

Solar with battery backup was installed in 2022. The solar system is paid off and operates in “self consumption mode.” The peak solar PV generation is rated at 6.885 kW. The battery has a storage capacity of 10.08 kWh (watt hours) and is rated to operate at 3.84 kVA (volt amps). The system is configured to serve power to the whole home (main breaker panel).

The solar system is composed of 17 solar PV modules mounted to the carport in 2 strings. The PV modules are manufactured by Hanwha. The model is Q Peak Duo L-G6.2 405W. These are bi-facial panels which produce additional power from both sides of the panel. Data sheet here:

https://es-media-prod.s3.amazonaws.com/media/components/panels/spec-sheets/Q_CELLS_Data_sheet_Q.P_EAK_DUO_L-G6.2_405-425_2020-01_Rev01_NA_1.pdf

Each of the 17 PV panels has a Enphase IQ7a Microinverter installed to convert DC to AC power. Data sheet here:

<https://enphase.com/store/microinverters/iq7-series/iq7a-microinverter?sku=IQ7A-72-2-US>

The battery is the Enphase 10T battery. It’s rated for 10.08 kWh of energy capacity. Data sheet here:

<https://enphase.com/download/iq-battery-10t-data-sheet>

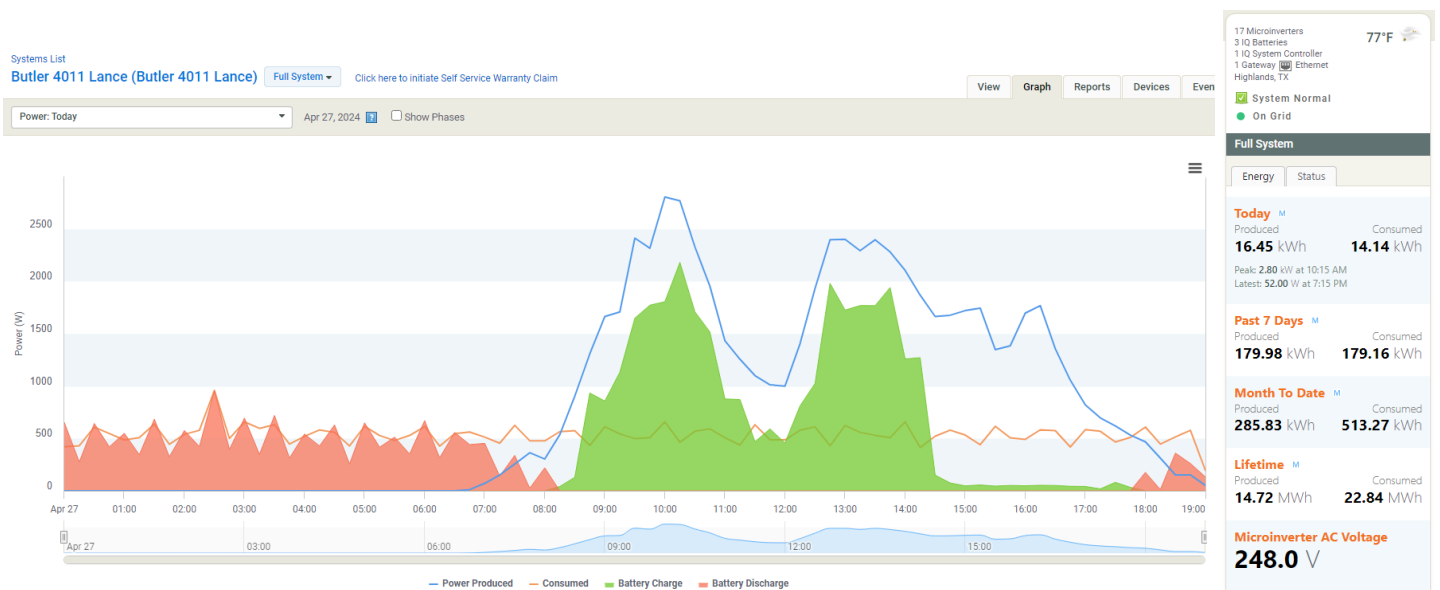
The system also has an Enphase IQ Combiner 3 and IQ System Controller which act as the brains of the system and ties together all components.

