

## Request for Payment Instructions Rule 21 – Non-Exporting Generators

### Submittal Instructions

**Prior to submitting your application and fee or deposit, please complete and submit this form to:**  
[Rule21@sce.com](mailto:Rule21@sce.com)

In response, you will receive detailed payment instructions within a Request for Advance Payment form that will greatly facilitate the tracking and processing of your request. The Request for Advance Payment form will contain mailing and wiring instructions along with a document number for SCE to track your payment. Please do not mail any checks along with your interconnection application, instead, please use the instructions provided.

Absent extraordinary circumstances, instructions should be sent to you within 3 business days of receipt of this completed Request for Payment Instructions form.

Once the payment confirmation and complete application package are received, your request will be forwarded for processing and review.

### INTERCONNECTION CUSTOMER INFORMATION

**Customer Name:** \_\_\_\_\_

**Customer Address:** \_\_\_\_\_

**Project Contact Name:** \_\_\_\_\_

**Project Contact Phone Number:** ..... **E-mail:** \_\_\_\_\_

**Project Name:** \_\_\_\_\_

**New Project Generating Facility Gross Nameplate Rating (In MW):** \_\_\_\_\_

### STUDY PROCESS

**Unless waived per table E.1 of the Rule 21, select the *one* of the operating modes listed below:**

- Parallel Operation** - Application fee is **\$800.00**  
Parallel Operation: The Generating Facility will interconnect and operate "in parallel" with SCE's Distribution System for more than one (1) second.
  
- Momentary Parallel (MP) Operation** - Application fee is **\$800.00**  
Momentary Parallel: The Generating Facility will interconnect and operate on a "momentary parallel" basis with SCE's Distribution System for a duration of one (1) second or less through transfer switches or operating schemes specifically designed and engineered for such operation.
  
- Isolated Operation** - Note: There is **no application fee** for Isolated Operation mode, however, an application is needed to satisfy SCE's notice requirements for operating an isolated Generating Facility as per California Health and Safety Code Section 119085 (b)  
Isolated Operation: The Generating Facility will be "isolated" and prevented from becoming interconnected with SCE's Distribution System through a transfer switch or operating scheme specifically designed and engineered for such operation

### SCE GRID INTERCONNECTION CONTACT INFORMATION

**If you have any questions, please contact us:**  
**Via E-mail:** [InterconnectionQA@sce.com](mailto:InterconnectionQA@sce.com)  
**The Grid Interconnection phone number is: 626-302-3688**

\*Fees and deposits are calculated using the Rule 21 Tariff Revised in September 2012, Table E.1. in section E.2.c. Please refer to the tariff for the most current fee and deposit information as well as refund guidelines. A copy of the Rule 21 Tariff can be found on our Open Access site: [www.sce.com/GridInterconnection](http://www.sce.com/GridInterconnection)



Southern California Edison  
Rosemead, California (U 338-E)

Revised Cal. PUC Sheet No. 54878-E  
Cancelling Revised Cal. PUC Sheet No. 53273-E

Sheet 1

GENERATING FACILITY INTERCONNECTION APPLICATION

Form 14-732

(To be inserted by utility)

Advice 3050-E  
Decision 14-04-003

Issued by  
Megan Scott-Kakures  
Vice President

(To be inserted by Cal. PUC)

Date Filed Jun 9, 2014  
Effective Jul 9, 2014  
Resolution \_\_\_\_\_



- A. Applicability:** This Generating Facility Interconnection Application (Application) is used to request the interconnection of a Generating Facility to Southern California Edison's (SCE) Distribution System (over which the California Public Utilities Commission (CPUC) has jurisdiction). Refer to SCE's Rule 21 to determine the specific requirements for interconnecting a Generating Facility. Capitalized terms used in this Application, and not otherwise defined herein, shall have the same meanings as defined in SCE's Rule 21 and Rule 1.

Except as noted in the next paragraph, this Application may be used for any Generating Facility to be operated by, or for, a Customer and/or Producer to serve part or all of its electric energy requirements that would otherwise be provided by SCE, including "distributed generation", "cogeneration," emergency, backup, and standby generation, and Net Energy Metered Generating Facilities. A simpler, shorter form is also available from SCE for Net Energy Metered (NEM) Generating Facilities with a nameplate rating less than 10kW. While Customers operating Generating Facilities isolated from SCE's Distribution System are not obligated to enter into an Interconnection Agreement with SCE, parts of this Application will still need to be completed to satisfy SCE's notice requirements for operating an isolated Generating Facility as per California Health and Safety Code Section 119085 (b).

