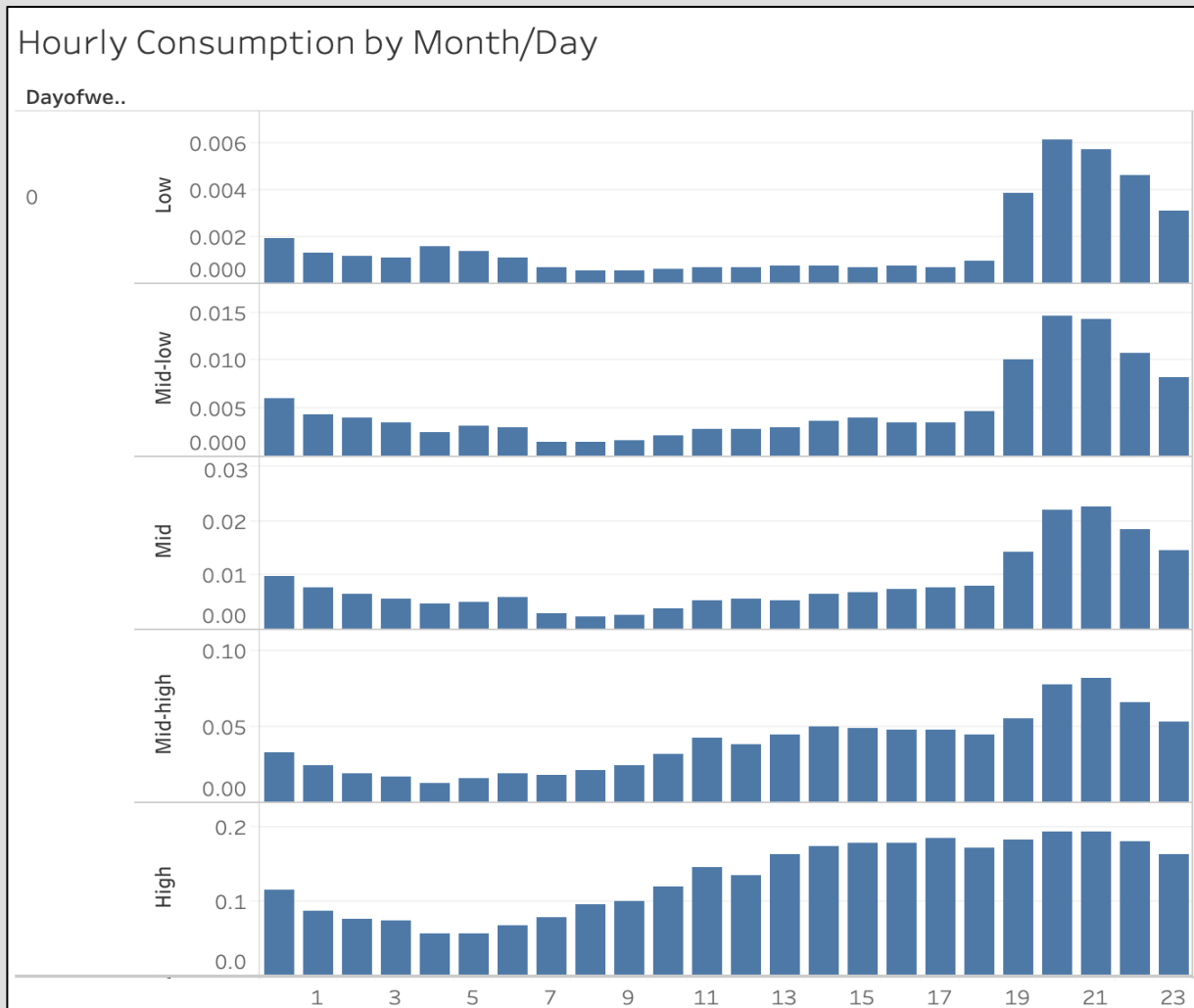
Customer Count



HOURLY LOAD PROFILE COMPARISON

**Outage Communities (larger) Group 1: Conakry
Dee, Kychom, Petifu Junction**

**NonOutage Communities (Smaller) Group2:
Malekuray, Masimera Barmoi Munu**



IMPLEMENTING
TABLEAU
DASHBOARD
- MOCK
COPS
GRAPHS

Columns: WEEK(Date)

