



# COMMERCIAL ENERGY STORAGE TO GRID PILOT PROGRAM GUIDELINES

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## 1.0 – Definitions

For the sole purpose of these Guidelines, the capitalized terms listed below shall have the specific meanings ascribed to them in this section:

**“Applicant”** means the person or entity submitting the Commercial Energy Storage to Grid Pilot Program Application. Through the process the Applicant will become a Participant when they have satisfied all Application process requirements and enter into the DESS.

**“Application”** means the Commercial Energy Storage to Grid Pilot Program Application form listed in Attachment 4 of these Guidelines and related required documentation to initiate the process of entering into the DESS with LADWP.

**“Available”** means the Battery Energy Storage System is “online” and connected and may be dispatched at LADWP’s discretion.

**“Available Hours”** means the hours that the Battery Energy Storage System is connected and may be dispatched at LADWP’s discretion.

**“Battery Energy Storage System” or “BESS” or “System”** means a battery capable of charging and discharging energy to serve the Customer or in response to LADWP dispatch direction. A BESS may be a mobile battery energy storage system (MBESS) or stationary battery energy storage system (SBESS).

**“Business Day”** means any calendar day that is not a Saturday, a Sunday, or a day on which commercial banks are authorized or required to be closed in Los Angeles, California, or New York, New York.

**“Capacity”** means the total nominal nameplate of the inverter of the System in kilowatts (alternating current).

**“Critical Peak Period” or “CPP”** means an event during which the Department in its sole judgment discharges energy from Customer’s Energy Storage to the Department grid due to high system peaks, low generation, high market prices, temperature, and system contingencies, among other reasons as defined in the DESS.

**“CES2G Pilot Program” or “CES2G”** means the LADWP Commercial Energy Storage to Grid Pilot Program to purchase capacity and stored Energy from customer-owned Facilities as set forth in these Guidelines.

**“Commercial Operation Date or COD”** means the date on which the permitting, construction, and testing of the Facility such that the Facility is both authorized and able to deliver energy at full capacity to the point of interconnection is completed.

**“Commercial Operation Deadline”** means the date by which the Applicant must achieve Commercial Operation.

**“Cost of Charging Energy”** means the cost of energy based on the applicable customer DESS for the Facility, plus any fees or taxes, including the Los Angeles County’s Utility Users Tax.

**“Customer”** means an existing LADWP customer or a third party who will establish a customer account with LADWP, upon interconnection to LADWP’s Distribution System.

**“DCFC” or “Charger”** means the bi-directional Direct Current Fast Charger rated at 480V 3-phase capable of connecting and being dispatched by the LADWP.

**“DER”** means Distributed Energy Resource. DER programs consist of small-scale energy resources connected to the local distribution grid including battery energy storage, local solar and vehicle to grid integration (V2G).

**“DESS”** means the Pilot Standard Offer Agreement for Distribution Voltage Energy Storage Supply Service. “DESS2” corresponds to the rate structure for interconnections to the 4.8-kV Distribution System and “DESS3” corresponds to the rate structure for interconnections to the 34.5-kV Distribution System.

**“Distribution System”** means the conductors (or wires), transformers, and related equipment utilized by LADWP to deliver electric power to its customers at distribution level voltages. The Distribution System is not defined by one specific voltage, but rather as equipment that provides the distribution function at any distribution voltage.

**“EMS”** means Energy Management System.

**“Energy Report”** means monthly reports for incoming and outgoing energy from the Facility as reported by the Customer.

**“Energy Storage Capacity”** means the total nominal nameplate of the System in kilo watt-hours (kW-hrs).

**“Facility”** means the aggregate Battery Energy Storage Systems used to deliver energy under this Commercial Energy Storage to Grid Pilot Program, including all property and related electrical and non-electrical equipment, and complies with all local and national codes.

**“Guidelines”** means these Commercial Energy Storage to Grid Pilot Program (CES2G) Guidelines as adopted by the Board, including all amendments, revisions, and any successor thereto.

**“IA”** means the Customer CES2G Pilot Interconnection Agreement to be entered into by the Customer and LADWP.

**“Interconnection Costs”** means LADWP’s cost to connect the Facility into LADWP’s electric grid, for which Participant is responsible to pay to LADWP.

**“Integration Study”** means Facility integration feasibility study done after application submission.

**“kV”** means a kilovolt (1,000 volts).

**“kW”** means a kilowatt (1,000 watts) of electric power in alternating current.

**“kWh”** means the power in kilowatts charged or discharged over one hour.

**“LADWP”** means the Los Angeles Department of Water and Power.

**“MW”** means a megawatt (1,000,000 watts) of electric power in alternating current.

**“Mobile Energy”** means energy discharged from a grid-connected medium-duty or heavy-duty electric vehicle.

**“Notice of Eligibility”** an electronic notice, via e-mail, from the LADWP CES2G administrative team to the Applicant notifying the Applicant of their CES2G Pilot Program eligibility status for the tranche which was applied for.

**“Participant”** means an Applicant after satisfying all Application process requirements and entering into an DESS with LADWP.

**“Pilot Program”** means this Commercial Energy Storage to Grid Pilot Program.

**“Point of Delivery” or “POD”** means the location where the electrical energy is required to be delivered to LADWP by the Participant.