This Application may not be used to apply for interconnecting Generating Facilities used to participate in transactions where all, or a portion of, the electrical output of the Generating Facility is scheduled with the California Independent System Operator. Such transactions are subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) and require a different application available from SCE.

This Application is not applicable for incentives and/or rebates offered by the Energy Resources Conservation and Development Commission ("CEC") or the CPUC. Please contact those agencies directly or on their respective websites ([www.energy.state.ca.us](http://www.energy.state.ca.us) and [www.cpuc.ca.gov](http://www.cpuc.ca.gov)).

- B. Guidelines and Steps for Interconnection:** This Application must be completed and sent to SCE along with the additional information indicated in Part 1 Section C below to initiate SCE's interconnection review of the proposed Generating Facility. An Initial Review fee of \$800 (payable by check or money order to SCE) must accompany the Applications except those Applications for isolated Generating Facilities, and Net Energy Metering Renewable Electrical Generating Facilities (as defined in Schedule NEM-Net Energy Metering). Supplemental Review and Interconnection Study fees may be required for large capacity and/or more complex Generating Facility Interconnections; see SCE's Rule 21 Section E. & F. You may also refer to SCE's Electric Service Requirements (ESR's) located on SCE's website: <http://www.sce.com/nrc/aboutsce/regulatory/distributionmanuals/esr.pdf> for more information regarding interconnection of a Rule 21 or NEM generator to SCE's Distribution System.

This document is only an Application. Upon acceptance, SCE will prepare an Interconnection Agreement for execution by the "Producer," the party that will be responsible for the Generating Facility. SCE may also require an inspection and testing of the Generating Facility and installation of any related Interconnection Facilities prior to giving the Producer written authorization to operate in parallel. **Unauthorized Parallel Operation may be dangerous and may result in injury to persons and/or may cause damage to equipment and/or property for which a Producer/Customer may be liable!**

Please note, other approvals may need to be acquired, and/or other agreements may need to be formed with SCE or regulatory agencies, such as the Air Quality Management Districts and local governmental building and planning commissions prior to operating a Generating Facility. SCE's authorization to operate in parallel does not satisfy the need for an Applicant to acquire such other approvals.

- C. Required Documents:** Two (2) copies of this Application and each of the following documents **must be submitted** before this application will be processed. Drawings must conform to accepted engineering standards and must be legible. 11"x17" drawings are preferred.

1. A **Single-line drawing** showing the electrical relationship and descriptions of the significant electrical components such as the primary switchgear, secondary switchboard, protective relays, transformers, generators, circuit breakers, with operating voltages, capacities, and protective functions of the Generating Facility, the Customer's loads, and the interconnection with SCE's Distribution System. Please show the location of all required net generation electric output meters and the A.C. manually operated disconnect devices on the single line drawing.
2. **Site plans and diagrams** showing the physical relationship of the significant electrical components of the Generating Facility such as generators, transformers, primary switchgear/secondary switchboard, and control panels, the Customer's loads and the interconnection with SCE's Distribution System. Please show the location of all required net generation electric output meters and the A.C. manually operated disconnect devices on the site plans. For customers electing to participate in NEM Aggregation, the location of all aggregated meters must be provided on a plot plan with this Application.
3. When required, please provide photos of the Rule 21 **AC Disconnect**, showing visible contact separation in the open position
4. **If the point of interconnection is on the utility side of the main circuit breaker and/or it is a Virtual Net Energy Metering project**, please provide switchgear, switchboard, or main panel cut-sheets/shop drawings detailing the bussing and proposed point of interconnection including any proposed modifications showing resultant clearances. The proposal must include a signed PE stamp and modifications must be re-certified by the manufacturer or a qualified third party. In addition, please provide pictures of the point of interconnection prior to modification. Pictures of the point of interconnection post-modification must be provided prior to scheduling of SCE commissioning test.
5. If the project requires a **net generation output meter (NGOM)**, please provide meter socket cut-sheets of the net generation output meter socket.
6. If **transformers** are used to interconnect the Generating Facility with SCE's Distribution System, please provide transformer nameplate information (voltages, capacity, winding arrangements, connections, impedance, et cetera).

