



Laguna Woods Village®

OPEN MEETING

REGULAR MEETING OF THE VILLAGE ENERGY TASK FORCE

**Wednesday, March 4, 2020 – 1:30 PM
Laguna Woods Village Community Center Board Room
24351 El Toro Road**

NOTICE and AGENDA

This Meeting May be Recorded

1. Call to Order
2. Acknowledgment of Media
3. Approval of the Agenda
4. Approval of Meeting Report for January 10, 2020
5. Chairman's Remarks
6. Member Comments (*Items Not on the Agenda*)
7. Department Head Update

Consent:

All matters listed under the Consent Calendar are considered routine and will be enacted by the Task Force in one motion. In the event that an item is removed from the Consent Calendar by members of the Task Force, such item(s) shall be the subject of further discussion and action by the Task Force.

8. Project Log
9. Third Mutual Street Light & Walkway Light Outage Report
10. United & Third Mutual Electric Vehicle & Electric Golf Cart Report
11. United & Third Mutual Solar Production Reports

Reports:

12. Update on the Tesla Solar Presentation
13. Solar Optimum Presentation (Gene Okun, Commercial Sales)

Oral Discussions:

14. Formation of Volunteer Research Group for Third Street & Walkway Lights (Bert Moldow)
15. Community Choice Aggregation (Bert Moldow)
16. Energy Manager Job Description/Duties (Bert Moldow)
17. Alteration Solar Installations (Bert Moldow)



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Items for Future Agendas:

Third Mutual:

- Identify LED Solar Street Lights (to be considered after the street light fixture LED conversion project is completed.)
- Installation of Level II EV Bollards

United Mutual:

- Installation of Level II EV Bollards

GRF:

- Installation of Level II EV Bollards (Streets & Clubhouses)
- Community Choice Aggregation

All Corporations:

- Identify Locations in Need of LED Upgrades

Concluding Business:

Date of next meeting – May 6, 2020

Adjournment

Bert Moldow, Chair
Velny Soren, Staff Officer
Telephone: 268-2281



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OPEN MEETING

REPORT FOR REGULAR MEETING OF THE VILLAGE ENERGY TASK FORCE

Friday, January 10, 2020 – 12:00 P.M.
Laguna Woods Village Community Board Room
24351 El Toro Road

MEMBERS PRESENT: Carl Randazzo, – Vice Chair, Judith Troutman, Bert Moldow, Brian Gilmore, Cush Bhada, John Frankel, Advisors: Bill Walsh, Sue Stephens

MEMBER ABSENT: None

OTHERS PRESENT: Juanita Skillman, Elsie Addington, Pat English, Manuel Armendariz

STAFF PRESENT: Guy West - Staff Officer, Laurie Chavarria, Chris Naylor, Chris Swanson

1. Call to Order

Vice Chair Randazzo called the meeting to order at 12:00 P.M.

2. Acknowledgment of Media

Vice Chair Randazzo noted no members of the media were present.

3. Approval of the Agenda

Item 15 was moved to Item 6a on the agenda. All items on the consent calendar were pulled for discussion. The agenda was approved as amended.

4. Approval of Meeting Reports for September 4, 2019

The Meeting Report of September 4, 2019, was approved as written.

5. Chairman's Remarks

Vice Chair Randazzo commented on the future format being considered for the Task Force; the vote for the new chair of the Task Force; Director Moldow's list of future energy tasks for discussion; the EV charging stations at the Community Center; and his concerns about lighting.

6. Member Comments (*Items Not on the Agenda*)

- Manuel Armendariz (917-D) commented on the United & Third Solar projects; the energy consultant budget; and the street light project.
- Pat English (2022-D) commented that the legitimacy of the Village Energy Task Force.

The Vice Chair and various Directors and Advisors responded briefly to all comments.

6a. Vote for a New Task Force Chair

Director Moldow accepted a nomination to be the Chair of the Village Energy Task Force.

7. Department Head Update

Staff Officer Guy West deferred the Department Head Update to allow the Senior Management Analyst to provide a brief summary on the status of the Professional Service Agreement with MelRok Operating, LLC.

Discussion ensued regarding the monitoring of the EMS systems for each Clubhouse.

Consent:

All matters listed under the Consent Calendar are considered routine and will be enacted by the Task Force by one motion. In the event that an item is removed from the Consent Calendar by members of the Task Force, such item(s) shall be the subject of further discussion and action by the Task Force.

By consensus, the Task Force pulled all items on the Consent Calendar for discussion.

8. Project Log

United Mutual:

- Walkway Lighting – Advisor Walsh commented on getting funding to add this type of program for Third Mutual. Chair Moldow commented on the cost for this walkway program. Vice Chair Randazzo commented on the process for requesting a new walkway light.
- Energy Consultant Services – Juanita Skillman (2154-N) commented on the status for this line item.