**“Purchase Price”** means the \$/kWh for energy purchased pursuant to the DESS.

**“Rated Capacity”** means the name-plate (AC) capacity of the Facility and equipment making up the Facility.

**“Site”** means the real property where the Facility is located or will be located (including all fixtures and appurtenances thereto) and related physical and intangible property generally owned or leased by the Applicant, and including any easements, rights-of-way or contractual rights held or to be held by Applicant for transmission lines and/or roadways servicing such Site or the Facility located (or to be located) thereon. The Site shall be within the boundaries of one legal parcel identified by the assessor’s parcel number on the Application.

**“Site Control”** means the Applicant shall (i) own the Site; or (ii) be the lessee or licensee of the Site under a lease or license which permits the Applicant to perform its obligations under this pilot program.

**“Stationary Energy”** means energy discharged from a grid-connected non-mobile BESS.

## 2.0 – Overview, Guiding Principles, Goals, and Initiatives



In accordance with the findings presented in the National Renewable Energy Laboratory’s (NREL) Los Angeles 100% Renewable Energy Study<sup>1</sup> (LA100), LADWP continues to develop a more holistic approach for integrating new DER technologies in its service territory. The LA100 study indicates that over 2,000 MW of local energy storage may be required to meet de-carbonization goals. To achieve future DER targets, it is essential to create innovative pathways that can help accelerate Battery Energy Storage System (BESS) deployments (both stationary and mobile) throughout the LA basin service territory. LADWP is committed to developing programs that will encourage customers to install and operate Facilities with characteristics that are most beneficial for distribution grid reliability. The CES2G Pilot Program will help LADWP determine optimal strategies for effectively scaling energy storage deployment in order to meet targets set by LA100 and the LADWP Strategic Long-Term Resource Plan (SLTRP). Additionally, the timing the Pilot may allow Applicants to take advantage of federal funding through the Inflation Reduction Act (IRA). Applicants should inform themselves of IRA eligibility requirements, which may include enhancements for projects using prevailing wage labor and those in certain environmental justice communities.

The purpose of the CES2G Pilot is to determine the optimal business strategies and processes required to facilitate a broader local energy storage deployment model that is beneficial to LADWP’s electric system infrastructure and its ratepayers. This Pilot Program is designed to address multiple short-term and long-term goals for LADWP’s DER integration:

- **Short-term:** To start an initial vehicle-to-grid (V2G) pilot program to serve as a foundation for future programs.
- **Long-term:** LADWP intends to deploy Stationary and Mobile energy storage solutions in a manner that aligns with the LADWP renewable and storage goals by 2035. By 2035, LADWP aims to have over 700 MW of energy storage capacity, which includes utility built and grid scale resources, as well as Customer owned facilities. Additionally, LADWP seeks to equitably deploy Stationary and Mobile solutions for in-basin capacity.

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<sup>1</sup> <https://www.nrel.gov/analysis/los-angeles-100-percent-renewable-study.html>



## PROGRAM OVERVIEW

- ✓ This Pilot Program establishes a DESS Rate Agreement, setting forth the terms for customer-owned BESS charging and discharging rates, a corresponding Interconnection Agreement, and Interconnection Costs reimbursement.
- ✓ Stationary and mobile Battery Energy Storage Systems are eligible. This Pilot is only available for projects in the Los Angeles (LA) basin service territory.
- ✓ The total CES2G Facility Capacity shall not exceed 300 kW-AC and 3 MW-AC per Facility for the 4.8-kV and 34.5-kV systems, respectively.
- ✓ Facilities must have a minimum total Energy Storage Capacity of 100 kW-hrs.
- ✓ Contract terms will be not less than five years or greater than ten years based on the manufacturer's energy storage useful life rating expressed in years or charge/discharge cycles. Systems must have a minimum manufacturer useful life of 5 years or be rated for 1,825 battery charge/discharge cycles.
- ✓ Bidirectional Direct-Current Fast Chargers (DCFCs) (3Phase /480-V) for Mobile Energy storage assets shall be 50 kW or greater.
- ✓ Applicants must enroll in the DESS rate agreement.
- ✓ Customers will be guaranteed at least 50 discharge events or will be paid for the remainder of any events less than 50 based on an average of their previously supplied energy during past discharge events.
- ✓ Energy Management Systems (EMS) for energy storage systems shall be capable of discharging energy to the grid based on the predetermined discharge hours given at least a 2-hour notice.
- ✓ Applicant's CES2G Facility load will be metered by a separate, bi-directional revenue quality meter provided and installed by LADWP.
- ✓ Systems shall be interconnected to the LADWP Distribution System at one single interconnection point.
- ✓ Interconnection costs incurred by the Applicant will be eligible to be reimbursed up to \$150,000 for 4.8-kV systems, and up to \$400,000 for 34.5-kV systems, (or 75% of the total cost, whichever is less) after achieving Commercial Operation pursuant to the IA or DESS.
- ✓ Customer shall provide LADWP data access to view 15-minute interval charge and discharge data for the energy storage systems.
- ✓ Quarterly and annual reports concerning the Facilities performance shall be provided to LADWP by the Participant.
- ✓ All System energy shall serve System load or be delivered to LADWP and cannot be sold to third parties and/or any other LADWP customer.
- ✓ Systems must adhere to all requirements in the latest version of the LADWP ESR manual and LADWP Design Guidelines. Please refer to [www.ladwp.com/codes](http://www.ladwp.com/codes) for further details.