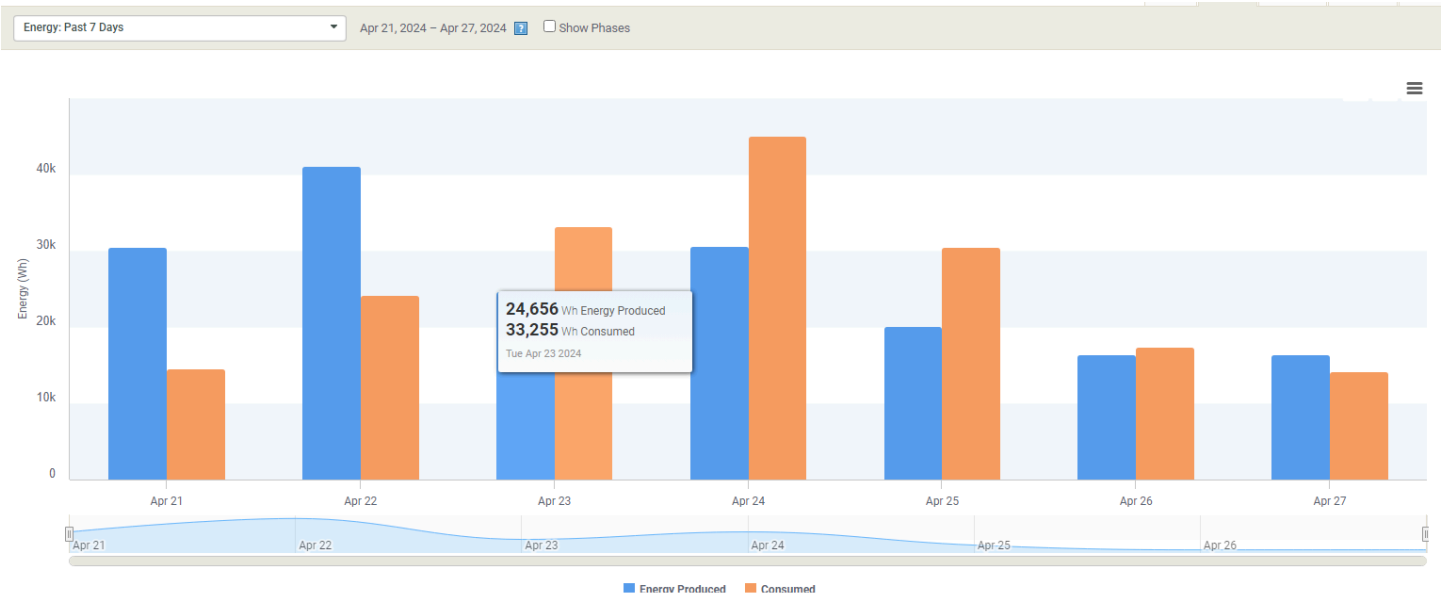
Maintenance of the system is provided through Enphase, who can be reached at 877-797-4743 site ID is 2783668. There is no annual cost for maintenance.

The system does not provide excess power to the grid. There is no buyback agreement from Centerpoint. All excess power is stored in the battery.

For the purposes of expansion, the system can accommodate up to 3 additional batteries with little effort. The system can also accommodate up to 2 additional strings of solar PV modules. Each string can contain a maximum of 11 PV modules. This allows the system to be upgraded at ease by the new owner.

There is a great app and online portal that the new owner will have access to allowing you to peer into all operational status of the system. Here’s a few screenshots.





The following information (3 documents) were provided to Centerpoint during “Permission to Operate” certification.

