



# TOWN OF BRIDGEWATER, MASSACHUSETTS ENERGY COMMITTEE

## FINAL MINUTES: AUGUST 26, 2019

**Members Present:** ✓ Kevin Bligh ✓ Carlton D. Hunt

**Guests:** Town Councilor, District 7: Frank Sousa; Assistant Town Planner: Elijah Romulus

The August 26, 2019 Energy Committee (EC) meeting was called to order at 6:35 PM in Room 201b of the Academy Building with a quorum present. The agenda was approved. There were no announcements.

### Old Business

#### 1. Green Communities update:

Projects/Grant status: Mr. Romulus provided a written summary of Green Communities project progress (see attached). The Committee voiced concern regarding the delayed Green Communities competitive grant awards. Committee voiced appreciation for Mr. Romulus's report. A short discussion of the meaning of unknown owner clarified that certain private ways, condo associations, and owner associations were not covered by the Town street lights. Mr. Bligh indicated his streetlight energy costs are covered by him as the pole and light are not public. The committee questioned how such lights may be addressed under the LED streetlight program. Mr. Romulus agreed to investigate further as the final light design is contracted pending Green Communities funding and installation deductions once the ward is made. Mr. Romulus indicated he received the conversion would be made as a single project one time not incrementally.

Mr. Romulus clarified the intent and funding for the Phase 2 EV charging station installation and internet to acquire additional EV vehicles. He indicated the current fleet of EV's are used by a range of town departments.

#### 2. Energy projects before Town boards and committees (see attached summary from Mr. Romulus)

Mr. Romulus noted the Citizen Energy solar field project on the former landfill on Bedford St. would start once the site closure requirements were complete. He noted that the proposed 14-acre, 2.5 MW solar field off Bedford St and Flagg St. was before the Planning Board. No update on the Auburn St solar field (in litigation) was available.

#### 3. Alternative energy assessment (former Golf Course energy assessment): No input from Town Manager. Chair to request status update from Town Manager

#### 4. Annual Report planning/Competitive GC grant projects going forward

Chair indicated he recently had conversations with Town Councilor Matt Rushton about the University's interest in acquiring EV for the campus police. The Chair noted he had interest in the Town's police department installing anti-idle equipment on Town police cars five years ago, but no progress was made. He provided Mr. Rushton with recent information about police department energy savings from installation of anti-idling equipment. Such devices may be eligible for Green Communities competitive grants next year. If so scoped the Town should evaluate the pro/cons to determine if acquiring retrofit units are desirable.

#### 5. Solar energy supply update

The Chair provided a set of draft figures (attached) showing three complete fiscal years data. The solar field provided FY19 95% of the municipal electrical demand in FY19, up from 85% in



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FY16. This increase is primarily due to decrease in electrical consumption over this time period. The Chair noted that upgrading the streetlight to LEDs could lower demand such that the Town would have an excess of power available from the solar field on Fireworks Circle.

6. Energy considerations for Mitchell School project

The Chair noted that he has participated in energy efficiency meetings for the proposed Mitchell School replacement. The school will roof top solar ready should future installation be desirable. The Chair also noted the building would be well above LEAD Silver.

7. Advisory role of the EC includes communications

The Chair noted his concern that the professional Town staff do not bring issues to advisory committees for discussion. He has spoken with the Town Manager about this concern with no resolution offered.

8. Ordinances

a. Solar Ordinance modifications (TBD) No action taken

b. Wind Bylaw (TBD) No action taken

### New Business

1. As brought up by committee. None

2. Fuel oil use/cost tracking for water and sewer

The Chair conveyed the Sewer and water departments has fuel oil and diesel use that were not tracked until mid-FY18. As a result, the baseline usage is artificially low and conveys the impression that the Town has increase its energy consumption in ordinally since FY18 (see attachment). The Chair has worked with the Accounting Department to find historic data to no avail. The historic records are paper and difficult to find since conversion to the MUNIS system. Mr. Bligh suggested we work with the accounting department to hindcast the use and cost to ensure the increase does not present a red flag to the Green Communities mangers given comments provided on the FY18 Annual Report. The Chair offered to construct a hindcast model for review by the Town.

3. VFW fuel oil payments

Mr. Sousa indicated the Town had agreed to pick up electrical, fuel oil, and propane costs a part of the lease agreement. The Chair will request account number to ensure this energy costs are tracked effectively in the MEI database

No other business being brought up and no public comments, the meeting was adjourned at 7:26 PM.