## 2.1 – Commercial Energy Storage to Grid Pilot Framework and Program Offering

Under the CES2G Pilot, eligible Customers will have the opportunity, directly or through a third-party developer, to deliver energy to the LADWP Distribution System through the use of Stationary and Mobile Battery Energy Storage Systems. Customers will apply to the CES2G Pilot Program. Acceptance into the Pilot Program will be based on available Capacity as set forth in Section 2.2. Upon notification of acceptance into the Pilot, Participants will be required to meet the eligibility requirements as set forth in these Guidelines. Eligible Participants will be required to execute the DESS agreement, an Interconnection Agreement, and may be eligible for a reimbursement of their Interconnection Costs as set forth in Section 2.5. Pilot Program Participants will enroll in the DESS and deliver energy to LADWP during specified dispatch hours pursuant to the DESS rate agreement. The Pilot Program utilizes an interconnection cost reimbursement and the DESS to establish the rate for charging energy from, and providing energy to, LADWP. Further details regarding the Pilot Program payment structure can be found in [Section 2.3](#).

The CES2G Pilot Program seeks 20 MW of capacity which will be allocated among at least three separate tranches.

## 2.2 – Program Capacity and Tranches

The CES2G Pilot will have a total of 20 MWs of available capacity split over multiple tranches. Each tranche will consist of a 90-calendar day window to allow for applications to be submitted. Selected Facilities will be required to sign up for the DESS rate contract for a term equivalent to the life expectancy of the energy storage resource, set by the manufacturer, up to a maximum of ten (10) years, but not less than five (5) years. Contract terms that are set based on the manufacturer's BESS life expectancy expressed in charge/discharge cycles will be one (1) charge/discharge cycle per day. For example, if a BESSs charge/discharge cycle rating is 1,825 cycle, the contract term will be five (5) years. BESSs must be rated for at least 1,825 cycles to be eligible for this Pilot Program.

A single Participant may not apply for more than 40% of the CES2G Pilot Program's Capacity for any given tranche. A single Participant may not subscribe to more than 8 MW for the CES2G Pilot Program.

In the event that capacity remains, more tranches may be created until the full capacity is reached at the discretion of LADWP.

Tranche Segmentation			
Tranche	1	2	3
Tranche Capacity	4 MW	7 MW	9 MW

## 2.3 – Payments

Facilities will be integrated into LADWP's Distribution System on an hourly basis in accordance with system needs and limitations, as determined by LADWP. LADWP will pay for exported energy during those hours pursuant to the DESS. Additionally, Participants may be eligible to receive a reimbursement for certain Interconnection Costs depending on Distribution System voltage level that they interconnect to (as set forth

in Table 1).

**Table 1: Sample Energy Payment Price/Interconnection Costs Reimbursement Structure**

<b>4.8-kV Interconnections</b>	Interconnection Reimbursement	Lesser of: \$150k or 75% of costs
	Energy Credit Price (DESS 2)	\$0.39786 <sup>2</sup>
<b>34.5-kV Interconnections</b>	Interconnection Reimbursement	Lesser of: \$400k or 75% of costs
	Energy Credit Price (DESS 3)	\$0.40337 <sup>2</sup>
<b>Capacity</b>	Maximum Available (MW)	20
<b>Submittal</b>	Application Submittal period per tranche	90 days

For Interconnection Costs reimbursement limitations, see section 2.5.

## 2.4 – Critical Peak Period Energy Credits & Guaranteed Credits

LADWP will conduct at least 50 Critical Peak Period (CPP) discharge events per year of the contract. In the event that the LADWP conducts less than 50 Critical Peak Period discharge events, the LADWP will credit the Participant in the amount of the 50 less the number of conducted discharge events in a contract year. The amount of energy that is to be credited will be the average of CPP energy discharged during the DESS contract year not to exceed 115% of the Facility Energy Storage Capacity.

For example, if the following assumptions are made:

- LADWP only conducts 20 Critical Peak Period discharge events in year one (1). All CPP discharge events occur in the first three contract quarters (Q1-Q3)
- Facility Energy Storage Capacity: 1,200 kW-hr
- Average energy discharged during the 20 Critical Peak Periods over the first three quarters: 400 kWh
- DESS 2 Rate

Then the amount paid over the first contract year, including to make up for not conducting 50 Critical Peak Period events, is:

- Payment for the first 20 CPP discharge events:  $((20 \text{ CPP events}) * 400 \text{ kWh}) * \$0.39786 = \mathbf{\$3,182.88}$
- Payment for the remaining 30 uncondacted CPP discharge events:  $((50 \text{ CPP events} - 20 \text{ CPP events}) * 400 \text{ kWh}) * \$0.39786 = \mathbf{\$4,774.32}$
- Total for first contract year:  $\mathbf{\$3,182.88 + \$4,774.32 = \$7,957.20}$

<sup>2</sup> Prices subject to change as set forth in the DESS

## 2.5 – Interconnection Costs Reimbursement

Applicant must complete Interconnection Agreement within twenty (20) Business Days after the final interconnection study is completed and Service Planning has issued a letter setting forth the subsequent steps to maintain eligibility for the CES2G Pilot Program.

