From: Parker Stacy <pstacy@optonline.net>
Sent: Wednesday, May 17, 2017 5:49:23 PM
To: Bachman, Melanie
Subject: Objection to Eversource's Petition for Reconsideration of Greenwich Substation

Director Bachman, members of the Siting Council:

As an Intervenor I am registering my objection to the Eversource petition for reconsideration of a Greenwich Substation.

Eversource has again come up with potentially inefficient, soon-to-be obsolete and very expensive technology to solve a problem that is not imminent. Although the summer of 2016 was the hottest on record electricity demands on Eversource did not come close to capacity.

There are new ways of approaching the issue of capacity which have the potential for massive savings.

One example of the new approaches was very much in evidence in the press at the end of last week. CNBC reported a deal Tesla did with a Vermont utility to help them avoid costly infrastructure upgrades. Here is a copy of the online article. There are two parts to the program: Powerpacks for utilities and Powerwalls for homes. As you will see, the dollars are much smaller - $1500 per home for a Powerwall, plus the cost of the Powerpack batteries for the utility.

I can't imagine the total cost of overcoming the current perceived electrical shortfall using the Tesla approach would be anywhere near the $80,000,000 or $100,000,000 which Eversource is ready to spend and which will be borne by ratepayers everywhere.

And, their approach would entail little or no disruption to the proposed areas to be affected by the current Eversource approach.

I spoke with a representative of Tesla and am forwarding his email to you. His question: who should I contact at Eversource?

Here is the article:

CNBC: Tesla does deal with Vermont utility to reduce electricity bills with Tesla batteries

- Tesla signed a deal with Vermont's largest utility Green Mountain Power.
- The utility hopes the deal will reduce peak load electricity costs.
- The fee will be $15 per month, or one-time $1,500 charge, for 10-year plan.

Robert Ferris | @RobertoFerris
Friday, 12 May 2017 | 1:12 PM ET
Tesla has signed another deal with a utility, partnering with a Vermont utility to offer customers backup electricity for a fee.

The California-based sustainable energy company will install several of its nearly 4,000-pound Tesla Powerpack battery units on utility land, and offer the much-smaller Powerwall battery packs for up to 2,000 individual customers. The deal is the latest with utilities in the United States and abroad.
Vermont utility Green Mountain Power delivers electricity to three-quarters of the state's population. For a monthly fee of $15, or a one-time $1,500 fee, customers will receive backup power to their home for next 10 years, Tesla said. (Ten years is the warranty period during which Tesla guarantees their advertised performance level.)
At the end of the program, Tesla will take back the batteries, said Green Mountain Power spokeswoman Kristin Carlson.
Further deals may be in the works.
"Obviously, we are looking to grow this program," Carlson said, "because we see this as our new energy future."
Tesla said the batteries will eliminate the need for traditional, manually controlled, and fossil-fuel burning, backup generators.
Green Mountain expects the electricity batteries will also allow the utility to reduce peak energy load by 10 megawatts, the equivalent to taking 7,500 homes off the grid.
This will allow the utility to more cheaply meet the highest levels of demand — often on hot days when homes and businesses run air conditioners.
"There is a time, usually in the summer when there is peak energy use, and that is when energy is most expensive," Carlson said. "So anything we can do to lower that will save money for customers."
Green Mountain Power also plans to dispatch electricity aggregated from the batteries into New England's wholesale electricity markets when not needed by its own customers. Carlson said this will result in further savings for Green Mountain customers.
Tesla has done energy storage deals with utilities in such places as Connecticut, California, Hawaii and the U.K.
Please give this your consideration when you decide whether to grant Eversource's Petition.
Sincerely
Parker Stacy, Intervenor

Second email follows.

From: Parker Stacy <pstacy@optonline.net>
Sent: Wednesday, May 17, 2017 5:56:04 PM
To: Bachman, Melanie
Subject: FW: Tesla: Amer Hawari

Director Bachman, Members of the Siting Counsel:

Here is an email with attachments and contact information which I received from the Tesla representative with whom I spoke and who would very much like to discuss their approach with an Eversource representative.

