Tesla 47700 Kato Road and 1055 Page Avenue Improvements Project

Attachment 1.6 – Energy

A. Solar City Energy Report, 2017

B. Kato Project Electrical Capacity/Load (electricity "Waterfall"), Tesla

C. Table 1 – Existing and Project Energy Estimates

D. PG&E Primary Service Letter, 2/28/2020

SolarCity Inc - MIS (MIS / 101290998)

SA Id: 3595296649 **Open: Y** Bus Act Desc: Svc Descriptor: MANUFACTURING **From Jan 1, 2017 to Dec 31, 2018**

Per Name: SOLARCITY INC
Acct Id: 3595296270
Meter #: 1004577206
Billing Addr: PO BOX 319022, C/O ENERNOC INC CHICAGO, IL 60631
Service Addr: 1055 PAGE AVE, FREMONT, CA 94538

Date	Days	Rate	[redacted]	Therms	[redacted]	On-Peak Usage (kwh)	Part-Peak Usage (kwh)	Off-Peak Usage (kwh)	Total Usage (kwh)	Hours	Billing Demand (kW)	Created Demand (kW)	On-Peak Demand (kW)	Part-Peak Demand (kW)	Off-Peak Demand (kW)	[redacted]
12/06/2018	30	E20P			[redacted]	0	295,454	500,406	795,860	604	1,318	1,318	0	1,318	1,217	[redacted]
11/06/2018	30	E20P			[redacted]	138,847	218,026	502,903	1,719,552	1,213	1,418	1,418	1,418	1,390	1,313	[redacted]
10/07/2018	31	E20P			[redacted]	176,661	191,351	584,696	952,708	610	1,562	1,562	1,562	1,514	1,483	[redacted]
09/06/2018	31	E20P			[redacted]	209,274	230,357	651,602	1,091,233	590	1,850	1,850	1,850	1,771	1,733	[redacted]
08/06/2018	29	E20P			[redacted]	210,408	229,546	620,004	1,059,958	578	1,834	1,834	1,834	1,697	1,682	[redacted]
07/08/2018	31	E20P			[redacted]	221,572	243,482	774,879	1,239,933	623	1,990	1,990	1,990	1,944	1,817	[redacted]
06/07/2018	31	E20P			[redacted]3	235,006	258,794	741,755	1,235,555	579	2,134	2,134	2,134	2,052	1,990	[redacted]
05/07/2018	32	E20P			[redacted]	60,097	467,472	818,518	2,692,174	1,256	2,143	2,143	2,143	2,090	1,951	[redacted]
04/05/2018	29	E20P			[redacted]	0	487,244	694,411	1,181,655	569	2,076	2,076	0	2,076	1,925	[redacted]
03/07/2018	30	E20P			[redacted]	0	471,085	708,104	1,179,189	577	2,045	2,045	0	2,045	1,865	[redacted]
02/05/2018	31	E20P			[redacted]	0	497,760	802,826	1,300,586	647	2,009	2,009	0	2,009	1,908	[redacted]
01/05/2018	30	E20P			[redacted]	0	485,575	808,756	1,294,331	623	2,076	2,076	0	2,076	1,932	[redacted]
Total for 2018:			0.00	0	[redacted]	1,251,865	4,076,146	8,208,860	15,742,734	8,469						[redacted]
12/06/2017	30	E20P			[redacted]	0	542,951	852,955	1,395,906	630	2,215	2,215	0	2,215	2,114	[redacted]
11/06/2017	29	E20P			[redacted]	218,893	348,633	829,475	1,397,001	597	2,340	2,340	2,340	2,294	2,162	[redacted]
10/08/2017	31	E20P			[redacted]	275,698	308,691	956,020	1,540,409	617	2,498	2,498	2,498	2,345	2,383	[redacted]
09/07/2017	31	E20P			[redacted]	290,237	323,936	930,901	1,545,074	624	2,477	2,477	2,477	2,412	2,366	[redacted]
08/07/2017	29	E20P			[redacted]	305,833	340,955	935,797	1,582,585	555	2,849	2,849	2,849	2,822	2,609	[redacted]
07/09/2017	32	E20P			[redacted]	320,052	356,762	1,069,715	1,746,529	563	3,101	3,101	3,101	3,014	2,815	[redacted]
06/07/2017	30	E20P			[redacted]	349,130	396,492	1,061,979	1,807,601	567	3,187	3,187	3,187	3,175	2,957	[redacted]
05/08/2017	32	E20P			[redacted]	97,813	648,749	1,070,037	1,816,599	573	3,173	3,173	3,173	3,151	3,026	[redacted]
04/06/2017	29	E20P			[redacted]	0	713,211	963,963	1,677,174	526	3,190	3,190	0	3,190	2,940	[redacted]
03/08/2017	30	E20P			[redacted]	0	692,442	1,025,853	1,718,295	563	3,050	3,050	0	3,050	2,875	[redacted]
02/06/2017	31	E20P			[redacted]	0	682,022	1,116,988	1,799,010	592	3,038	3,038	0	3,038	2,964	[redacted]
01/06/2017	31	E20P			[redacted]	0	645,695	988,379	1,634,074	501	3,264	3,264	0	3,182	3,264	[redacted]
Total for 2017:			0.00	0	[redacted]	1,857,656	6,000,539	11,802,062	19,660,257	6,908						[redacted]
Total for SA id: 3595296649:			0.00	0	[redacted]	3,109,521	10,076,685	20,010,922	35,402,991	15,377						[redacted]