LADWP will reimburse certain Interconnection Costs after the Commercial Operation Date (COD) milestone is achieved, provided that the COD is achieved within thirty (30) months of the Notice of Eligibility. LADWP will provide the Applicant up to 75% of the Interconnection Costs as a one-time lump sum payment, not to exceed \$150,000 on the 4.8-kV system and \$400,000 on the 34.5-kV system. Cost reimbursement will be based on the location of interconnection (at the service address) that is the least cost to LADWP as determined by LADWP Service Planning.

If the Facility has discontinued operation or is removed within five (5) years of the COD, the Applicant must return the Interconnection Costs reimbursement to LADWP, if applicable.

## 3.0 – Eligibility and Technical Requirements

The initial scope of the CES2G Pilot Program provides for up to 20 MW of Stationary and Mobile Battery Energy Storage Systems (BESSs). All BESSs must utilize lithium-ion batteries or similar at LADWP's discretion. Due to the limited amount of available program capacity, eligible Facilities are limited to a Capacity of 300 kW-AC on the 4.8-kV system or 3 MW-AC on the 34.5-kV system. Facilities shall be interconnected to the LADWP system at one single interconnection point. Mobile Systems shall utilize bi-directional Direct Current Fast Chargers (DCFCs) (3- $\Phi$  /480-V, minimum 50 kW) for the CES2G Pilot Program. All BESSs and Chargers must be capable of bi-directional charging.

Applicants shall be responsible for all necessary permitting to construct and operate Facilities under this Pilot Program. Applicants shall be responsible for submitting all information and documentation required by these Guidelines, including any necessary analyses, forms, or fees required for an Interconnection Agreement (IA).

Failure to provide the information and demonstrate that each minimum requirement has been met, as detailed in these Guidelines, will result in disqualification.

All Applicants must:

- Have at least two years of relevant experience installing energy storage systems.
- Have developed at least one energy storage system equal to or greater than 40 kW-AC. Such system(s) must be currently in operation within the United States.

## 3.1 – Facility Minimum and Maximum Sizes and Ratings

**Size Requirements.** Each Facility shall have a minimum and maximum discharge Capacity ranging from a minimum of 50 kW-AC to maximum of 300 kW-AC at the Point of Delivery (POD) for the 4.8-kV system, or a minimum of 300 kW-AC to maximum of 3 MW-AC at the POD for the 34.5-kV system. Each System's Capacity may be additionally limited based on distribution circuit capabilities as determined during integration studies conducted by LADWP. If such a reduction is required, the Applicant may withdraw their application.

**kW-AC Rating.** The rated Capacity in kW-AC for all Battery Energy Storage Systems will be determined

by multiplying the system's nominal voltage, amp-hour capacity, and inverter efficiency and then dividing by the duration of discharge.

## 3.2 – Technologies and Qualified Facility Components

All Facility components must follow prudent utility practices for quality and safety. Only Facility components, including, but not limited to, energy storage technologies and inverters, that are certified by a(n) Occupational Safety and Health Administration (OSHA) Nationally Recognized Testing Laboratory (NRTL) are eligible for the Pilot Program. All Facility components must also comply with LADWP's Electric Service Requirements Manual (ESR Manual) for detailed service equipment and installation requirements.

LADWP reserves the right to adopt additional codes, standards, and conditions, at any time, at its sole discretion. Refer to LADWP's ESR Manual for the latest service equipment and installation requirements. In case of any conflicts, the ESR Manual design guidelines shall prevail.

### 3.2.1 – Battery Energy Storage Systems

**Energy Storage Systems.** All BESS and equipment shall comply with UL 9540 standard. The BESS shall be utility-interactive and comply with IEEE 1547 and UL 1741SA and UL 9540 for grid safety. Facilities shall adhere to all applicable requirements stated in the most recent LADWP Electric Service Requirements. LADWP's Electric Service Requirements can be accessed online at [www.ladwp.com/codes](http://www.ladwp.com/codes).

### 3.2.2 – Inverters

Utility-interactive Inverters must be used at the point of interconnection to the grid. All inverters must be certified by a NRTL for safe operation and must be certified as meeting the requirements of UL 1741SA and IEEE 1547, including testing conformance to IEEE 1547.1.

### 3.2.3 – Metering and Controls

Applicant's Facility load will be metered by a meter provided and installed by LADWP. Facility load which pertains to this Pilot Program will be isolated from all existing and future Customer loads. Customer may not add any additional load to the Facility without LADWP's written permission.

LADWP shall install bi-directional, revenue-grade, dual-channel, digital metering equipment, and recorders which may include cellular communication capabilities at the Point of Delivery of the Facility to measure electric energy production, delivery, and other electric parameters deemed appropriate by LADWP. Applicants will not be allowed to opt-out of the use of such a meter.

The DESS and the IA, executed by the Customer, include specific metering requirements.

### 3.2.4 – Network Communications

Customer shall be responsible for maintaining network communication for the Bi-directional Charging Systems (BCS). System equipment must, at minimum, be on-line and ready to be dispatched via a distributed energy resource management system while plugged in and also relay charging information as required by IEEE 2030.5 (2018) or its successor.

Communications infrastructure must provide end-to-end cyber security protection for Distributed Energy Resources following industry best practices.