1 - Mode of Operation for 4011 Lance, Highlands TX 77562

Self-Consumption

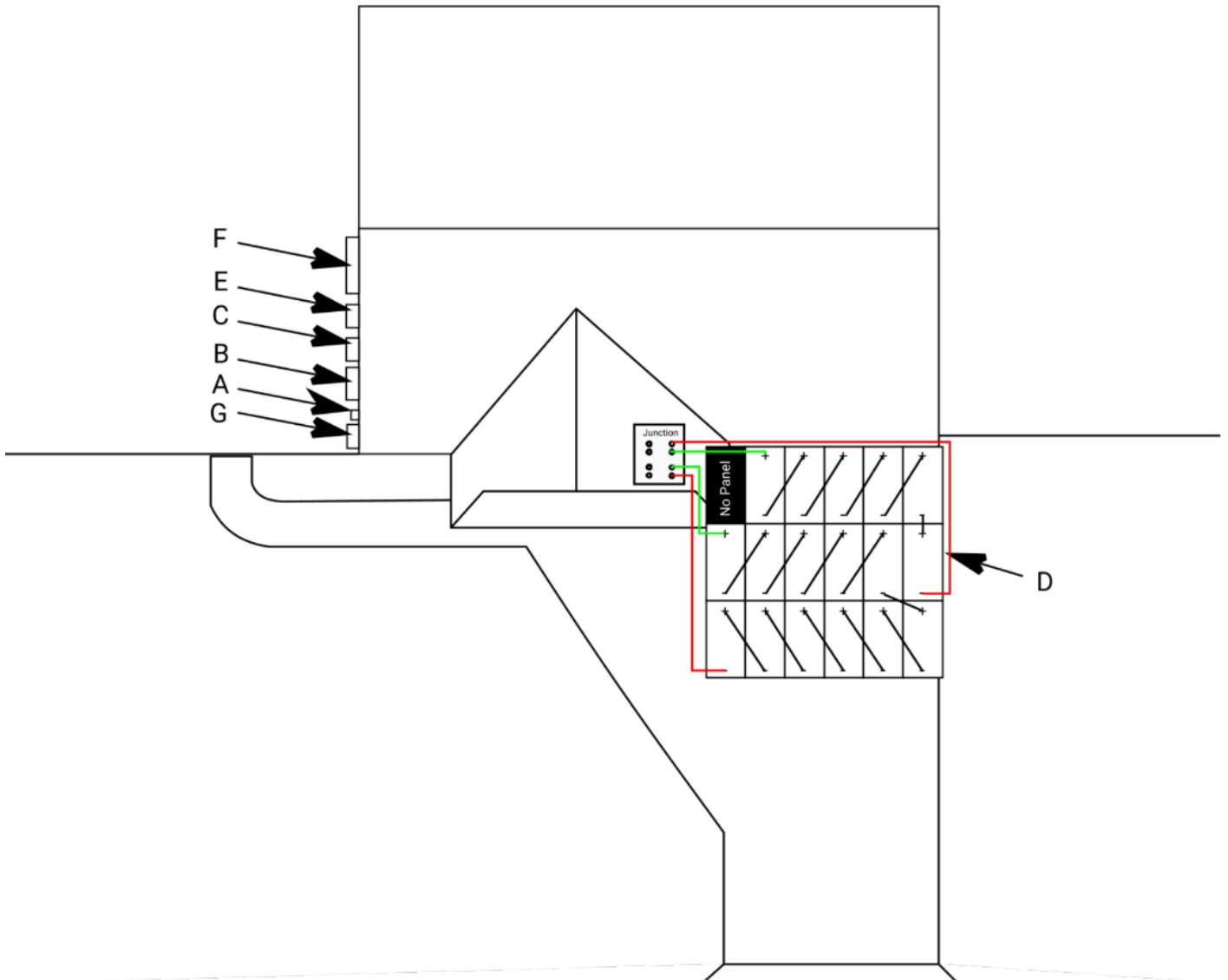
The objective of this mode is to minimize the use of electricity from the grid.

- During the day, home is powered by solar. Any excess solar charges the battery. Any further excess is exported to the grid.
- During the night, home is powered by the battery.
- Electricity gets imported from the grid when home needs more power than solar and battery can provide together.
- In this mode also, battery reserves some energy to power home during a grid outage.