The next meeting is scheduled for 6:30 PM, TBD, Room 201B of the Academy Building.

Submitted by Carlton D. Hunt, Ph.D.,

EC Chair



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Community & Economic Development Division Economic Development/Planning

DATE: August 26, 2019 TO: Bridgewater Energy Committee

FROM: Elijah Romulus, Assistant Town Planner, Community & Economic Development Department, CED

RE: Updates to the Committee

This memo serves as an update to the Bridgewater Energy Committee on various projects I have managed since my last update on September 13, 2018.

1. Green Communities update: Project/Grant Status: As of today August 26, 2019, I have been playing the waiting game with the Green Communities Division. I called the Division a couple weeks ago and they mentioned that they must wait for a sign off from their higher ups before they make any grant announcements. They were pretty tight lipped otherwise. The following tables show the timelines and funding sources for the LED Streetlight Retrofit project.

**Table 1: PROJECT TIMELINE**

DATE	MILESTONE
December 18, 2017	<i>Town of Bridgewater Purchase Price Inquiry Letter sent to National Grid</i>
May 9, 2018	MAPC RPF for streetlight audit & design contactor proposal due date
June 15, 2018	NGRID sends streetlight pricing inventory package
October 23, 2018	Council appropriates \$39,000 for streetlight retrofit
December 13, 2018	Bridgewater contracts Tanko Lighting for Audit & Design
<b>February 15, 2019</b>	<b>AUDIT COMPLETE</b>
March 4, 2019	Energy Committee receives Streetlight retrofitting updates, recommends GE LEDs
March 5, 2019	MAPC confirms funding for Bridgewater's LED streetlight project under 2 <sup>nd</sup> round of Rapid Retrofit grant program with DOER
March 22, 2019	Green Communities Grant Application Due
March 2019 – July 2019	Design Process
<b>July 25, 2019</b>	<b>DESIGN COMPLETE</b>
TBD	Procurement Process
TBD – March 15, 2020	Start installation. Submit revised Table 1 for MAPC incentive
TBD	Contract for Maintenance
<b>May 31, 2020</b>	<b>COMPETE RETROFIT</b>
June 15, 2020	Submit for utility incentive
June 30, 2020	Submit Commitment for MAPC Grant



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**Table 2: PROPOSED PROJECT BUDGET**

BUDGET ITEM	AMOUNT (\$)
Streetlight Purchase <sup>1</sup>	\$26,860.99
Material Cost <sup>2</sup>	\$322,379.01
Consulting Costs <sup>2</sup>	\$103,320.00
Install Costs <sup>2</sup>	\$100,240.00
<b>TOTAL PROJECT COST</b>	<b>\$552,800.00</b>

<sup>1</sup>Purchase price in the process of being executed and price is subject to change.

<sup>2</sup>Project costs do not include acquisition costs. Tanko Lighting projections based on pricing seen in other Massachusetts communities. Tanko Consulting fees are subject to change (likely decrease) based on the specific tasks needed for this project. Material and install costs depend on the MAPC bids.

**Table 3: PROPOSED PROJECT FUNDING SOURCES**

FUNDING SOURCE	AMOUNT (\$)
Green Communities FY19 Grant	\$250,000.00
Utility Incentive	\$92,545.00
MAPC/DOER Rapid Retrofit grant Program	\$138,076.50
Town Council Appropriation 1 <i>vote on 10/23/18</i>	\$39,000.00
Town Council Appropriation 2 <i>proposed for April 2019</i>	\$33,178.50
<b>TOTAL PROJECT COST</b>	<b>\$552,800.00</b>

### 2. Energy Projects before Town Boards and Committees

a. One Solar Farm was approved by the Planning Board on October 3, 2018. The Applicant (Bridgewater Landfill Solar LLC/ Citizens Energy Corp.), through a lease agreement Albina Limited, proposes to develop a 0.95 MW AC solar array on the Landfill site, pending receipt of the necessary regulatory approvals. The proposed solar Project will be located on approximately 8.8 acres of the Landfill.

b. Benning Solar, LLC/Cypress Creek Renewables proposes to develop a 2.5 MW AC solar array on an undeveloped site at 851 Bedford Street. The proposed solar project will be 15.8 acres located on a 45.6-acre parcel. It is currently on the September 4, Planning Board draft agenda.

