



OPEN MEETING

**REPORT OF REGULAR MEETING OF THE UNITED LAGUNA WOODS
MUTUAL MAINTENANCE AND CONSTRUCTION COMMITTEE**

**Wednesday, June 26, 2019 - 9:00 a.m.
Laguna Woods Village Community Center Board Room
24351 El Toro Road**

MEMBERS PRESENT: Carl Randazzo – Chair, Sue Margolis, Reza Bastani, Gary Morrison, Cash Achrekar

MEMBERS ABSENT: None

ADVISORS PRESENT: Walter Ridley, Janey Dorrell

STAFF PRESENT: Ernesto Munoz – Staff Officer, Laurie Chavarria, Christine Spahr, Ellyce Rothrock, Chris Naylor

1. Call to Order

Chair Randazzo called the meeting to order at 9:00 a.m.

2. Acknowledgement of Media

Chair Randazzo noted no members of the media were present.

3. Approval of the Agenda

The agenda was approved as written.

4. Approval of Meeting Report for April 24, 2019

The Meeting Report for April 24, 2019 was approved as written.

5. Chairman's Remarks

Chair Randazzo asked for a moment of silence to acknowledge the passing of Third Mutual Director Jack Connelly. Chair Randazzo then commented on the pilot program for Handyman Services; the water heater installation program and provided the following thought for the day from one of America's founding fathers, John Adams: "Facts are stubborn things; and whatever may be our wishes, our

inclinations, or the dictates of our passion, they cannot alter the state of facts and evidence.”

6. Member Comments - (Items Not on Agenda)

- Catherine Brians (392-B) commented on multiple EV's charging in the carport at the same time.

Staff Officer Ernesto Munoz, Director Margolis, Chair Randazzo and Advisor Dorrell responded briefly to the comment.

By consensus, staff was directed to provide the list of owners with electric vehicles and golf carts, who share the same electric circuit, to Ms. Brians so those residents can coordinate their charging schedule.

7. Department Head Update

Staff Officer Ernesto Munoz provided an update on:

- The storm drains located at Gates 1 and 5 at El Toro Road: Staff will coordinate with the City on ways to upgrade the inlet/storm drain at this location and will provide options to the Committee for further review.
- Water Heater Installation Program: The program was placed on hold except for emergency replacements due to a shortage of funding. The backlog of replacements will be completed in 2020 and options to continue the program were discussed with the Committee.

Manuel Armendariz (917-D) commented on the timely replacement of water heaters, and budget expenditures for water heater replacement.

Juanita Skillman (2154-N) suggested that additional funding be approved as part of the 2020 budget and then partial funding be authorized for early release to cover the overage spent in 2019.

Discussion ensued regarding the water heater replacement cycle, relocating water heaters to the exterior, replacing the element to extend the life of the water heater and prioritizing interior water heater replacements.

By consensus, staff was directed to continue with the water heater program and bring a report to the Finance Committee and Board authorizing a supplemental appropriation for \$940,000.

Consent:

All matters listed under the Consent Calendar are considered routine and will be enacted by the Committee by one motion. In the event that an item is removed

from the Consent Calendar by members of the Committee, such item(s) shall be the subject of further discussion and action by the Committee.

A motion was made and unanimously carried to approve the Consent Calendar.

- 8. Project Log**
- 9. Maintenance Programs Reports**
- 10. Expenditures Report & Variance Explanations**
- 11. Solar Production Report**

Reports:

12. Alternative Water Detection Devices

Staff Officer Ernesto Munoz summarized the report and answered questions from the Committee.

Discussion ensued regarding water detection devices for water heaters and washing machines; and advertising product availability.

No further action was taken on this item.

13. Review of Handyman Services Pilot Program

Chair Randazzo informed the meeting attendees that the Handyman Services Pilot Program has been cancelled. A Task Force will be created for members of the Board to discuss other options that will still provide handyman type services but will be cost effective for the Corporation. Possible Task Force members include Anthony Liberatore, Cash Achrekar, Carl Randazzo, Elsie Addington, Juanita Skillman and Advisor Janey Dorrell.

Discussion ensued regarding current users of the program, a resident volunteer program, and chargeable services.

