



## MEGAPACK SYSTEM COMMISSIONING PROTOCOL

This document outlines the scope of work required to commission a Tesla **Megapack System**, and identifies the responsible party for each requirement. Tesla defines the commissioning process as the period between the initial submission of the Construction Checklist through the submittal of the signed Commissioning Completion Form.

### Reference Documents

- Megapack Onsite Commissioning Overview

[https://partners.teslamotors.com/en-us/EnergyDocs/Tesla\\_Megapack\\_Onsite\\_Commissioning\\_Overview\\_Checklist.pdf](https://partners.teslamotors.com/en-us/EnergyDocs/Tesla_Megapack_Onsite_Commissioning_Overview_Checklist.pdf)

### Definitions and Cautions

This document defines the key stakeholders using the following names and roles:

<b>Customer</b>	The purchaser of the Megapack System. This is the facility manager, unless a third party operates the energy solution on behalf of the facility manager.
<b>Facility Manager</b>	The owner of the property on which the system is installed.
<b>Construction Manager</b>	The lead in charge of completing the entire Megapack System installation. Also serves as the default point of contact for site access, unless otherwise notified by the customer.
<b>Tesla Project Engineer</b>	The Tesla engineer responsible for reviewing site design and working with the construction manager to complete installation.
<b>Tesla Megapack Support</b>	Tesla Customer Support for Megapack Systems.
<b>Tesla Field Service Technician</b>	Tesla employee or Tesla-approved contractor trained to commission and service Megapack Systems.
<b>Tesla Account Management</b>	Tesla representative responsible for the Commissioning Completion Form.

**NOTE:** This document is written for projects where Tesla is not responsible for construction. For “turnkey” projects where Tesla manages construction, Tesla performs all roles attributed to the Construction Manager in this document and some of the roles attributed to the Customer. The detailed split in responsibilities is defined in the project Scope of Work document that forms part of a turnkey project contract.

**NOTE:** Commissioning requires the Tesla Service team to perform test charging and discharging of the system. **If there are restricted times or conditions when this can occur,** please notify Tesla at [Megapacksupport@tesla.com](mailto:Megapacksupport@tesla.com).

**CAUTION:** Failure to enable and execute charge at the end of 12 months storage may result in permanent system damage and would void the warranty, as described in the Limited Warranty. If units are expected to sit for longer than 12 months between the date of manufacture and installation, the site manager must contact Tesla at [Megapacksupport@tesla.com](mailto:Megapacksupport@tesla.com) to ensure

system readiness. See Tesla's *Megapack Transportation and Storage Guidelines* for additional information.

For allowable storage temperatures before system installation, refer to the *Megapack System Transportation and Storage Guidelines*. For the procedure to put an installed system safely into storage mode, refer to the *Megapack System Operation and Maintenance Manual*.

## Order of Commissioning and Site Events

The order of events for a site is as follows:

### 1. Construction begins.

Responsible Party: Construction Manager

The designated contractor transports all components to the site and physically installs the Megapack System, including positioning, cabinet anchoring, conduit wiring, wiring to all terminals, and site cleanup, per the procedures and standards in the *Megapack System Installation Manual*. The installation team tracks completion on the Tesla-provided Construction Checklist, which the Construction Manager signs and submits in step 3.

### 2. Determine tentative commissioning date.

Responsible Party: Customer

The customer must provide a *tentative* commissioning date to the Tesla Project Engineer. This request is a tentative placeholder for scheduling purposes; however, the actual onsite commissioning date is subject applicability and scheduling change. The Construction Checklist must be successfully completed before an Onsite Commissioning can begin.

### 3. Submit completed Construction Checklist.

Responsible Party: Construction Manager

Upon construction completion, the construction manager must submit the completed Construction Checklist and its associated photos and documents to the Tesla Project Engineer (if one has been assigned). The completion form generated from the Installation Validation App must also be submitted. If you do not receive a response from your Tesla Project engineer within 3 days, please email the documentation to [Megapacksupport@tesla.com](mailto:Megapacksupport@tesla.com).

### 4. Communicate outstanding Construction Checklist items.

Responsible Party: Tesla Project Engineer

Confirms receipt of the Construction Checklist within 3 business days and communicates any outstanding/incomplete items to the Construction Manager to rectify. The

Construction Manager must then rectify any problems and re-submit the Construction Checklist for review. Note that multiple submission-review cycles may be required.

**5. Confirm Construction Checklist is complete.**

Responsible Party: Tesla Project Engineer

Confirms the Construction Checklist as complete once all outstanding items have been rectified as indicated in the last Construction Checklist submission. This step may involve Tesla accessing the system remotely to confirm the installation validation.