3. Additional Energy Projects Phase II of our EV & Charging Stations Plan is for one fleet station, one public station, and four (4) ports total. Unlike the prescriptive application that Bridgewater just completed for the Bedford Street Town Hall parking lot, these are standard applications. National Grid (NG) will provide the installation infrastructure. One reason to have NG provide the installation work is how expensive that work would be for Bridgewater (upwards to \$9,950 per one quote received from



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Joseph Botti Co., Inc). The other reason to have NG provide the installation work is that both they have infrastructure that would be less costly to utilize, namely a manhole and pole that wouldn't require trenching through asphalt. Another difference with this standard application is that it only covers a percentage of the total equipment cost. The prescriptive application Bridgewater utilized previously was a lump sum. The percentage covered for Standard Applications has changed recently but I believe NG covers 75% of equipment costs for Public Stations and 50% for Fleet stations. The good news is that the two MassEVIP grants that Bridgewater has applied for should cover the remaining equipment costs; if awarded. There will once again be an amount of costs that aren't covered by any grants. That should once again be less than \$1,000 if all other funds are awarded.

We have also applied for the MassEVIP Fleets grant for two additional town vehicles. Each award is worth \$5,000, and therefore two awards is worth \$10,000. The total for two electric vehicle leases will be less than \$20,000 after State and Federal incentives. We are looking to lease a Nissan Leaf and A Chevy Bolt. This concludes the updates to the Energy Committee.

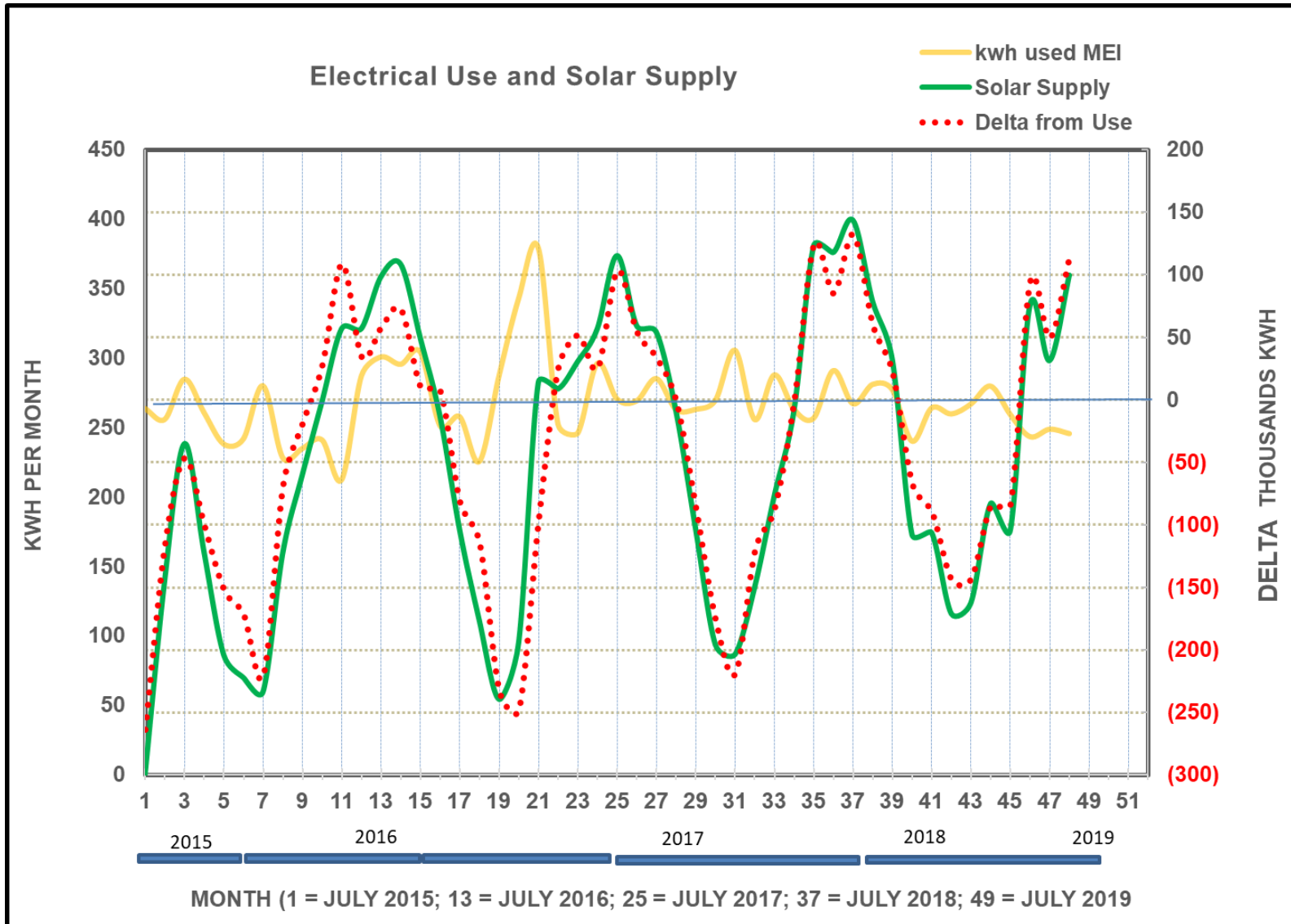
Respectfully Submitted, Elijah Romulus, Assistant Town Planner, CED