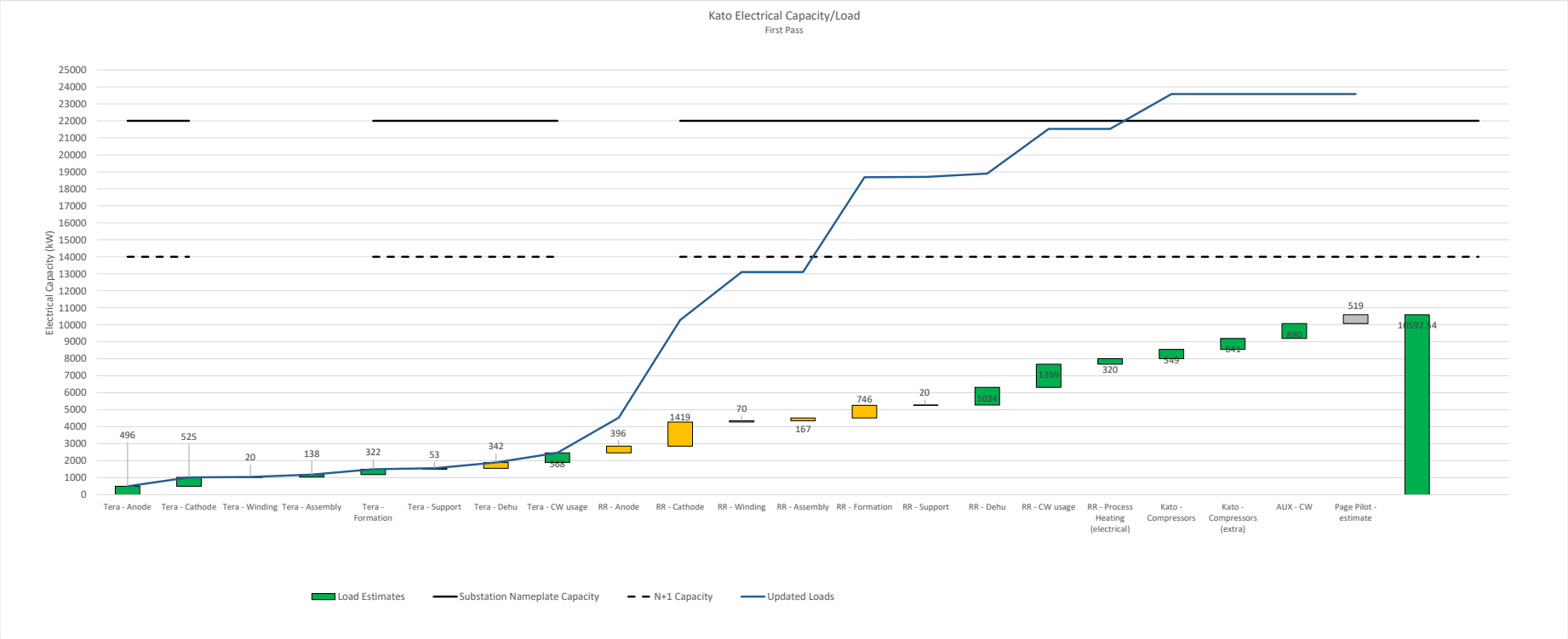
Kato Electrical Capacity/Load
First Pass
Electrical Capacity (kW)
25000
24000
23000
22000
21000
20000
19000
18000
17000
16000
15000
14000
13000
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
496
525
20
138
322
53
342
396
1419
70
167
746
20
320
549
519
Tera - Anode
Tera - Cathode
Tera - Winding
Tera - Assembly
Tera - Formation
Tera - Support
Tera - Dehu
Tera - CW usage
RR - Anode
RR - Cathode
RR - Winding
RR - Assembly
RR - Formation
RR - Support
RR - Dehu
RR - CW usage
RR - Process Heating (electrical)
Kato - Compressors
Kato - Compressors (extra)
AUX - CW
Page Pilot - estimate
Load Estimates
Substation Nameplate Capacity
N+1 Capacity
Updated Loads