2 - Site Sketch (battery was installed after sketch, ignore "future" noted below)

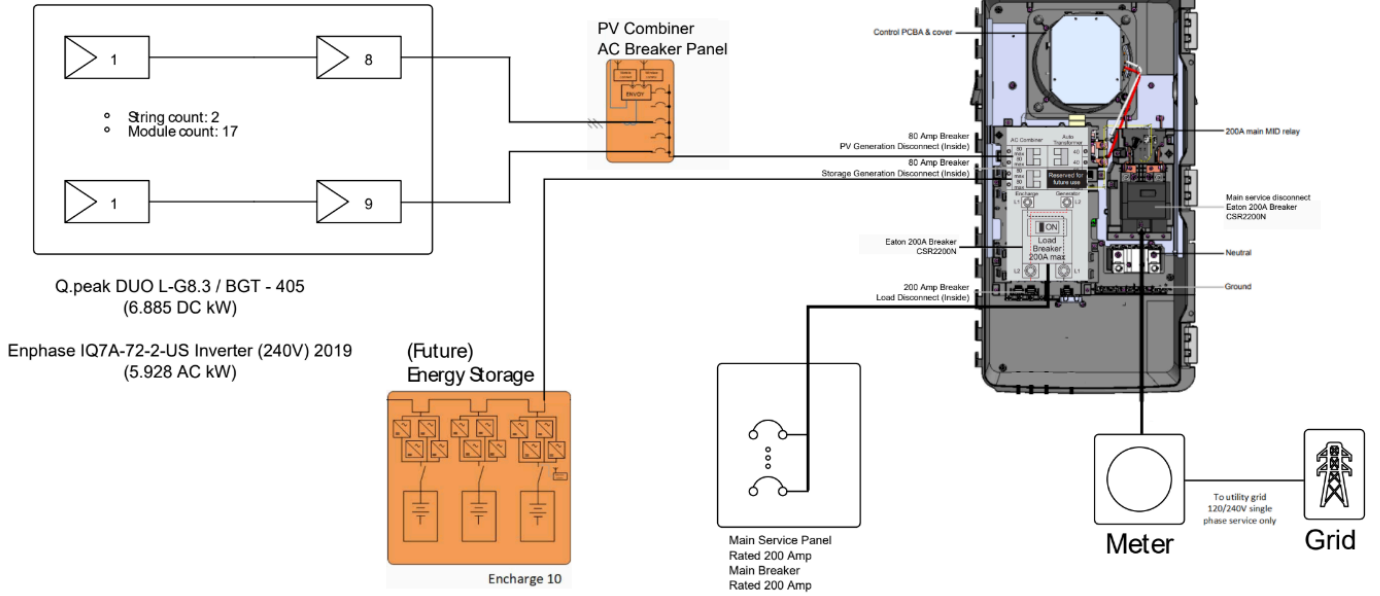
Site Layout
Customer: Charlie M Butler
Address: 4011 Lance St, Highlands TX 77562
Meter ESS ID: 1008901010251515450100
Meter Number: 64 488 030

Schedule of Components
A - Centerpoint Utility Meter
B - VLLD Enphase Smart Switch Service Entrance Rated 200A With 80A PV and 80A Storage Generation AC Disconnect
C - 80A PV Combiner AC Breaker Panel
D - (17) Q.peak DUO L-G8.3 / BGT - 405 & Enphase IQ7A-72-2-US (240V)
E - 80A Battery Storage Subpanel
F - (Future) 80A Enphase Encharge 10 Storage
G - Existing 200A Main Panel



3 - Solar Line Drawing

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 ESSID: 1008901010251515450100
 Meter Number: 64 488 030



Module Specifications

17 x Hanwha Q Cells Qpeak DUO L-G8.3 / BGT - 405	
STC Rating	405W
Vmp	40.14V
Imp	10.09 A
Voc	48.1 V
Isc	10.6 A

Inverter Specifications

17 x Enphase IQ7A-72-2-US(240V) (2019)	
Max AC Power Rating	
Max Input Voltage	58 V
Min AC Power Rating	0W
Min Input Voltage	18 V