Rows: Project Code, Customer Id, Last Name, First Name

Negative customers by community

Project Code	Customer Id	Last Name	First Name	Week of Date			
				June 28, 2020	July 5, 2020	July 12, 2020	July 19, 2020
BMNU	037374100			-218,496	-733,459	-1,086,464	-1,224,1
	554741455			-486,688	-887,930	-932,930	-976,1
	989554449			-423,319	-777,033	-822,033	-865,2
	578223303			-375,967	-694,167	-739,167	-785,0
	531461665			9,770	-28,859	-83,097	-134,9
	185802028			-250,846	-475,206	-520,206	-543,4
	220985424			-76,304	-169,756	-221,002	-272,5
	120487125			-112,288	-229,579	-274,579	-317,7
	540379253			-83,481	-182,317	-228,233	-295,4
	670534192			-88,072	-190,352	-235,352	-278,5
	664638122			-76,691	-170,434	-220,302	-265,4
	401627230			-65,539	-150,919	-195,919	-239,1
	774036788			-10,339	-66,826	-58,185	-101,8
	633116648			81	-15,803	-85,835	-141,5
	696150632			-28,570	-86,222	-131,222	-162,1
	933883700			-536	-4,947	-66,420	-96,0
318545135			15,398	-18,706	-74,028	-121,0	
697386510			-27,803	13,727	-111,822	-250,6	
063527253			-4,884	-3,324	-57,897	-108,1	
574668106			1,578	-1,083	16,755	-94,3	
314440353			-16,387	-30,155	-98,204	-158,5	
487258697			5,964	-47,544	-53,512	-91,3	

Filters: Country Code: SL, YEAR(Date): 2020, MONTH(Date), Project Code

Marks: Automatic, Color, Size, Text, Detail, Tooltip, SUM(Balance ..)

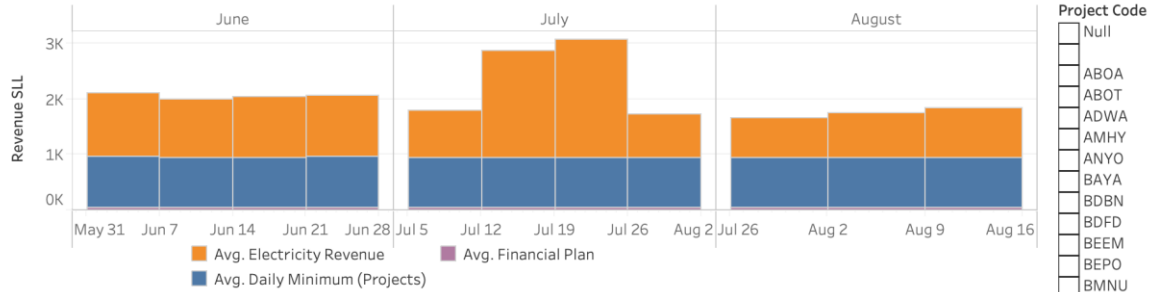
Project Code: (All), Null, ABOA, ABOT, ADWA, AMHY, ANYO, BAYA, BDBN, BDFD, BEEM, RFPO

MONTH(Date): (All), January, February, March, April, May, June, July, August, September, October, November

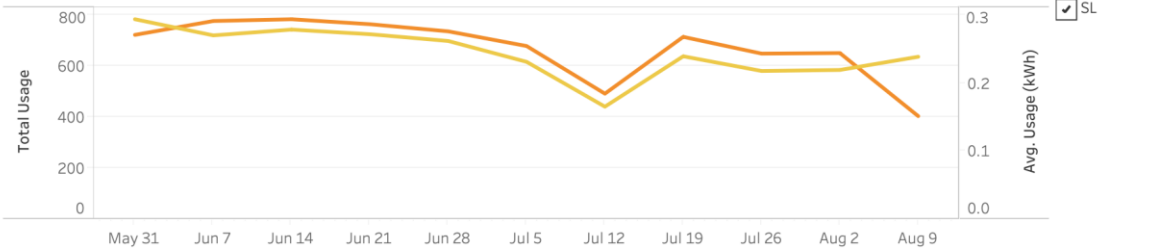
Energy Usage Dashboard

Day of Date
June 1, 2020 to August 12,
and Null values

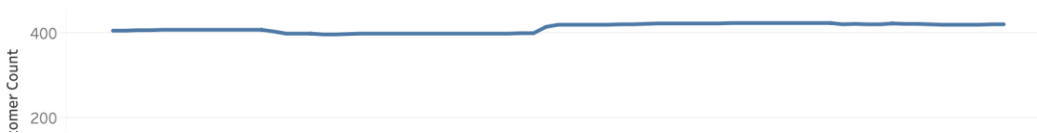
Revenue Sources



Usage (kWh) on a weekly basis



Customer Count



IMPLEMENTING
TABLEAU
DASHBOARD –
MOCK COPS
GRAPHS