14. Solar Power Plant Task Force Update (oral discussion by Sue Margolis)

Director Margolis summarized the items audited by the Task Force for the Committee. A formal report was presented and is attached.

Manual Armendariz (917-D) commented on the ROI from the solar installation project and suggested that the generation continue to be monitored.

Discussion ensued regarding tree trimming, solar panel cleaning and monthly generation reports.

Chair Randazzo thanked Director Margolis and the Task Force for their review of the solar project.

Items for Future Agendas:

- Building & CDS Address Sign Installation Program (START AT GATE 5)
- Copper Pipe Supply Line Leak Report (August & December 2019)
- Drainage Improvements to Prevent Foundation Issues

Concluding Business:

Committee Member Comments

- Advisor Dorrell commented on the color & format of the CDS signs.
- Advisor Ridley volunteered to provide a cursory review of the carport panel single line drawings.
- Director Bastani commented on water heater elements.
- Director Achrekar commented on the handyman services task force.

Date of Next Meeting – August 28, 2019

Adjournment

The meeting was recessed at 11:00 a.m.



Carl Randazzo, Chair

Solar Panel Task Force Report

BACKGROUND:

In March 2019, United Laguna Woods Mutual's Board of directors selected a team of five United directors and two VMS directors to form an adjunct task force as part of the United M&C Committee. Its goal was to determine the status of United's currently operating Solar Power Plant and to recommend how to go forward in solving any problems identified in order to get the best productivity from the system in the future.

We had entered into a contract 6 July 2016 with Johnson Controls Incorporated (JCI) to install the solar panels and water heaters for \$3,794,951, and for an additional annual cost of \$16,201 JCI was to provide us a guaranteed production amount of kWh's, if certain contractual obligations were met by United Mutual, JCI, and Phoenix Renewable Service (Phoenix's first year's contract was \$19,616).

The system was activated 9 February 2017. For the first year up through February 2018 we were not getting the kWh's guaranteed nor the related dollar cost savings. JCI has taken the position that they performed all they were required to do under their contract and the decreased production of kWh's was the fault of either United and/or Phoenix for their failure to perform. The task force was convened to study the problem and see if mistakes were made to learn from them and so hopefully avoid making them in the future.

HERE IS A SUMMARY OF WHAT WE DISCOVERED

1. There is a discrepancy in the location of one of the installation sites from the location specified in the contract.
2. The angle of the position of the panels as installed differs from the angle specified in the contract. Being shallower it is less optimal and more susceptible to pooling and requires cleaning more frequently.
3. The trimming of trees shading the new location was not done.
4. Items 1.) 2.) and 3.) resulted in the power plant producing 17.6% less energy than expected under the terms of the contract.
5. JCI was in charge of the installations. The JCI contract required issuance of "change orders" if there were any changes in the installation from that specified in the contract. but no change orders were ever issued.
6. The VMS staff was not given visibility into the project.
7. The assembled United board was not given visibility into the contract. Our lawyers were not given visibility into the contract.
8. The contract was signed off by one individual. No due diligence was applied.

OPERATIONAL DATA:

The United Solar Power Plant is made up of 2400 photo-voltaic cells arrayed in four locations (eight laundry rooms and thirty carport roof locations in four cul-de-sacs) . JCI, the originating contractor, had promised a Yearly Production of 1,236,030 kWh. It has been documented that the production for the past 23 months of operation (from March 2017 through January 2019) is 1,916,936 kWh. This production has saved our local area from a production of 120,000 tons of CO2 in the air. Based on the data, and adjusted by estimated monthly production, the solar power plant is producing 17.6% less than what was guaranteed by JCI. For the 23 months of operation that should have produced solar electricity credits of \$342.053 before deducting SCE solar charges.

EXPENSES:

For operating expenses we were charged \$16,201 (first year) and \$14,642 (second year) by JCI for Measurement & Verification Services, which was required by contract to provide the electric production guarantee, And we paid \$19,616 (first year) to Phoenix to monitor, clean the panels twice a year, and perform corrective maintenance on the plant. Corrective maintenance is performed at an additional cost.