Third Mutual:

- Electrical Systems – Chair Moldow commented on the use of this budget.
- Exterior Lighting – Chair Moldow asked if tree trimming is included in the street light project costs. Advisor Walsh commented on tree trimming during the light fixture conversion. He would like to see a list made of trees that are blocking the new lights so that they can be trimmed. Chair Moldow commented on using the old street light fixtures to replace the walkway light fixtures that are not in good condition.

Staff Officer Guy West and the Senior Management Analyst responded to all questions and comments.

9. Third Mutual Street Light & Walkway Light Outage Report

Chair Moldow commented on the response time from SCE when it is identified that there is no power to the pole.

10. United & Third Mutual Electric Vehicle & Electric Golf Cart Report

Chair Moldow commented on the new format for this report.

11. Third Mutual Solar Production Report

Chair Moldow commented on the average monthly production of kilowatt hours. He would like to see a more user friendly report instead of just a data spreadsheet and would like explanations added for months where low generation is indicated.

Discussion ensued regarding generation capacity; the solar production reporting software package for each building; how staff receives the data for the production report; adding this report to the agenda for United Mutual; the possibility of hiring an energy manager and solar plant manager; projected kilowatts versus actual kilowatts generated and ROI for the solar equipment.

By consensus, staff was directed to contact Third Mutual's Solar O&M contractor to find out if any of the inverters are experiencing more than a 2% loss of Direct Current (DC) power.

Staff Officer Guy West and the Senior Management Analyst responded to all questions and comments.

12. GRF EV Charging Station Report

Chair Moldow asked staff to provide more information on this report such as dates of vehicle charging, especially on the Level 3 chargers.

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Discussion ensued regarding revenue percentage collected by ChargePoint; separate metering for the charging stations; and Tesla charging adapters.

By consensus, staff was directed to bring a cost to a future GRF M&C Committee meeting for the purchase of a Tesla charging adaptor for use with the charging stations behind the Community Center.

13. GRF Demand Charges Report (Finance Dept.)

The Financial Analyst summarized the report and answered questions from the Task Force.

Discussion ensued regarding SCE billing rates, various rate schedule options; and regulating each cooling zone in the Community Center based on usage.

Meeting recessed for a break at 2:17pm, reconvened at 2:29pm.

Reports:

14. Third Mutual Walkway Lighting Locations

Staff Officer Guy West summarized the report and answered questions from the Task Force.

Discussion ensued regarding the ability to purchase the walkway lights from SCE; the possibility of asking SCE to remove their existing walkway light poles; budgeting for future walkway light upgrades; and the underground infrastructure that powers the lights.

Oral Discussions:

15. Comments on TEC Update from October 18, 2019

Chair Moldow asked for comments on the TEC presentations from the October VETF meeting.

Discussion ensued regarding EV charging as a priority; electrical infrastructure in residential buildings; providing more guidance to the energy consultant; and using the laundry room as a source of power for future EV charging bollards.

16. How SCE Power Outage Notifications Affect Laguna Woods Village (Bert)

Chair Moldow discussed the power shut downs that SCE can perform during uncontained fires.

Discussion ensued regarding residents that need a power source for life saving medical equipment; local hospitals that are set up to help in an emergency; the use

of a Microgrid for power outages; and the residents' responsibility to provide their own power source.

17. Discuss the Tesla proposal for installing Solar > 240Kw @ \$1.00 per Kw (Bert)

Chair Moldow discussed info he found on the internet where you can buy or rent your own Tesla residential solar panel system.

By consensus staff was asked to contact a Tesla rep and invite them to a future meeting so they can discuss all solar options that apply to the Community.

18. Discuss current cleaning method for solar panels (Bert)

The Senior Management Analyst provided the cleaning method for solar panels as specified by our O&M contractor and answered questions from the Task Force.

Discussion ensued regarding microfiber rollers; using vinegar in the water; the frequency of solar panel cleaning; and the status of ongoing discussions with JCI.

19. Discuss product use for solar panel cleaning (Bert)

This was discussed under item #18. No further discussion ensued.

20. Discuss alternative solutions to EV charging in Third and United (Bert)

Discussion ensued on what infrastructure needs to be upgraded in order to provide charging of electric vehicles in carports and Garden Village garages and the associated costs.

21. Discuss alternate methods of financing a Microgrid (Bert)

Chair Moldow discussed two alternative methods for financing a Microgrid - applying for a low interest loan to purchase and install the Microgrid and paying a third party company who would install the Microgrid and charge the customer for the electricity.

Discussion ensued regard how we would get extra fuel for the Community Center generator in an emergency; and are other communities considering or installing a Microgrid.

Items for Future Agendas:

Third Mutual:

- LED Solar Street Lights (to be considered after the street light fixture LED conversion project is completed.)