### 3.2.5 – Communication Protocols for Telemetry

Communication Protocol: LADWP voluntarily follows portions of California Public Utilities Commission guidelines for DERs. As of the publication of these Guidelines, the default protocol will be the latest version of IEEE 2030.5 or its successor. LADWP may also utilize DNP3 (IEEE 1815) at its discretion. Alternative protocols can be agreed to if approved with written consent from LADWP and the Participant. Participants must make available, via an Application Programming Interface (API), IEEE 2030.5 protocol or similar, real time data about the Facility, including charging information such as voltage, current, frequency, and available capacity.

### 3.2.6 – Other Requirements

LADWP reserves the right to adopt additional codes, standards, and conditions at any time and at its sole discretion. Refer to LADWP's ESR Manual for the latest service equipment and installation requirements. In case of any conflicts, the ESR Manual design guidelines shall prevail.

Facilities shall be subject to further review by LADWP and accepted on a case-by-case basis. Submitted Applications shall include, but not be limited to, information regarding the Facility and its purpose, inverters, single line diagram, and the sequence of operations.

## 3.3 – Non-Eligibility of Existing Battery Energy Storage Systems

Existing Battery Energy Storage Systems that are already in-service may not be considered for the participation in the CES2G Pilot. All System units must be in "new" condition. Unique identifiers such as a serial number, Vehicle Identification Number (VIN), vehicle Registration, etc. must be provided as a part of the application. System units may not be "re-used" to enroll in any other LADWP programs for the purposes of acquiring additional payments or reimbursements.

## 3.4 – Facility Location

Facilities must be located within LADWP's electric service territory. The Facility shall be within the boundaries of one legal parcel identified by the assessor's parcel number on the Application.

### 3.5 – Site Control

A Proof of Site Control form shall be submitted with the Application, to indicate that the Applicant has obtained a sufficient level of the right to enter and construct the Facility at the proposed Site. The Proof of Site Control form must be valid for the entire duration of the proposed Project.

Please refer to Attachment 4 for the required Site Control Form.

The Applicant is not required to be the owner of the System Site at the time of Application but shall meet one of the requirements listed in the Site Control Form. The Participant must possess Site Control at the time of DESS execution and at all times during the term of the DESS.

LADWP reserves the right to request additional information concerning the circumstances surrounding the Applicant's declared Site Control status.

### 3.6 – Commercial Operation Date

Commercial Operation Date shall be no later than thirty (30) months following the issuance of the Notice of Eligibility to the Applicant. Failure to meet this deadline will result in cancellation of eligibility to continue in the Pilot Program unless the deadline is extended as set forth below. To achieve commercial operation, each Facility must have a DESS agreement in place and shall be structurally and electrically complete, acquire all applicable permits, pass all required testing, and be authorized and able to deliver energy at full capacity to the Point of Delivery approved by LADWP.

The Commercial Operation Deadline may be extended for up to twelve (12) months, at LADWP's sole discretion. The Commercial Operation Deadline extension is not automatically granted and must be requested by the Applicant. The request for extension of the Commercial Operation Deadline shall be submitted to LADWP in writing, at least thirty (30) days before the Commercial Operation Deadline, and sent to [CES2G.Pilot@ladwp.com](mailto:CES2G.Pilot@ladwp.com). Requests shall describe the cause of all delays in reasonable detail.

Applicants whose eligibility is cancelled may re-submit an Application for the Facility, establishing a new position in any queue of applications.

### 4.0 – Application Submission

LADWP will announce the commencement of the CES2G Pilot Program to new applications for each Capacity tranche on the CES2G Pilot Program website<sup>3</sup> not less than 30 days prior to the opening of the Application period. All program materials, including the Application forms, are available on Attachment 4.

Applications will be considered in the order received, however, Applications received on or prior to the first day of the Application period shall be deemed received at the same time. The order of Applications received or deemed received on the first day will be determined by random drawing. All other Applications will be placed in a queue based on the order received. Applications will be accepted for 90 calendar days after the opening of the Application period or when the allocation capacity is fully reserved, whichever comes first. A diagram of the CES2G Pilot Program process is included in these Guidelines as Attachment 3. Applicants

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<sup>3</sup> [www.ladwp.com/CES2G](http://www.ladwp.com/CES2G)

in the queue that are not allocated Capacity under a given tranche must re-apply for consideration under future tranches. Customers may Apply separately if they wish to expand their Facility at a Site, however, a separate IA and DESS must be executed and the Facility must be separately metered from the original Facility.

**The terms of the DESS, IA, and Guidelines are non-negotiable.** Applicants shall review the terms of all program documents carefully before submitting an Application. LADWP reserves the right to reject all applications. All submitted materials will become the property of LADWP and may be incorporated into a contract between LADWP and the selected Applicant.

## 4.1 – Required Information and Documents

Only the original LADWP forms shall be used in submitted application packages, otherwise the Application will be considered non-responsive and disqualified. Please see Section 4.2 for the submission procedure. All forms and further instructions are provided in Attachment 4: Application and Forms, and Site Control form.