CC: Michael Dutton, Town Manager Kimberly Williams, Assistant Town Manager Jennifer Burke, Director, CED



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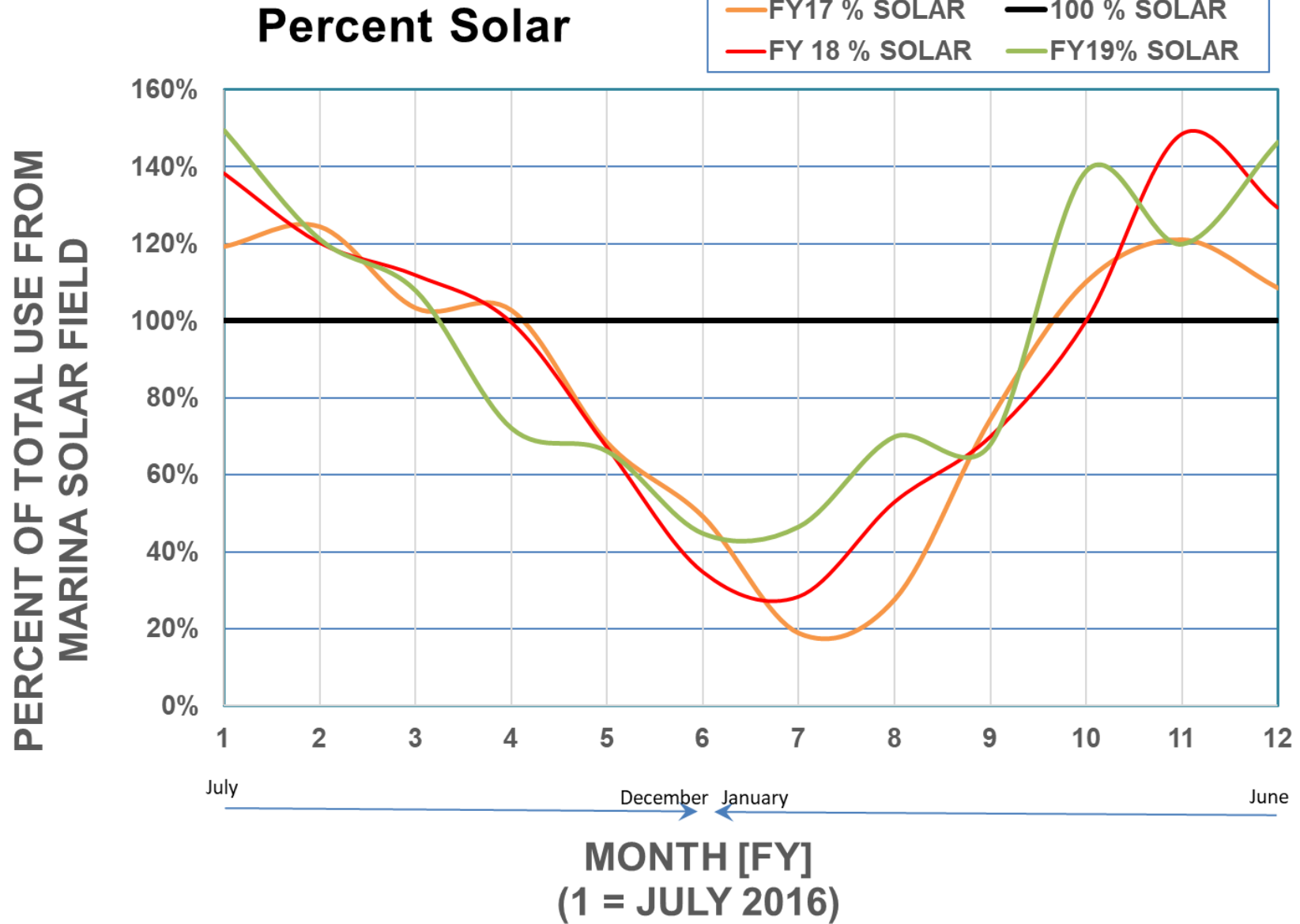
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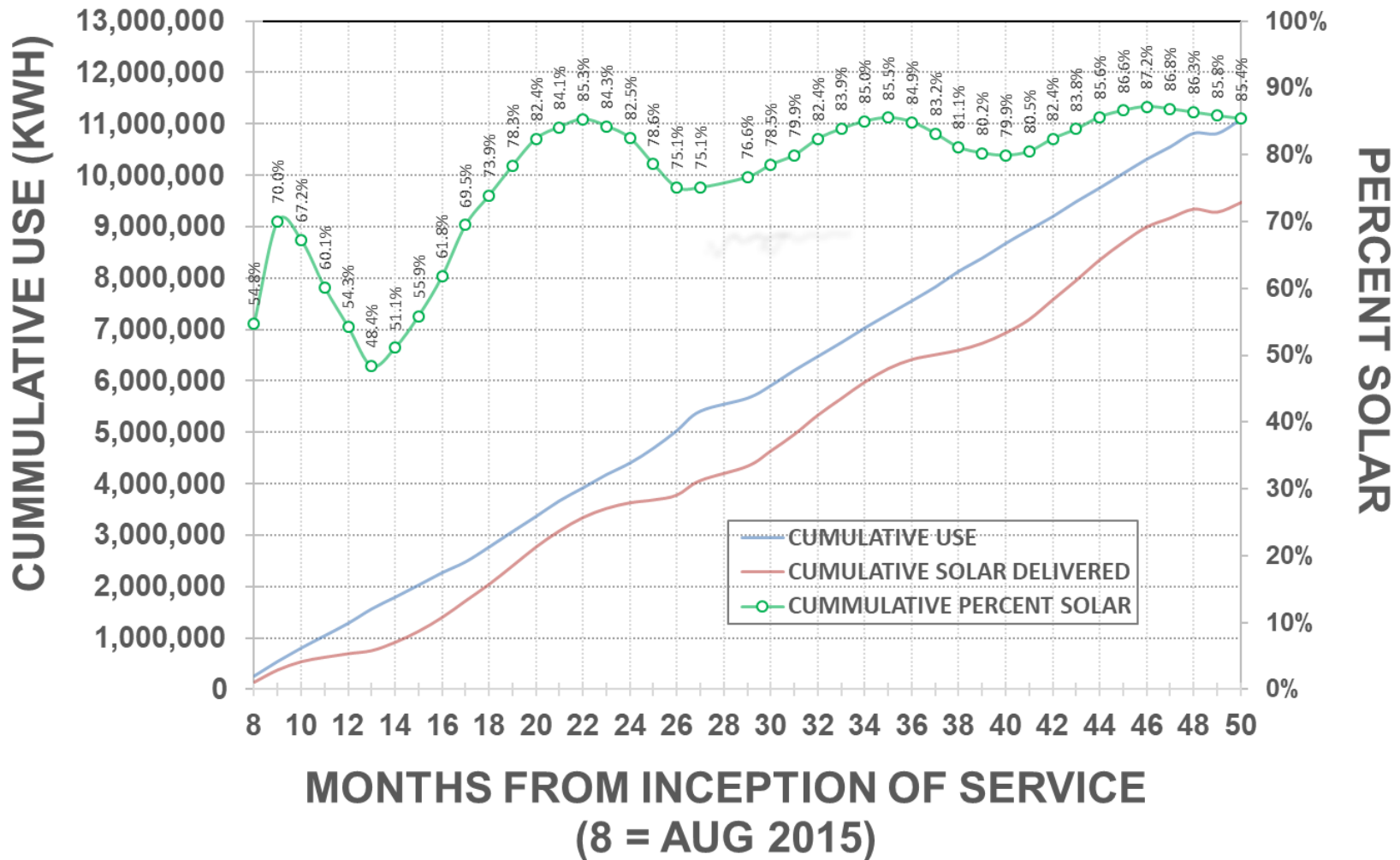