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United Mutual:

- Additional Walkway Lighting

GRF:

- Installation of Level II EV Bollard Chargers (on the streets and Clubhouses)
- Community Choice Aggregation

All Corporations:

- Identify locations in need of LED upgrades
- Electric vehicle charging
- Presentation by Gene Okun (Commercial Sales, Solar Optimum, Inc.)

Concluding Business:

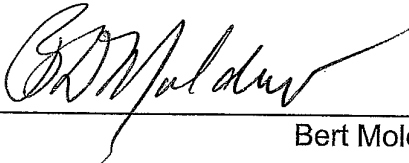
Committee Member Comments:

- Director Gilmore requested a copy of the VETF Charter and TEC Presentations.
- Director Frankel commented on SCE's disaster response process.

Date of next meeting – March 4, 2020

Adjournment

This meeting was adjourned at 4:11 P.M.


Bert Moldow, Chair

Energy Task Force Project Log (February 2020)

United Mutual

#	Name	Description	Status	Estimated Completion	Budget
1	Walkway Lighting Program	This program is dedicated to improving walkway lighting through additional fixture installation, or the upgrade of existing lighting. Alternatives to the existing pagoda style fixtures are evaluated as needed. Requests for additional lighting are received from residents on an ongoing basis. Those requests are vetted and additional lighting is installed if it meets the program requirements.	Open requests for additional lighting: 2 Approved requests for 2020: 1 Completed installations for 2020: 1	December 2020 Annual	Budget: \$50,121 Exp: \$1,301 Balance: \$48,820
2	Energy Consultant Services	These funds are allocated funding for future energy projects. An energy consultant will be used as-needed in order to advance United's and the Community's future energy initiatives.	Significant delays occurred which extended the consultant's timing of deliverables due to SCE not making their infrastructure data available. The consultant has therefore moved forward with executing the scope of work around the SCE challenge by executing Task 1 of the scope. (Perform assessment of community's current electrical infrastructure). The consultant will be presenting the results from Task 1 to the M&C Committee at their February 26th meeting, and will be seeking direction on the execution of Task 2.	On-going	Supplemental: \$20,319 Exp: \$0 Balance: \$20,319
3	Pushmatic Electrical Panel Replacement	This project is funded to replace 2,750 Pushmatic electric panels over a 10 year period. The Pushmatic panels are unreliable and no longer supported. The Board entered into a five year contract with Coastal Current Electric Corp. to install 1,375 Pushmatic electric panels. This contract expires in May 2021; at which time a new five year contract will be required to complete the remaining 1,375 electric panels. Estimated Project Completion: Year 2026	The estimated number of units scheduled for 2020: 275 The number of units completed in 2020: 25 Number of manors completed to date: 939 Number of manors left to complete: 1811	November 2020	Budget: \$425,000 Exp: \$57,548 Balance: \$367,452 Cumulative Expenditures 2016 through 2019: \$1,361,888

Third Mutual					
1	Solar Street Light Pilot Program	The Energy Committee directed staff to install a solar powered street light as a pilot project. The Committee's goal was to determine whether the solar street light was an economical option to improve street lighting levels without trenching for new conduits.	The pilot installation was completed approximately one year ago on Del Faro. The Board has expressed interest in keeping this fixture and requested a quote to install it permanently. A quote was procured and provided to the Committee for use of a marblite pole to match others in the community. The Committee directed staff to ask the contractor to wait until Siemens completes the light assessment to determine whether this pilot should be installed permanently.	N/A	Not Budgeted
2	Electrical Systems	These funds are allocated to repair or replace electrical equipment failures as needed.	It has been determined by staff that the grounding at the Garden Villa electric panels are not up to code and should be improved for safety reasons. Staff has completed grounding improvements to 44 of the GV buildings. The 2020 budget includes funding for the remaining 9 GV buildings to be completed this year.	December 2020 Annual	Budget \$50,000 Exp: \$0 Balance: \$50,000
3	Energy Consultant Services	These funds are allocated funding for future energy projects. An energy consultant will be used as-needed in order to advance Third's and the Community's future energy initiatives.	This is a contingency to address consultant fees for energy improvements. No projects have been assigned to the energy consultant this year.	December 2020 Annual	Budget \$10,000 Exp: \$0 Balance: \$10,000
4	Street Light LED Conversion Project	In 2018, funding for this program was allocated toward the purchase of the Southern California Edison street light infrastructure. A consultant was retained to assist with the street light acquisition; the retrofit of the existing lighting fixtures to more efficient LED technology, and to perform the operations and maintenance of the asset for three years.	On December 11, 2019, the M&C Committee approved the installation of King K427 and Acuity cobra style LED fixtures throughout the Mutual. A map specifying the type of fixtures, wattages and color temperatures will be provided and reviewed by staff in late-February. The fixtures are scheduled to be installed in April 2020.	2020	2019 Budget: \$740,000 Exp: \$0 Balance: \$740,000
GRF					
Agenda Item #8 Page 2 of 2		GRF retained the services of an Energy Consultant to be engaged as needed in order to advance GRF's and the Community's future energy initiatives.	The consultant presented the results of Task 1 (perform assessment of community's current electrical infrastructure) and Task 2 (investigate the feasibility of a Microgrid and alternative energy systems for electrical generation). No additional direction was provided to the consultant from the Board.	On-going	Supplemental: Budget: \$50,000 Invoiced: \$49,868 Balance: \$132