### **At the time of Application, each Applicant shall:**

- **Submit** completed and signed Application form
- **Submit** project description
- **Provide** an annual energy storage profile schedule estimate in kWh consistent with Attachment 1: Estimated Annual Energy Storage Profile
- **Submit** Proof of Site Control through documentation of ownership, lease, or license.
- **Submit** Site Plan
- **Submit** equipment schedule
- **Submit** a single-line and three-line electrical diagrams of the proposed Facility
- **Submit** CES2G Application fee along with the Application
- **Submit** CES2G Facility Standalone Integration study fee
- **(optional) Submit** a CES2G Facility SP Interconnection Study Fee or a valid LADWP Feasibility Study report

### **After LADWP issues Notice of Eligibility, each Applicant shall:**

- **Submit** a preliminary plot plan or Site development diagram showing the layout of the proposed Facility, equipment locations, nearest major intersection or landmark, and proposed point of interconnection
- **Submit** specification sheets for each BESS to be used within a Facility with the manufacturer's rated useful life of the BESS
- **Submit** completed Service Planning Information Form (SPIF)
- **Submit** SBESS Technical Data Form (If Facility is SBESS)
- **Submit** EV Charging Station/Charger(s) Technical Data (If Facility is MBESS)
- **Submit** receipt for an "Electrical Plan Check" permit via the Los Angeles Department of Building and Safety (LADBS)
- **Submit** other documentation required for Interconnection Costs reimbursement

For additional details on CES2G Pilot Fee see Section 4.4.1 of these Guidelines.

Failure to provide all necessary information and demonstrate that each minimum requirement has been met will result in disqualification from the CES2G Pilot application process.



## 4.2 – Application Submission Procedure

Applicants shall submit one (1) signed Application via electronic mail.

The parties agree that facsimile signatures or signatures scanned into .pdf (or signatures in another electronic format designated by LADWP) and sent by e-mail shall be deemed original signatures.

Applications for the CES2G Pilot shall be addressed to:

- **E-MAIL ADDRESS:** [purchbids.purchbids@ladwp.com](mailto:purchbids.purchbids@ladwp.com)
- **“CC”** [CES2G.Pilot@ladwp.com](mailto:CES2G.Pilot@ladwp.com)

The Vendor Liaison Center (VLC) will be responsible for receiving and logging all incoming electronic applications received via e-mail. The Applications must be received by the VLC, at the e-mail address listed above, where it will be date and time stamped. Applications will be ordered as set forth in Section 4.0.

## 4.3 – Program Participation Fees and Costs

The Applicant shall be responsible for submitting all required CES2G Pilot Fees and Costs.

### 4.4.1 – Fee Schedule

The following table provides a summary of fees and costs an Applicant will incur throughout the Application process:

Commercial Energy Storage to Grid Fee Schedule				
Item	Amount	Refund Policy	Additional Notes	Processed by
<b>CES2G Application Fee (50 kW - 3 MW)</b>	\$1,500 per application	Non-refundable	Due at time of application.	DER Engineer
<b>CES2G Facility Standalone Integration Study Fee</b>	\$1,500 per application	Non-refundable	Due at time of application.	DER Engineer
<b>CES2G Facility SP Interconnection Study Fee (optional)</b>	\$1,500 per application	Non-refundable	Due at time of application	DER Engineer
<b>Estimated Advance CES2G Facility Interconnection Costs</b>	TBD	Please reach out to Service Planning Engineer for details	Due ten (10) Business Days following notification of advance interconnection cost estimates.	Service Planning Engineer
<b>CES2G Facility Interconnection Design/Fees</b>	TBD	Please reach out to Service Planning Engineer for details	Due one (1) month after Authority to Bill is distributed	Service Planning Engineer

## 4.4 – Application Declaration

By signing the Application, the Applicant declares that:

- 1) The information provided in the Application is true and correct.
- 2) The Applicant has read, understands, and agrees to be bound by the Commercial Energy Storage to Grid Pilot Program Guidelines.
- 3) The Applicant has read and understands the DESS and IA.

## 4.5 – Communication

The Applicant shall designate a Facility manager on the Application who will serve as the sole source of contact between the Applicant and LADWP.

All formal communications and requests shall be submitted in writing to [CES2G.Pilot@ladwp.com](mailto:CES2G.Pilot@ladwp.com). The CES2G Pilot hotline at (213) 367-2100 is available to assist with any informal inquiries. A document including frequently asked questions and program status updates will be posted on the CES2G Pilot website main page.

## 5.0 – Post Submission Process

Applicants will be subject to the following processes and requirements following the submission of their Application.

### 5.1 – Integration and Interconnection Study Process

LADWP will perform an integration study (to verify that the distribution feeder or 34.5-kV circuit has available capacity) and perform an interconnection study to estimate the cost of extending the Department's system to the site. Based on the interconnection study, LADWP's Service Planning will provide an interconnection cost estimate for Applications that pass the integration study screening process. LADWP may deny a Facility if the electric grid that would serve as the point of interconnection is inadequate. Applicants must submit a copy of their Conditional Use Permit (CUP) to initiate the interconnection study. Applicants will be contacted by an LADWP Service Planning engineer for the interconnection study. Applicants shall submit any additional Facility information, as deemed necessary by the Service Planning engineer, on time.

Applicants that fail to respond to the Service Planning Engineer's requests for Facility information will be considered Non-Responsive and may be subject to cancellation.

Applicants may elect to withdraw their Application after the interconnection study is completed, if their Interconnection Costs exceed the reimbursement in Section 2.5 or LADWP determines that the Facility requirements are not feasible for the Distribution System.