As for the yearly fee we were paying to JCI to provide for a warranty on production and a yearly report, it turned out that the warranty did not warrant anything, because JCI set the terms such that we could not collect on the warranty. So we have recently cancelled this expense, since it was a cost that did not provide us with a benefit. An additional cost to maintain the Power Plant is paid to the Phoenix Renewable Services Company. For \$19.6K per year they monitor the performance of the power plant.

In addition, there was an unanticipated expense that we were hit with since the plant went into operation. This one-time expense was for a six months period where SCE put a software update fee on all solar power generators and a connect fee, which decreased our savings by over \$76K.

CONTRACTUAL FINDINGS:

Our expectations were not adequately guaranteed by the wording of the signed United installation contract with JCI. It seems that this contract was not fully vetted as outlined in United's governing documents. In accordance with our current governing documents, no contract should be entered into without VMS staff involvement. In addition, all contracts of this value should have a thorough reading and consultation with an attorney. The task force has been told that VMS informed the United board of directors that VMS was already involved with the solar project for Third Mutual and did not have sufficient staff to take on the solar project for United. Unfortunately, United chose not to follow proper protocol , such as putting VMS staff in charge of the project, getting advice from legal counsel and using prudent business practices.

Unfortunately, this methodology seems to have not been followed at the time of the execution of the contract in question, consequently, this leaves us with a contract that does not give us any power to go after JCI for a system that does not provide us with the power levels that were anticipated. The Certificate of Final Completion, which accepted the solar panel project as complete and released to JCI, was signed by a United director without consultation and approval of the Board. And this leaves United no recourse with JCI.

In addition to the foregoing, it also has been determined that changes were made to the original design that were not documented in change orders, and if there was any documentation regarding these changes, it cannot be found at this time.

This occurred during the transition from PCM to VMS, and as such, this may have been part of the reasoning for why that did not happen.

INSTALLATION SPECIFIC FINDINGS:

- During the installation process, the location of the solar panels was moved and the rationale and reasoning for this move are not documented.
- During the installation process, JCI directed United as to where we needed to prune and remove trees in order to maximize the sunlight to the panels. We made the changes that were asked to be made, however, when we informed JCI that the panels were not producing what was expected, JCI noted that it was because of trees that were obscuring them.
- As a part of our discussions with JCI during the installation process, they indicated that the panels needed to be cleaned once a year in order to ensure that the dirt on the panels would not obscure the sunlight to the panel. We followed that protocol, however, when we informed JCI that the panels were not producing what was expected, JCI noted that it was because the panels were dirty even though we were following their cleaning protocol.
- It has been noted that there are some trees that are partially shading the panels at certain times of the day, and at one site this has resulted in a 6% loss of power production. The landscape crew has taken care of those trees, and are aware that yearly we will need to inspect the areas for shading and continue to keep the trees from shading the panels. (See Tree Work Table below)
- The design specified a 5 degrees slope on the panels. There are no change orders indicating why the panels were constructed at 2 degree which affects the cleaning and diminishes the productivity. This is another example of a change being made without documentation.

FOLLOW THROUGH:

We met with Phoenix Renewable Services Company, our maintenance and monitoring contractor, and requested that they provide us with the following:

1. A monthly report of kWh that is being produced by panel site. This information will be presented at the United M&C meeting.
2. Assist us in setting up the Locus software with threshold data so we can have a quicker response time to problems and can determine if cleaning is required more frequently than the current twice a year interval.
3. Calculate the effects on power production of deep cleaning the panels twice a year so we can determine cost effectiveness of cleaning the panels more frequently.
4. Provide us with a recommended spare parts list that we should have on hand so we can quickly respond to part failures and minimize the down time of the plant and the loss of power production.
5. Provide a troubleshooting procedure that we can have VMS personnel perform before requiring a Phoenix technician to come to the site
6. Give us a list of their preferred Solar System Providers so when we are ready to install additional panels in the future, we have a starting point

ONGOING ISSUES THAT NEED ASSESSMENT:

There are still some issues that we will need to address in the future, e.g., the shading of the panels by trees and additional cleaning that may be required. We have put forth a plan whereby there is a person on VMS staff who is appointed as the plant manager and is co-monitoring the system with Phoenix. As noted above, we have canceled our contract with JCI because we felt it was not providing any value to us by just providing a yearly report. We will need to renegotiate the contract in August with Phoenix Renewable Services Company to clean and assist in the monitoring and will in the future, if necessary, draft a purchase order for them, if there are needed repairs that our staff cannot handle.