Third Mutual Street Light & Walkway Light Outage Report

Status as of February 18, 2020

SCE Repairs in Progress:

Address	Pole #	Req Date	Description	Note	Type of Light
B3280 on San Amadeo	1974539E	5/30/2019	Street Light to Report to SCE	Pole Replacement	Walkway
B5475 on Paseo Del Lago East	2118541E, 2118538E	12/4/2019	Street Light to Report to SCE	No Power to Poles	Street Light
B3193 on Via Buena Vista	2044060E	2/14/2020	Street Light to Report to SCE	Light Out	Walkway

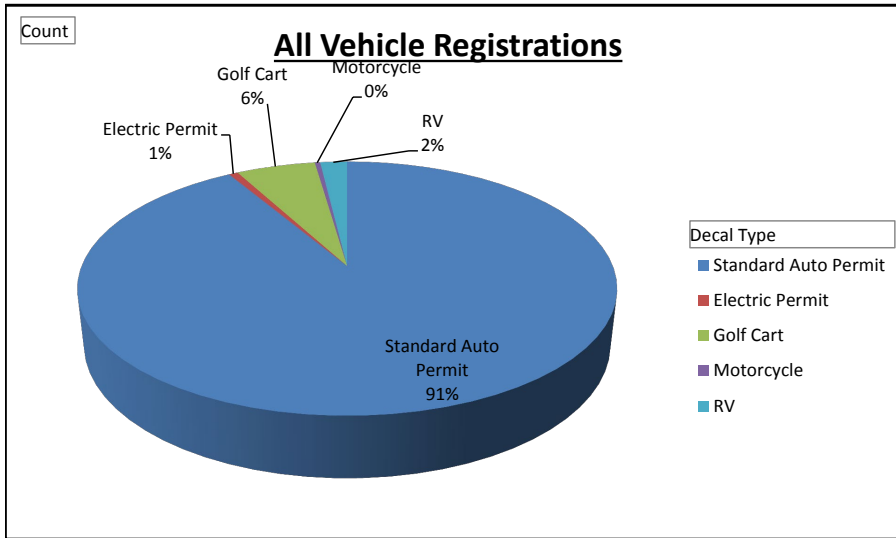
SIEMENS Repairs in Progress:

Address	Pole #	Req Date	Description	Note	Type of Light
B3529 on Monte Hermosa	2070018E	6/11/2019	Street Light Reported to Siemens	Pole Replacement	Street Light
B3279 on San Amadeo	2008653E	2/6/2020	Street Light Reported to Siemens	Light Out	Street Light
B3435 on Bahia Blanca West	2043912E	2/12/2020	Street Light Reported to Siemens	Light Out	Street Light

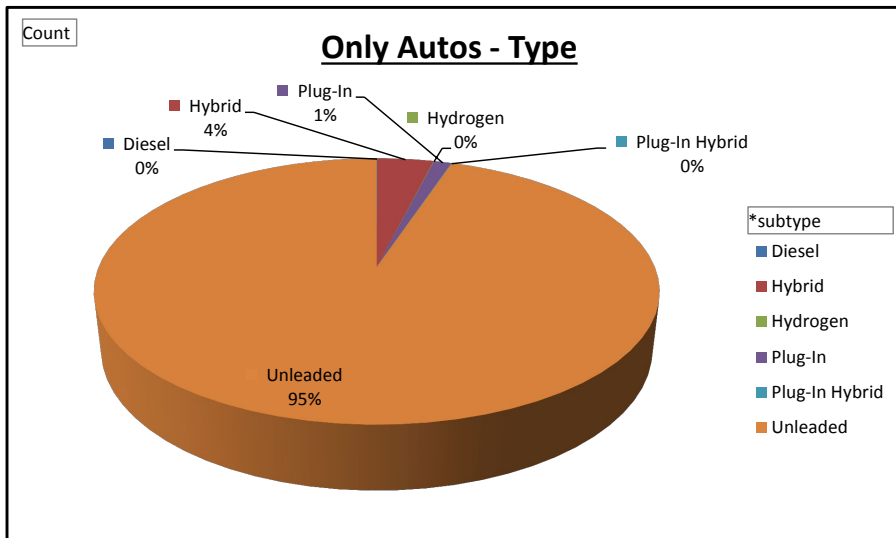
United & Third Mutual **Electric Vehicle & Golf Cart Report**