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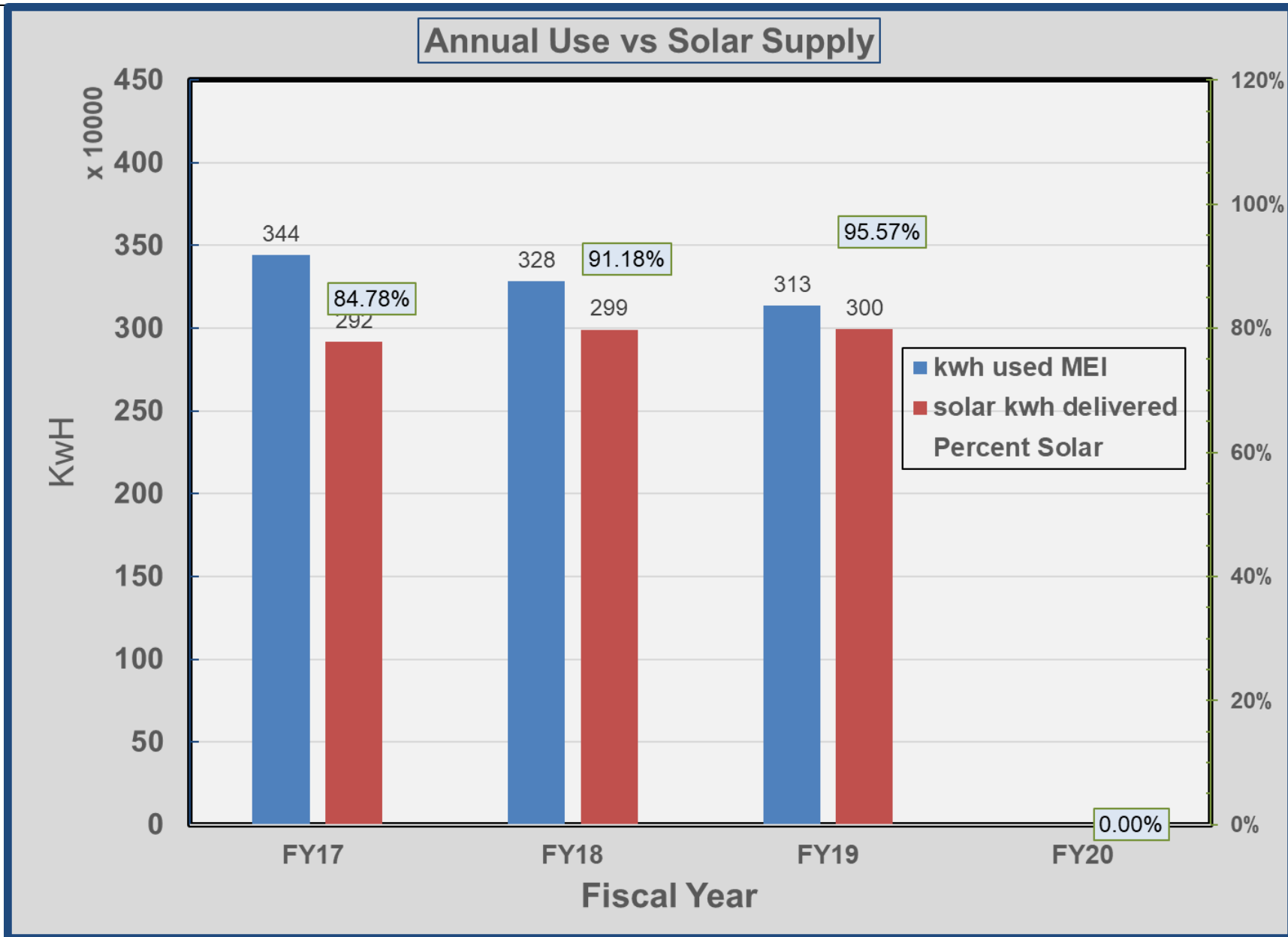
## Comparison of Cumulative Electrical Energy Use vs Cumulative Solar Power Delivered