If an Applicant decides to continue with the Facility, all contractual documentation indicated in Section 5.2 of the Guidelines will be due twenty (20) Business Days after the final interconnection study is completed and LADWP Service Planning has issued them a letter setting forth the subsequent steps.

## 5.2 – DESS and IA Submittal Requirements

Applicants shall submit the executed DESS and IA within twenty (20) Business Days after notification of final payment for Engineering interconnection cost estimates, along with all accompanying documents outlined in this Section 5.2:

1. One DESS signed by the Applicant.
2. One IA signed by the Applicant.
3. Copy of equipment leasing agreement (if applicable).
4. Final payment of the interconnection cost estimate, which is referred to as the Final Payment for Engineering to Service Planning.
5. Requisite resolutions, incumbency certificates, and any other documents evidencing authority to execute and deliver the agreements by the named representatives of the Applicant.
6. Copy of the City of Los Angeles Business Tax Registration Certificate or Vendor Registration Number, as appropriate.
7. Taxpayer Identification Number (if not available at time of application).
8. Certificate of Registration with the California Secretary of State.

The Commercial Energy Storage to Grid DESS and IA can be found at the program website at ([www.ladwp.com/CES2G](http://www.ladwp.com/CES2G)).

After LADWP executes the DESS, the Applicant will be referred to as a Participant in the Commercial Energy Storage to Grid Pilot Program.

## 5.3 – Interconnection Requirements and Standards

Applicants shall interconnect to the LADWP power system at the 4.8-kV or 34.5-kV voltage levels. The final Point of Delivery and interconnection will be determined during the integration study and the subsequent interconnection study. The Applicant is required to submit separate applications for each voltage level that one desires to interconnect at.

Metering and interconnection standards can be found in LADWP's Electric Service Requirements manual. LADWP's Electric Service Requirements manual can be accessed online at (<https://www.ladwp.com/codes>).

Before interconnection, Applicants shall establish a customer account with LADWP to support the Facility for billing and payment purposes. This account will reflect the Customer's DESS selection.

## 5.4 – Changes, Transfer/Assignment, and Third-Party Financing

Changes in Facility location will not be allowed. Change in Capacity may be approved at the sole discretion of LADWP and shall require an additional Integration Study Fee and a new DESS if the capacity is greater than the original Application.

Changes to technology or equipment providers (e.g. manufacturer of BESS equipment) are permitted with prior written approval from LADWP.

Applicants that wish to transfer a Facility before DESS execution may do so with prior written consent from LADWP. The Applicant will be responsible for resubmitting all applicable Commercial Energy Storage to Grid Application forms with the transferee's information.

Applicants shall not assign any of its rights or delegate any of its obligations, as set forth in Section 17 of the DESS.

## 5.5 – Permitting

Applicants shall obtain all necessary permits and comply with all applicable regulatory requirements including, but not limited to, the California Environmental Quality Act (CEQA), to construct and operate the Facility at their own expense.

Participants shall be responsible for compliance with all applicable City, County, State, and Federal regulatory requirements.

Participants will be required to obtain all necessary City building, safety, and planning permits prior to construction. For more information, please visit LADBS<sup>4</sup> and LA City Planning websites<sup>5</sup>.

## 5.6 – Milestones

The following milestones must be achieved:

1. Applicant must submit Facility Permits or proof of material procurement six (6) months after the Notice of Eligibility for Pilot Program participation. Failure to achieve this milestone will result in termination from the Pilot Program eligibility list.
2. Commercial Operation Deadline Milestone: The Facility must be in commercial operation within thirty (30) months after the Notice of Eligibility, however, at the sole discretion of LADWP, this milestone may be extended for up to twelve (12) months if there is a reasonable cause for the delay, as determined at LADWP's sole discretion. Failure to achieve this milestone will result in loss of eligibility for the DESS. Notwithstanding the twelve (12) month milestone extension, failure to achieve Commercial Operation within the original thirty (30) months after the notification of eligibility will result in ineligibility for the reimbursement of Interconnection Costs.

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<sup>4</sup> [www.ladbs.org](http://www.ladbs.org)

<sup>5</sup> [www.cityplanning.lacity.org](http://www.cityplanning.lacity.org)

## 5.7 – Eligibility Requirements

During the construction phase, the Applicant will be required to:

- Obtain Facility permits within 6 months of Notice of Eligibility.
- Submit final interconnection payment within three (3) months after Notice of Eligibility, or within twenty (20) business days after Service Planning sends the Authorize to Bill letter, whichever happens later.
- Submit final drawings and equipment listing.
- Submit a job creation report.

Applicants seeking extension of the COD deadline must submit a request for the extension to LADWP in writing to the DER Team at [CES2G.Pilot@ladwp.com](mailto:CES2G.Pilot@ladwp.com), describing in reasonable detail the cause of the delay, at least thirty (30) days prior to the Commercial Operation Deadline. Any decision to grant such extension shall be at the discretion of LADWP.

It is the responsibility of the Participant to coordinate installation and allow access for LADWP staff to install required interconnection and metering equipment at least twenty (20) Business Days prior to the Commercial Operation Date.

The Applicant shall provide accommodations for the LADWP, LADBS, and other City of Los Angeles agencies to perform inspections, as necessary.

LADWP is responsible for work on the distribution side of the POD and the Applicant is responsible for work on the Customer side of the POD.