All Registrations	
Decal Type	Count
Standard Auto Permit	15,712
Electric Permit	111
Golf Cart	969
Motorcycle	65
RV	329
Grand Total	17,186

Top Electric Vehicle & Golf Cart Locations			
Cul-De-Sac	EV Vehicles	Plug-In Golf Carts	Total
219	7	62	69
203	0	33	33
221	5	26	31
206	1	25	26
216	3	19	22
202	1	18	19
403	2	16	18
46	2	14	16
63	1	15	16
209	2	14	16
205	1	14	15
340	2	13	15
41	1	13	14
207	2	12	14
13	1	12	13
28	0	13	13
344	3	10	13
9	4	8	12
10	0	12	12
59	4	8	12
352	0	12	12
27	3	8	11
306	1	10	11
405	1	10	11
408	1	10	11
8	4	6	10
36	1	9	10
37	2	8	10
210	1	9	10
222	0	10	10
324	1	9	10
406	1	9	10
12	2	7	9
95	0	9	9
213	0	9	9
14	1	7	8
16	0	8	8
17	2	6	8
30	0	8	8
35	0	8	8
40	2	6	8
45	1	7	8
94	0	8	8
204	2	6	8
303	1	7	8
339	2	6	8
341	2	6	8
343	1	7	8
363	0	8	8
3	1	6	7
4	1	6	7
5	1	6	7
11	1	6	7
23	1	6	7
24	2	5	7
29	1	6	7
32	1	6	7
44	0	7	7



Only Autos	
Fuel Type	Count
Diesel	6
Hybrid	612
Hydrogen	5
Plug-In	190
Plug-In Hybrid	6
Unleaded	15069
Grand Total	15888