**6. Onsite Commissioning (If Applicable)**

Responsible Party: Tesla Onsite Commissioning Personnel

In the event that any issues cannot be rectified, Tesla is able to provide Onsite Commissioning personnel per contractual agreement. See Appendix B below for details regarding Onsite Commissioning.

a) Responsible Party: Tesla Megapack Support

**Schedules the date for Onsite Commissioning to occur.** The onsite commissioning is scheduled for 10 business days after the unsuccessful completion of Remote Commissioning for On-Grid sites, or 20 business days for Grid Interactive or Microgrid sites.

b) Responsible Party: Tesla Field Service technician

**Performs Onsite Commissioning** after rectifying any outstanding issues. Onsite commissioning typically takes one day per Megapack AC transformer block; however, this is highly variable from site to site (Large Utility sites will have individual commissioning plans). See Appendix B below for details of the tasks performed during the onsite commissioning for each Megapack.

**7. Review and send completed Commissioning Completion Form.**

Responsible Party: Tesla Account Management

Reviews the Commissioning Completion Form and sends it to the Customer within 3 business days of commissioning completion.

**8. Sign and return the Commissioning Completion Form.**

Responsible Party: Customer

Countersigns the signed Commissioning Completion Form and returns it to Tesla Account Management to show acceptance of site completion within 3 business days of receiving the completed form in step 9.

Figure 1 below provides an overview and timeline of the steps outlined above.

What	Who	When
1. Begin Construction	<b>Construction Manager</b>	Varies by site
2. Provide desired onsite commissioning date. Placeholder for step 6 only.	<b>Customer</b>	Varies by site
3. Send completed Construction checklist and other deliverables.	<b>Construction Manager</b>	At construction completion
4. Confirm receipt of Construction Checklist. Provide list of items to be rectified.	<b>Project Engineer / Megapack Support</b>	3 business days after Step 3
4 (response). Rectify identified problems, send updated Construction Checklist for review.	<b>Construction Manager</b>	Varies by site
5. Confirm Construction Manager has fully completed Construction Check list with no issues remaining.	<b>Project Engineer / Megapack Support</b>	Varies by site
6a. Schedule Onsite Commissioning (if applicable)	<b>Tesla Field Service Manager</b>	Up to 10 business days after any issue identified in Step 5
6b. Perform Onsite Commissioning (if applicable)	<b>Tesla technician</b>	Varies by site
7. Review and deliver Commissioning Completion Form for sign off	<b>Project Engineer / Megapack Support</b>	Within 3 business days after completion of Step 5, or Step 6 if applicable.
8. Sign and return Commissioning Completion Form to Megapack Support	<b>Customer</b>	Within 3 business days of completion of Step 7

**Figure 1: Commissioning and Site Events Overview and Timeline**

## Appendix A: Onsite Commissioning (If Applicable)

In the event of unrectified critical issues, Tesla is able to provide onsite personnel per contractual agreement. This is a brief summary of the Onsite Commissioning process. Refer to the *Megapack System Onsite Commissioning Overview* for further details.

The following scope requires approximately 8 hours per Megapack block, and will be run in parallel for each AC transformer block. Only Tesla Service or a Tesla-approved contractor may perform the steps outlined in the procedure below. The exact order and scope of some tests may vary depending on site conditions and configuration.

1. Rectify any outstanding issues identified in the Construction Checklist review and Installation Validation app. This may involve:
  - a) De-energize the system for a full visual inspection of all mechanical and electrical connections.
  - b) Re-energize the system.
  - c) Test communication between all components as listed in the section above.
2. Update system firmware for all inverter blocks to the latest version.
3. Perform basic functional testing, including charge and discharge functions, controller data verification, and thermal system verification.

**NOTE:** If a full power charge could create a peak onsite or trigger export, specify a charge limit when requesting the onsite commissioning visit.

**NOTE:** Tesla may charge all Megapack Units to an 80% State of Charge during commissioning. This can take up to 24-48 hours to complete.

**NOTE:** If the system will be de-energized before regular use begins, the Customer must follow the Storage Mode shutdown procedure in the *Megapack System Operation and Maintenance Manual* to protect battery life.

## Revision Log

<b>Revision #</b>	<b>Date</b>	<b>Description</b>
1.0.0	06-24-2019	<ul style="list-style-type: none"><li>• <i>Initial Release</i></li></ul>
1.0.1	07-02-2019	<ul style="list-style-type: none"><li>• <i>Changed summary language to clarify scope of document</i></li></ul>