In all cases, the BESS shall be installed in accordance with the manufacturer's specifications and conform to all applicable electrical codes and standards. The installer shall be a properly licensed California contractor. An active "C-10" license is required for all Facilities.

## 5.8 – Inspection, Energy Report, Warranty, and Unique Identifiers

All System units must have unique identifiers, including: serial numbers, Vehicle Identification Numbers (VIN), Vehicle Registration. Participant shall provide complete warranty of all components including replacement labor extending 5 years after the date of system start-up and acceptance / commissioning by LADWP. The term of the DESS shall be based upon the recommended manufacturer's standards and specifications. In addition, to ensure continuous safety and reliability of the Facility, Customer shall provide access for the LADWP staff to perform spot inspections when requested and provide monthly Energy Reports to LADWP.

## 6.0 – Energy Payment Offering

Energy credits or payments will be made pursuant to the DESS.

LADWP will not credit or purchase energy over one-hundred fifteen (115) percent of the Facility's energy storage rating as indicated on the DESS.

## 7.0 – Indemnification

Except for the gross negligence or willful misconduct of LADWP, Applicant undertakes and agrees to defend, indemnify and hold harmless LADWP, the City of Los Angeles, including but not limited to any of its boards, commissioners, officers, agents, employees, assigns and successors in interest (hereinafter, collectively, "Indemnities") from and against any and all suits and causes of action (including proceedings before FERC), claims, losses, demands, penalties, judgments, costs, expenses, damages (including indirect, consequential, or incidental), disbursements of any kind or nature whatsoever, including but not limited to attorney's fees (including allocated costs of internal counsel), other monetary remedies, and costs of litigation, damages, obligation or liability of any kind or nature whatsoever, in any manner arising by reason of, incident to, or connected in any manner with the performance, non-performance or breach of the DESS, these guidelines or any ancillary document, or any other act, error or omission or willful misconduct by or of the Applicant or Applicant's officers, employees, agents, contractors, sub- contractors of any tier, including but not limited to any such performance, non-performance, breach, act, error or omission or willful misconduct that results in intellectual property infringement or leads to death or injury to any person, including but not limited to Applicants, Applicant's officers, employees, agents, contractors or sub-contractors of any tier, or damage or destruction to property of any kind or nature whatsoever, of either Party hereto, or of third Parties, or loss of use (hereinafter, collectively, "Indemnified Liabilities"). The provisions of this paragraph shall be in addition to, and not exclusive of, any other rights or remedies which Indemnities have at law, in equity, under the DESS or otherwise. To the extent that the undertakings to defend, indemnify, pay and hold harmless set forth in this subsection may be unenforceable in whole or in part because they are volatile of any law or public policy, Applicant shall contribute the maximum portion that it is permitted to pay and satisfy under applicable law to the payment and satisfaction of all Indemnified Liabilities incurred by Indemnities or any of them. The provisions of this paragraph shall survive the expiration or termination of the Guidelines, DESS, and IA Agreements.

## 8.0 – Program Modifications

Due to rapid technological advancement in energy storage devices, LADWP reserves the right to modify the program. Updates to the Commercial Energy Storage to Grid Pilot Program Guidelines, Application, and Forms will be posted to the website to ensure full transparency.

# Attachment 1: Estimated Annual Energy Storage Profile Example

Hourly System State Controller (Weekday)												
	31	28	31	30	31	30	31	31	30	31	30	31
HOUR	January	February	March	April	May	June	July	August	September	October	November	December
0	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE
1	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE
2	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE
3	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE
4	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE
5	IDLE	IDLE	IDLE	IDLE	IDLE	CHARGE	CHARGE	IDLE	IDLE	IDLE	IDLE	IDLE
6	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	CHARGE	CHARGE	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS
7	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	CHARGE	CHARGE	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS
8	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	CHARGE	CHARGE	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS
9	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	IDLE	IDLE	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS
10	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	IDLE	IDLE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE
11	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE
12	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE
13	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE
14	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	IDLE	IDLE	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS
15	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	IDLE	IDLE	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS
16	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	IDLE	IDLE	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS
17	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	EXPORT	EXPORT	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS	SCHED. OPS
18	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT
19	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT
20	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT
21	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT
22	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE
23	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE	CHARGE

## Attachment 2: Application Instructions and Submittal Documents

For all **Commercial Energy Storage to Grid Applications**, the following items must be submitted:

- Complete Commercial Energy Storage to Grid Application Proposal**
- Application fee payable to LADWP via certified check**
  - Facility 50 kW - 300 kW: \$1500
  - Facility 300 kW - 3 MW: \$1500
- Integration Study Fee payable to LADWP via certified check**
  - Facility 50 kW - 300 kW: \$1500
  - Facility 300 kW - 3 MW: \$1500
- Interconnection Study Fee payable to LADWP via certified check:**
  - Facility 50 kW - 300 kW: \$1500
  - Facility 300 kW - 3 MW: \$1500
- Site Plan**
- Facility Information**
  - Digital Facility Diagram (Plot/Equipment Layout Plan)
  - Digital Single and Three-Line Diagrams
  - Facility Description and Equipment Schedule
  - Proof of Site Control
  - Estimated Annual Energy Storage Profile



## Attachment 3: Application Flowchart

**See attached.**

## Attachment 4: Application and Forms

**See attached.**