Other aspects the task force looked into was whether we qualify for a tax rebate, however it was determined that based on our tax status, we do not.

We also considered whether our current method for monitoring the system could be more effective. There are some glitches with the monitoring system due to intermittent communication problems. The LOCUS software provided with the system is excellent, and we need to address the implementation of a more effective alarm system,

In the future we will want to look into the need for a battery backup so we can smooth out the usage of the system. The battery backup can help us to achieve a not to exceed Tier 1 rate from SCE. We may even look into the benefits of installing a micro-grid. These will be issues that will be addressed by the Energy Task Force.

At present, this project does not appear to be a good investment based on the results of the first year of operation.

Here is a tabulation of the first year of operation.

Investment in Solar Panels	\$3,794,951
Estimated Life of Solar Panels	30 Years
Operating Expenses	
JCI	\$ 16,201
Phoenix	<u>\$ 19,616</u>
	<u>\$ 35,817</u>
SCE Credits Earned	
SCE Credit	\$151,210
SCE Fixed Charges	<u>\$ (76,477)</u>
SCE Net Credits	<u>\$ 74,733</u>
SCE Credits Earned Less Operating Expenses	<u>\$ 38,916</u>
Percentage Return	1.0255%

With anticipated future higher SCE electric rates, no extra charges from SCE and the cancelation of the JCI contract; the Solar power plant may provide us a better return on investment. Currently the results are not what was expected, but and when the rates we hope the return will improve. It also has a positive effect on our carbon footprint.

LESSONS LEARNED

1. No contract should be entered into without VMS being responsible for all aspects of it.
2. No contract should be entered into without a reading by the treasurer and one other director (who approve expenditures from reserves as required under Davis-Stirling).
3. Before signing the contract all directors who choose to do so , are given the opportunity to review it prior to the signing,
4. Before signing the contract, all questions or ambiguities brought up by any director must be satisfactorily answered or explained by VMS staff and/or legal counsel.
5. A Return on Investment or appropriate analysis must be provided on all expenditures (greater than \$100,000) for projects approved by the board prior to signing a contract.

6. No changes to the contract are to be allowed without the execution of a change order authorizing the change in the work and subject to approval by the board of directors prior to the issuance of the change. There is no documentation or authorization for any changes in the JCI contract. Per the procedures that would have been used with VMS today, all changes are documented and a package of documents surrounding the execution of a contract is maintained by VMS. This did not appear to happen with the execution of this contract, but would have happened today if the contract were executed today. Lessons learned from the foregoing is that every new contract needs to be executed in accordance with current procedures and governing documents in order to preclude these mistakes from happening again. Based on a review of the protocols that are followed today, that appears to be happening.

United Solar Panel Tree Work 2019

Date	CDS	Type of Work	Tree Name	Quantity	Cost
4/4/2019	10	Removal	Sik Oak Tree	1	\$562.50
4/4/2019	10	Crown Reduction	Crape Myrtle Tree	1	\$112.50
4/4/2019	10	Crown Reduction	Flaxleaf Paperback Tree	1	\$225.00
4/3/2019	28	Removal	Canary Island Pine Tree	2	\$900.00
4/4/2019	28	Crown Reduction	Jacaranda Tree	4	\$562.50
4/4/2019	28	Crown Reduction	Fern Pine Tree	3	\$281.25
4/4/2019	28	Crown Reduction	Crape Myrtle Tree	3	\$225.00
4/5/2019	38	Remove	Cajeput Tree	1	\$506.25
4/5/2019	38	Remove	Silk Oak Tree	1	\$393.75
6/5/2019	38	Remove	Crape Myrtle Tree	1	\$281.25
6/5/2019	38	Crown Reduction	Crape Myrtle Tree	2	\$168.75
Total				20	\$4,218.75

Submitted by

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