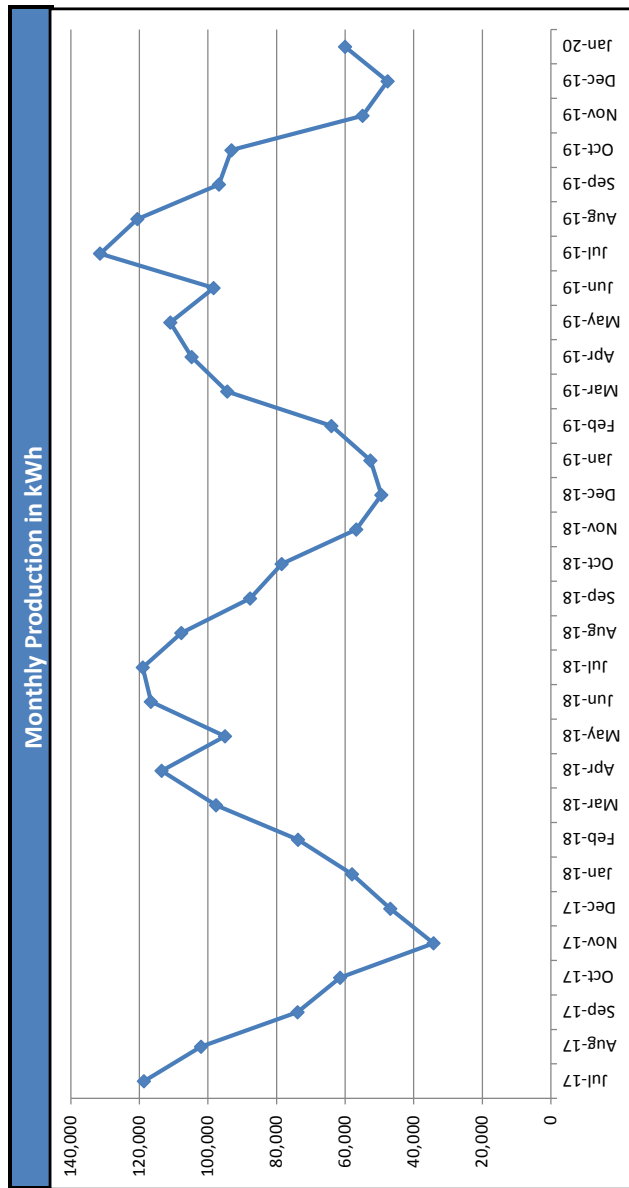


United Mutual - Solar Power Generation

Year One Production		Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Total
United Mutual Project														
	23	12,912	11,266	8,066	6,655	3,790	5,055	6,133	7,970	10,824	12,639	10,582	13,338	109,230
	24	12,437	10,889	7,971	6,679	3,793	5,054	6,097	7,957	10,509	12,139	10,650	13,769	107,944
	50	16,209	14,200	10,276	8,626	4,593	5,771	7,561	9,808	13,595	15,689	13,076	16,443	135,847
	52	14,359	12,308	8,822	7,333	3,984	5,258	6,835	8,847	11,669	13,633	11,379	14,238	118,665
	88	14,957	12,701	9,181	7,669	4,330	6,301	8,007	10,247	12,945	14,728	12,065	16,594	129,725
	90	15,993	13,819	10,035	8,359	4,643	6,467	7,996	9,699	12,869	15,056	12,157	9,338	126,431
	91	14,611	12,319	8,959	7,428	4,256	6,123	7,231	9,173	11,752	13,726	11,960	15,700	123,238
	92	17,149	14,486	10,562	8,670	4,799	6,771	8,125	10,027	13,430	15,890	13,127	17,190	140,226
Total Production of kWh =		118,627	101,988	73,872	61,419	34,188	46,800	57,985	73,728	97,593	113,500	94,996	116,610	991,306

Year Two Production		Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Total
United Mutual Project														
	23	12,808	11,466	9,306	8,418	6,101	5,229	5,623	6,887	10,504	11,168	12,475	11,298	111,283
	24	13,130	11,695	9,831	8,591	6,143	5,165	5,596	6,536	9,547	10,379	11,250	10,493	108,356
	50	16,540	14,795	12,026	11,245	7,445	6,091	6,795	8,740	13,088	14,470	15,113	13,896	140,244
	52	14,280	12,785	10,398	9,544	6,586	5,708	6,105	7,385	10,651	12,542	13,358	12,034	121,376
	88	16,019	14,617	11,883	10,379	7,601	6,702	6,935	8,640	13,034	14,131	14,905	13,249	138,095
	90	15,033	13,787	11,200	10,344	7,797	7,010	7,288	8,702	12,811	14,008	14,661	13,148	135,789
	91	14,822	13,548	10,951	9,414	7,136	6,432	6,841	8,159	11,981	13,263	13,967	10,641	127,155
	92	16,369	15,066	12,066	10,510	7,924	7,091	7,402	8,931	12,736	14,773	15,223	13,566	141,657
Total Production of kWh =		119,001	107,759	87,661	78,445	56,733	49,428	52,585	63,980	94,352	104,734	110,952	98,325	1,023,955
Average Monthly Production =		118,814	104,874	80,767	69,932	45,461	48,114	55,285	68,854	95,973	109,117	102,974	107,468	1,007,631

Year Three Production		Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Total
United Mutual Project		14,903	13,541	10,756	10,360	6,140	5,283	6,737						67,720
23		13,895	13,742	11,011	10,443	6,071	5,111	6,478						66,751
24		18,227	16,117	13,260	12,918	7,920	6,483	8,205						83,130
50		15,679	13,782	11,355	10,730	6,597	5,444	6,832						70,419
52		17,640	16,103	12,918	12,667	7,454	6,426	8,070						81,278
88		17,488	16,059	12,776	12,388	7,347	6,462	8,143						80,663
90		15,718	14,853	11,738	11,214	6,394	5,958	7,517						73,392
91		17,865	16,370	12,979	12,415	6,997	6,450	8,041						81,117
92		131,415	120,567	96,793	93,135	54,920	47,617	60,023						604,470
Total Production of kWh =														
This Year vs. Average =		10.6%	15.0%	19.8%	33.2%	20.8%	-1.0%	8.6%						



Year 1 & 2 Average Production - July to January	
523,246	
Year 3 Production - July to January	
604,470	
Year 3 Production vs. Average in kWh	
81,225	
% Change Vs. Average	
15.52%	
Lifetime Production in kWh	
2,619,731	
2020 Repair Costs	
\$0	
Recent Panel Cleanings	
12/11/2017, 5/18/2018, 4/27/2019, 9/20/2019	