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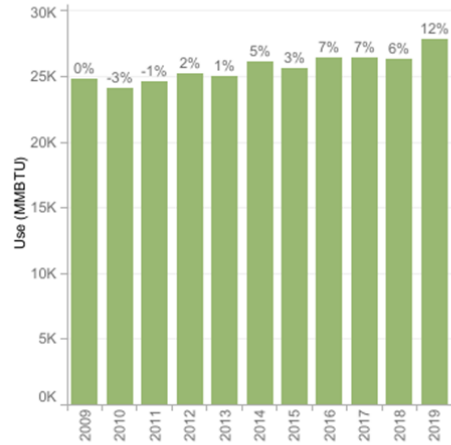


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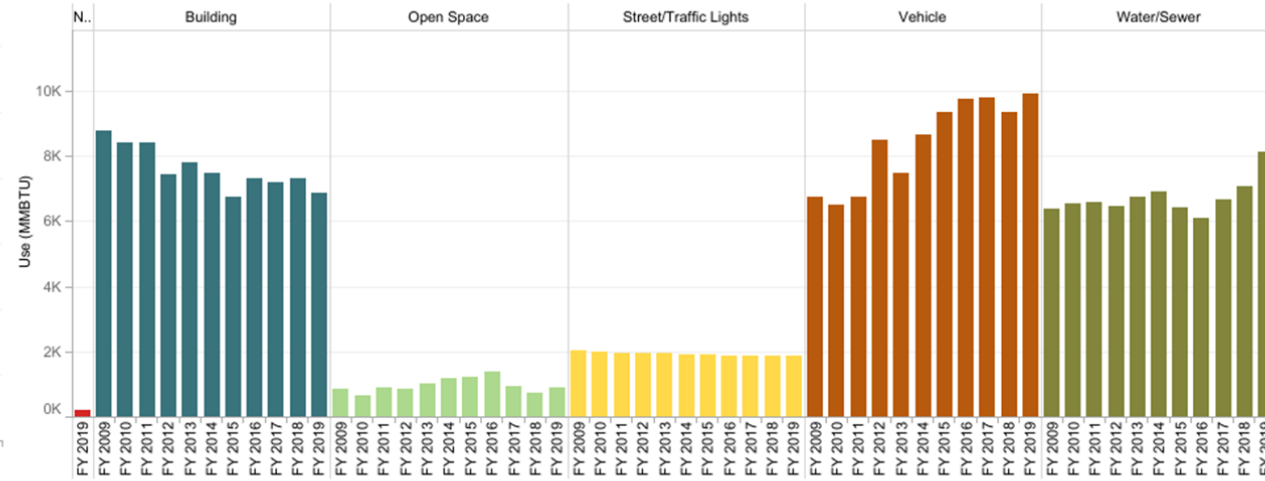
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### Baseline Dashboard

Overall Use (with % Difference from Baseline Year)



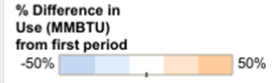
### Use by Facility Category



Show Department or Facility Category in "Use by..." Chart Facility Category

Year Multiple values

A Facility Category of Null or blank indicates buildings that have not yet been assigned a category.



Buildings marked as "Exclude from Baseline" (list below) are not included in totals on this dashboard.

Old Highway Barn/Cable Studio??

BRRSD Buildings

### Drill down by Facility Category (showing Use (MMBTU))

Hover over Facility Category and Subcategory and click the plus or minus signs to expand and collapse the table.

Facility Category	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Null											195
Building	8,761	8,404	8,425	7,418	7,786	7,475	6,723	7,301	7,175	7,317	6,849
Open Space	864	668	875	840	1,009	1,191	1,239	1,399	925	732	901
Street/Traffic ..	2,011	1,981	1,955	1,951	1,944	1,902	1,892	1,881	1,859	1,863	1,859
Vehicle	6,756	6,511	6,759	8,501	7,483	8,633	9,362	9,733	9,777	9,355	9,902
Water/Sewer	6,363	6,520	6,567	6,472	6,731	6,899	6,398	6,106	6,680	7,056	8,132

### Drill down by Department (showing Use (MMBTU))

Hover over Department, Complex, etc. and click the plus or minus signs to expand and collapse the table.

Department	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Null	24,755	24,084	24,581	25,181	24,954	26,100	25,613	26,419	26,415	26,323	27,839