Sincerely,
Parker Stacy, Intervenor

From: Amer Hawari [mailto:ahawari@tesla.com]
Sent: Tuesday, May 16, 2017 6:58 PM
To: pstacy@optonline.net
Subject: Tesla: Amer Hawari

Amer Hawari | **Inside Sales Advisor** | Tesla Energy

444 De Haro St. Suite 101 | San Francisco, CA 94107

p 650.963.5154 | c 510.926.1610 | e ahawari@tesla.com

From: Amer Hawari
Sent: Tuesday, May 16, 2017 3:56 PM
To: 'Pstacey@optonline.net' <Pstacey@optonline.net>
Subject: Tesla: Amer Hawari

My contact information is below, the best number to reach me at is my mobile 510-926-1610.

Amer Hawari | **Inside Sales Advisor** | Tesla Energy

444 De Haro St. Suite 101 | San Francisco, CA 94107

p 650.963.5154 | c 510.926.1610 | e ahawari@tesla.com

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POWERPACK

TESLA COMMERCIAL BATTERY

Tesla has been building integrated battery systems in cars for over 10 years. The same degree of expertise, quality control and technological innovation has informed our process of developing high-performance energy storage systems. Powerpack 2 offers commercial and utility customers a turn-key energy storage solution to maximize on-site clean power and energy savings. The Powerpack system scales to the space, power and energy requirements of any site from 210 kWh to 100 MWh+.

Powerpack System Includes a Bi-Directional Inverter and DC Battery Packs

FULLY INTEGRATED SYSTEM

A complete energy storage system including DC batteries, bi-directional inverter, and a Powerpack controller with intelligent software. This turnkey system is designed to maximize savings and prolong battery life.

OPTIMIZATION SOFTWARE

Powerpack systems have the most advanced battery technology and dispatch optimization software to quickly learn and predict a facility's energy patterns. Tesla's proprietary storage dispatch software can charge and discharge autonomously to maximize customer value.

ENHANCED SYSTEM SAFETY

Powerpack's battery architecture consists of a low voltage battery with a DC/DC converter for added electrical isolation and safety. It also has an integrated liquid cooling / heating system for thermal safety and enhanced performance and reliability.

APPLICATIONS

PEAK SHAVING

Discharge at times of peak demand to reduce expensive demand charges

EMERGENCY BACKUP

Powers a facility when the grid goes down

CAPACITY FIRMING

Smooth out the intermittency of renewables by storing and dispatching when needed

LOAD SHIFTING

Shift energy consumption from one point in time to another

MICROGRID

Build a localized grid that can disconnect from the main power grid

TRANSMISSION & DISTRIBUTION SUPPORT

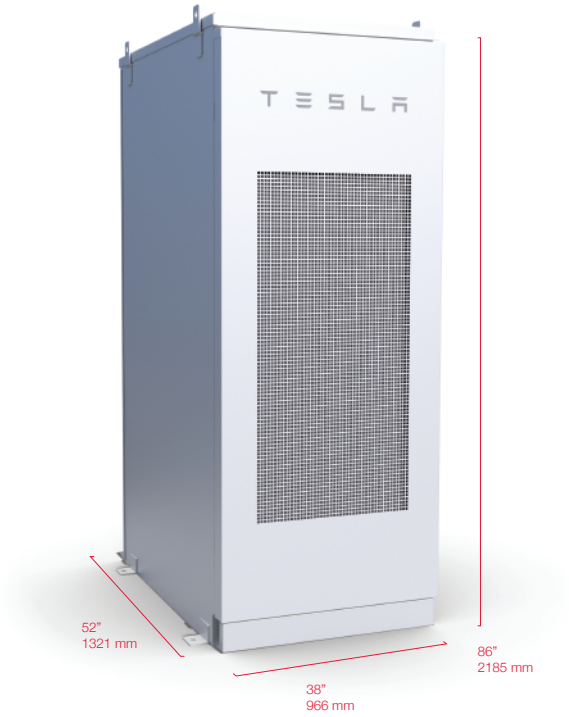
Supply power at a distributed location to defer the need to upgrade aging infrastructure

DEMAND RESPONSE

Discharge or charge in response to signals from a demand response administrator

ANCILLARY SERVICES

Provide service to the grid in response to signals sent



POWERPACK DETAILS:

1 Powerpack includes 16 individual battery pods

Each pod has an isolated DC/DC inverter and thermal control system

Sensors to monitor cell-level performance in real-time

POWERPACK 2 SPECIFICATIONS

MECHANICAL AND MOUNTING

Enclosure	IP67 (Pod) NEMA 3R / IP35 (Powerpack) NEMA 4 / IP66 (Inverter)
Powerpack Weight	1622 kg / 3575 lbs
Powerpack Dimensions	L: 51.5" (1308mm) W: 32.4" (822mm) H: 86" (2185mm)
Powerpack Area Requirements	50kW / 210kWh: 95ft^2 / 8.9m^2 100kW / 420kWh: 127ft^2 / 11.8m^2 250kW / 1050kWh: 221ft^2 / 20.5m^2 500kW / 2100kWh: 377 ft^2 / 35m^2
Inverter Dimensions	L: 39.9" (1014mm) W: 49.4" (1254mm) H: 86.3" (2192mm)
Operating Ambient Temperature	-13°F to 122°F / -30°C to 50°C
Installation	Requires a crane Unit ships on removable 130mm tall pallet

COMMUNICATIONS

Protocol	Modbus TCP DNP3 Rest API

SYSTEM SPECIFICATIONS

ELECTRICAL

AC Voltage	480VAC 3-phase 400VAC 3-phase
System Availability	50 Hz, 60 Hz
System Sizes	Scalable from 50kW - 500kW
Continuous Power Duration	4 hours
System Efficiency @ C/4	89% Roundtrip*

*Net energy delivered at 25°C (77°F) ambient temperature including thermal control.

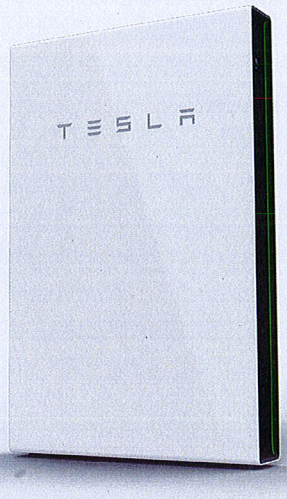
REGULATORY

Lithium-Ion Cells	NRTL listed to UL 1642
System	NRTL listed to UL 1973, 9540, 1741 IEEE 1547 Compliant to grid codes and safety standards of all major markets. The full list can be provided upon request.

POWERWALL

Tesla Powerwall 2 is a fully-integrated AC battery system for residential or light commercial use. Its rechargeable lithium-ion battery pack provides energy storage for solar self-consumption, load shifting, backup, and off-grid use.

Powerwall's electrical interface provides a simple connection to any home or building. Its revolutionary compact design achieves market-leading energy density and is easy to install, enabling owners to quickly realize the benefits of reliable, clean power.



PERFORMANCE SPECIFICATIONS

AC Voltage (Nominal)	208 V, 220 V, 230 V, 100/200 V, 120/240 V
Feed-In Type	Single & Split Phase
Grid Frequency	50 and 60 Hz
Total Energy[1]	14 kWh
Usable Energy[1]	13.5 kWh
Real Power, max continuous[2]	5 kW (charge and discharge)
Real Power, peak (10 s)[2]	7 kW (discharge only)
Apparent Power, max continuous[2]	5.8 kVA (charge and discharge)
Apparent Power, peak (10 s)[2]	7.2 kVA (discharge only)
Imbalance for Single-Phase Loads	100%
Power Factor Output Range	+/– 1.0 adjustable
Power Factor (full-rated power)	+/– 0.85
Depth of Discharge	100%
Internal Battery DC Voltage	50 V
Round Trip Efficiency[1,3]	> 90%
Warranty	10 years

[1]Values provided for 25°C (77°F), 3.3 kW charge/discharge power.
[2]Values region-dependant.
[3]AC to battery to AC, at beginning of life.