Third Mutual - Solar Power Generation

Year One Production		Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Total
Third Mutual Project		7,336	11,749	9,151	8,125	5,756	5,807	5,860	7,790	10,400	12,370	10,730	14,030	109,104
2353 Via Mariposa	A	8,566	8,566	5,922	6,211	4,410	5,622	4,730	3,340	6,210	8,130	8,260	10,360	71,761
2381 Via Mariposa		6,283	8,423	7,967	6,712	4,671	4,157	5,166	6,867	7,876	2,799	10,380	13,260	84,561
2393 Via Mariposa West		1,789	B	2,203	1,029	5,542	5,826	5,450	8,840	11,420	13,590	12,130	15,450	83,269
2394 Via Mariposa West		12,437	11,011	8,431	7,446	5,330	3,627	5,590	7,560	9,400	11,660	10,420	13,510	106,422
2397 Via Mariposa West		6,206	10,194	7,617	6,703	4,770	4,678	5,240	6,780	8,680	10,380	9,340	12,030	92,618
2399 Via Mariposa West		7,282	5,400	8,697	7,668	5,468	5,514	5,990	7,730	10,130	12,060	10,870	14,150	100,959
2400 Via Mariposa West		11,193	9,736	7,256	6,312	4,341	4,433	4,960	6,340	8,600	10,480	9,570	12,220	95,441
3242 San Amadeo		10,351	9,449	6,901	4,708	3,409	4,397	4,192	5,428	7,896	8,896	7,932	9,953	83,512
3243 San Amadeo		8,381	7,141	5,666	4,971	3,325	3,288	2,016	2,705	5,128	7,581	6,910	8,744	65,856
3420 Calle Azul		2,439	8,332	8,216	7,016	5,004	5,081	5,296	7,220	8,918	11,074	10,012	12,649	91,257
5372 Punta Alta		7,962	7,090	5,329	4,628	3,110	3,015	3,138	4,451	5,679	7,130	6,098	8,283	65,913
5510 Paseo Del Lago West		81,659	97,091	83,356	71,529	55,136	55,445	57,628	75,051	100,337	116,150	112,652	144,639	1,050,673
Total Production of kWh =														

Year Two Production		Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Total
Third Mutual Project		13,573	12,057	9,830	8,750	6,630	3,390	3,368	5,552	8,329	11,520	11,880	10,870	105,749
2353 Via Mariposa		9,905	10,918	9,090	8,040	6,120	4,000	4,951	5,431	8,366	9,418	9,650	8,761	94,650
2381 Via Mariposa		12,820	11,288	8,970	7,480	5,440	4,440	4,762	5,917	9,176	10,480	11,170	10,230	102,173
2393 Via Mariposa West		14,888	13,236	10,770	9,530	7,260	6,100	6,393	789	8,618	12,420	13,060	11,910	114,974
2394 Via Mariposa West		13,295	11,817	9,610	8,350	6,280	5,250	5,506	6,497	9,682	10,880	11,210	10,250	108,627
2397 Via Mariposa West		11,993	10,669	8,680	7,450	5,580	4,640	4,889	5,796	1,841	C	4,692	7,812	74,042
2399 Via Mariposa West		13,794	12,137	9,850	8,540	6,380	4,580	3,778	5,036	8,142	9,948	11,760	10,790	104,735
2400 Via Mariposa West		12,005	10,177	8,290	6,790	5,090	4,160	3,856	3,756	8,158	9,671	10,250	9,200	91,403
3242 San Amadeo		10,144	9,481	8,054	6,514	5,035	4,278	4,509	4,952	7,669	8,607	8,162	7,510	84,915
3243 San Amadeo		8,736	7,770	6,221	5,212	4,008	3,334	3,547	4,197	6,116	7,037	7,019	6,540	69,737
3420 Calle Azul		12,412	11,369	9,215	7,392	5,853	4,621	5,133	6,126	9,022	10,380	10,391	9,551	101,465
5372 Punta Alta		8,253	7,509	6,151	4,990	3,747	2,965	3,287	3,939	5,822	6,766	6,759	6,167	66,355
5510 Paseo Del Lago West		141,818	128,428	104,731	89,038	67,423	51,758	53,979	57,988	90,941	107,127	116,003	109,591	1,118,825
Total Production of kWh =														
Average Monthly Production =		111,739	112,760	94,044	80,284	61,280	53,602	55,804	66,520	95,639	111,639	114,328	127,115	1,084,749

A - Currently Researching - Not being serviced by Phoenix nor setup with the SMA Sunny Portal.

B- Currently Researching - Not being serviced by Phoenix nor setup with the SMA Sunny Portal.

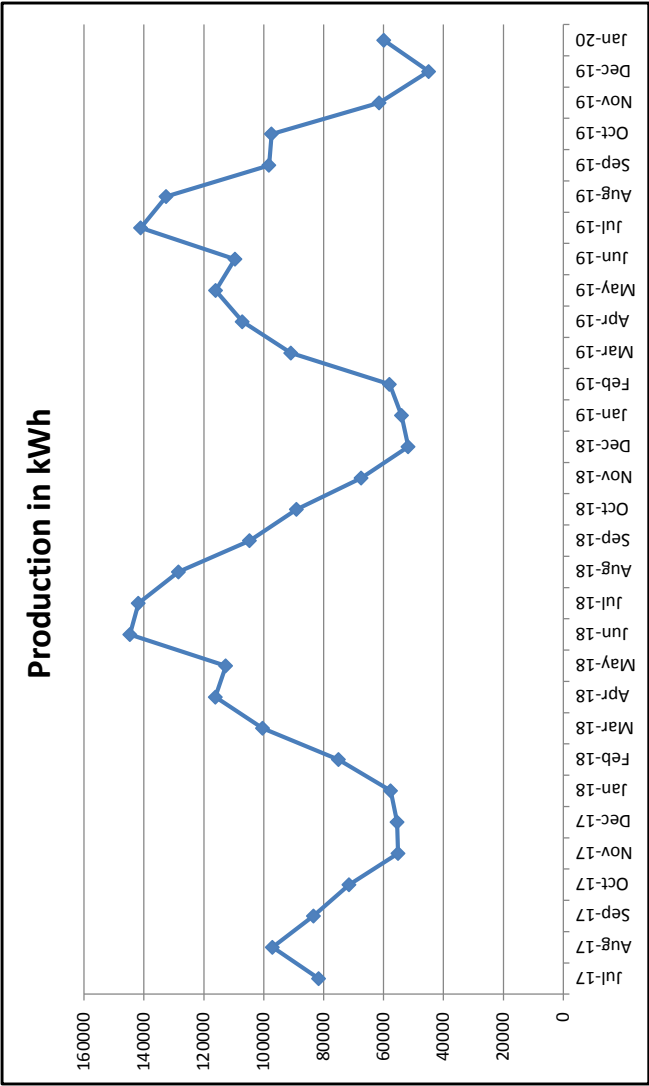
B2394 - February 2019 - Replaced power supply due to the power to communication comes on