Table 1: Existing (2017) and Project Energy Estimates					
	Avg. Elec. Load (kw)			Annual Electrical Use (kwh/yr)	
	Existing Load	Future Load		2017 Electrical Demand	Future Electrical Demand
	kw	kw		hours/yr	kwh/yr
Tera - Anode	496	496		8760	4,344,960
Tera - Cathode	525	525		8760	4,599,000
Tera - Winding	20	20		8760	175,200
Tera - Assembly	138	138		8760	1,208,880
Tera - Formation	322	322		8760	2,820,720
Tera - Support	53	53		8760	464,280
Tera - De-Hu	342	342		8760	2,995,920
Tera - CW Use	568	568		8760	4,975,680
Kato - Compressors	549	549		8760	4,809,240
Kato - Compressors (extra)	641	640		8760	5,606,400
AUX - CW	880	880		8760	7,708,800
	4,534	**4,533**		**19,660,257**	
RR- Anode		396		8760	3,468,960
RR-Cathode		1419		8760	12,430,440
RR-Winding		70		8760	613,200
RR - Assembly		167		8760	1,462,920
RR- Formation		746		8760	6,534,960
RR - Support		20		8760	175,200
RR- De-Hu		1034		8760	9,057,840
RR- CW Use		1369		8760	11,992,440
RR - Process Heat		320		8760	2,803,200
Page - Pilot		519		8760	4,546,440
	Increased Load:	**6,060**		Increased Use:	**73,130,393**
		10,593			**92,790,650**

February 28, 2020

Tesla
Amir Berahmand, PE | Sr. Electrical Design Engineer
45500 Fremont Blvd, Fremont, CA 94538

RE: 1055 Page Ave Fremont Primary Service

Dear Mr. Berahmand,

We have received your request to add additional 6MW load at your facility.
The existing electric service is adequate to serve the additional load.
At this time, no other work will be needed on our electric facilities and you can go ahead and add the additional load.

Please call me if there are any questions 510 760-8955 or e-mail exv4@pge.com
Sincerely,

Emmanuel Veneracion

Emmanuel Veneracion
PG&E
IPE
510-760-8955 cell
510-683-3078 office
exv4@pge.com