COMPLIANCE INFORMATION

Safety	UL 1642, UL 1741, UL 1973, UL 9540, UN 38.3, IEC 62109-1, IEC 62619, CSA C22.2.107.1
Grid Standards	Worldwide Compatibility
Emissions	FCC Part 15 Class B, ICES 003, EN 61000 Class B
Environmental	RoHS Directive 2011/65/EU, WEEE Directive 2012/19/EU, 2006/66/EC
Seismic	AC156, IEEE 693-2005 (high)

MECHANICAL SPECIFICATIONS

Dimensions	1150 mm x 755 mm x 155 mm (45.3 in x 29.7 in x 6.1 in)
Weight	125 kg (276 lbs)
Mounting options	Floor or wall mount

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	–20°C to 50°C (–4°F to 122°F)
Operating Humidity (RH)	Up to 100%, condensing
Maximum Altitude	3000 m (9843 ft)
Environment	Indoor and outdoor rated
Enclosure Type	NEMA 3R
Ingress Rating	IP67 (Battery & Power Electronics) IP56 (Wiring Compartment)
Noise Level @ 1m	< 40 dBA at 30°C (86°F)

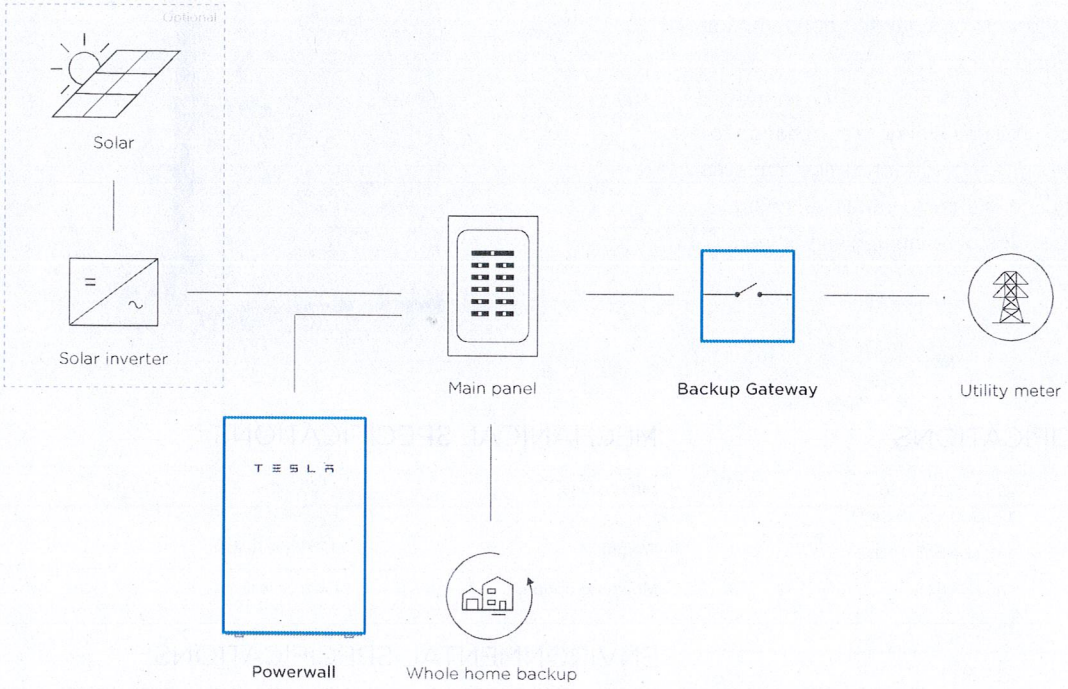
BACKUP GATEWAY SPECIFICATIONS

Dimensions	691 mm x 378 mm x 129 mm (27.2 in x 14.9 in x 5.1 in)
Weight	16.4 kg (36 lbs)
Disconnect Current	200 A
Enclosure Type	NEMA 3R
Ingress Rating	IP44
Overcurrent Protection Breaker[4]	100–200 A
User Interface	Tesla App
Connectivity	Wi-Fi, Ethernet, 3G[4]
AC Meter	Revenue grade
Operating Modes	Support for solar self-consumption, load shifting, backup, and off-grid use
Backup Operation	Automatic disconnect for seamless backup transition
Modularity	Supports up to 10 AC-coupled Powerwalls

[4]Optional

TYPICAL SYSTEM LAYOUTS

WHOLE HOME BACKUP



PARTIAL HOME BACKUP