C - This was due to a conduit becoming damaged after heavy rains.

Year Three Production												
Third Mutual Project												
Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Total
2353 Via Mariposa	14,370	13,230	10,120	9,850	2,720	3,378						59,588
2381 Via Mariposa	11,590	10,590	8,100	7,920	3,940	5,150						52,240
2393 Via Mariposa West	13,470	12,000	7,267	8,380	4,080	5,067						55,334
2394 Via Mariposa West	15,680	14,370	10,910	10,800	5,580	7,064						71,194
2397 Via Mariposa West	13,500	12,440	9,480	9,250	4,770	6,068						61,348
2399 Via Mariposa West	12,100	11,170	8,540	8,240	4,220	5,356						54,836
2400 Via Mariposa West	14,170	12,930	9,830	9,500	4,860	6,159						63,389
3242 San Amadeo	12,000	10,860	8,180	7,510	3,670	4,642						51,522
3243 San Amadeo	8,447	8,849	7,359	7,161	3,832	4,876						45,230
3420 Calle Azul	7,120	7,838	5,803	5,617	3,016	3,805						36,998
5372 Punta Alta	10,742	10,739	7,271	7,731	4,184	4,782						50,459
5510 Paseo Del Lago West	7,837	7,520	5,404	5,424	2,786	3,508						35,999
Total Production of kWh =	141,026	132,536	98,264	97,383	47,658	59,855						638,137
This Year vs. Average =	26.2%	17.5%	4.5%	21.3%	-11.1%	7.3%						

B2353 - December 2019 - This was due to 1 out of 3 inverter's wiring harnesses malfunctioning and needing replacement through the manufacturer. Production data was not recorded but estimated based on 2/3 of the production of an identical setup.

Year 1 & 2 Average kWh Production - July to January	569,510
Year Three kWh Production - July to January	638,137
YOY Total Change in kWh	68,628
Total % Change vs Average	12.05%
Lifetime Production	2,807,635
Total 2020 Repair Costs	\$0
Recent Panel Cleanings	5/30/18, 11/15/18, 4/27/19, 9/25/19





STAFF REPORT

DATE: March 4, 2020
FOR: Village Energy Task Force
SUBJECT: Update on the Tesla Solar Presentation

RECOMMENDATION

Receive and file.

BACKGROUND

During the regular meeting of the Village Energy Task Force on January 10, 2020 discussion ensued regarding potential increases in Southern California Edison (SCE) energy charges and the possibility of adding additional solar photovoltaic systems throughout the community. Task Force members expressed an interest in two separate solar programs advertised on Tesla's website.

By consensus staff was asked to contact Tesla representatives and invite them to a future meeting so they can discuss all solar options that apply to the Community.

DISCUSSION

The first solar program is known as the Residential Subscription Service which allows homeowners to install solar power by paying fixed monthly charges instead of larger upfront costs. Staff reached out to this division of Tesla and spoke with a representative who indicated they would not be interested in providing a sales presentation to Laguna Woods Village. The representative conveyed that there are considerable challenges performing projects under HOA guidelines; numerous roofing materials and unit styles creating a less than ideal setting for discussing the program to a large audience. It was recommended that individual homeowners may subscribe online to receive information specific to their situation.

The second solar program is for commercial purchases of large photovoltaic systems for rooftops. Tesla requires an online sign up for their program which includes a \$100 deposit payment and an energy analysis to pre-qualify the desired location. Further details are available on their website.

FINANCIAL ANALYSIS

There is no fiscal impact associated with this report.

Prepared By: Christopher Naylor, Senior Management Analyst

Reviewed By: Velny Soren, Maintenance Operations Manager