**Part 1 Cont'd – Introduction and Overview**

7. If a **transfer switch** or scheme is used to interconnect the Generating Facility with SCE Distribution System, please provide component descriptions, capacity ratings, and a technical description of how the transfer scheme is intended to operate.
8. If **protective relays** are used to control the interconnection, provide protection diagrams or elementary drawings showing relay wiring and connections, proposed relay settings, and a description of how the protection scheme is intended to function.
9. An Initial Review fee check or money order in the amount of \$ 800, if applicable, made out to SCE referencing the electric account number (Part 2. A.) and "Initial Interconnection Review Fee"

**D. Mailing Instructions, Assistance:** When this application has been completed it may be printed and mailed, along with the required attachments to:

**1. NEM Projects "10 kW – 1,000 kW" Only**

Southern California Edison Company  
Attention: Net Energy Metering Administrator (NEM)  
2244 Walnut Grove Ave, GO 1, Quad 4 D  
Rosemead, CA 91770

Alternatively, you may contact SCE for NEM at (866) 600-6290 or FAX to (626) 571-4272 and make arrangements to e-mail or fax copies of the required information with payment of the required fees to follow. If you have questions or need assistance in completing this application please call.

**2. All Other Distributed Generation Projects (DG)**

Southern California Edison Company  
Attention: Manger Grid Contract and Rule 21 Development  
2244 Walnut Grove Ave, GO 1, Quad 4 C  
Rosemead, CA 91770

Alternatively, you may contact **SCE for DG** at (626) 302-3688 or FAX to (626) 302-1152 and make arrangements to e-mail or fax copies of the required information with payment of the required fees to follow. If you have questions or need assistance in completing this application please call.



**Part 2 Cont'd – Identifying the Generating Facility's Location and Responsible Parties**

**C. 1. Customer – Generation Facility Interconnection Agreement (GFIA) Information or the Customer Generation Agreement (CGA) (applicable to 3<sup>rd</sup> party owner only)** (Please identify, if known, the party that will execute the applicable agreement. Not applicable for NEM Applicants because SCE and the Customer, not the 3<sup>rd</sup> party must enter into the NEM Interconnection Agreement)

Person Executing the GFIA/CGA	Title of Person Executing GFIA/CGA

Name of Legal Entity to be entered in signatures section of the GFIA/CGA

**C.2. 3<sup>rd</sup> Party Owner – GFIA Information** (Please identify the 3<sup>rd</sup> party, if known, that will execute the GFIA). Not applicable for Net Energy Metering Applicants, because SCE and the Customer, not the 3<sup>rd</sup> party must enter into the NEM And Renewable Electrical Generating Facility Interconnection Agreement

Person Executing the GFIA	Title of Person Executing GFIA

Name of Legal Entity to be entered in signatures section of the GFIA

**D. Operating Date** (What date is this Generating Facility expected to begin operation?)

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**E. Expiration Date\*** (The date the status of this Application is changed to "withdrawn" by SCE?)

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\* The information submitted in this Application will remain active and valid for a period of 12 months from the date the Application was accepted by SCE as a "completed" Application. If the project has not received written authorization to operate in parallel, or reasonable proof the project is going forward has not been submitted to SCE by that time, the Application will be considered "withdrawn". To the extent that the Initial Review, Supplemental Review, or Detailed Interconnection Study fees have been paid to and the corresponding reviews/study completed by SCE, Applicant will only be entitled to a return of one-half of the Initial Review fee of \$400. All other fees will be forfeited.

**Part 2 Cont'd – Identifying the Generating Facility's Location and Responsible Parties**

**F. Estimated Versus Actual Cost Responsibility**

If actual costs for (1) detailed interconnection studies, and/or (2) interconnection Facilities and distribution system modifications exceed the original estimated amounts, Applicant will be responsible for costs above the estimated amounts, and SCE will refund the difference. Applicants seeking interconnection under SCE's Net Energy Metering tariffs are not responsible for Initial Review, Supplemental Review and Detailed Interconnection Study fees, or for Distribution upgrade and Network Upgrade costs.

**Part 3 - Describing the Generating Facility and Host Customer's Electrical Facilities**

A. (MP&I)	Indicate the operating mode of the Generating Facility	operating mode options: _1 _2 _3 (Choose one)
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Instructions and Notes

Choose from the following operating mode options:

- Parallel Operation:** The Generating Facility will interconnect and operate "in parallel" with SCE's Distribution System for more than one (1) second.
- Momentary Parallel (MP) Operation:** The Generating Facility will interconnect and operate on a "momentary parallel" basis with SCE's Distribution System for a duration of one (1) second or less through transfer switches or operating schemes specifically designed and engineered for such operation.
- Isolated Operation:** The Generating Facility will be "isolated" and prevented from becoming interconnected with SCE's Distribution System through a transfer switch or operating scheme specifically designed and engineered for such operation.

If the answer is operating mode option 1, "parallel operation," please supply all of the information requested for the Generating Facility. Be sure to supply adequate information including diagrams and written descriptions regarding the protective relays that will be used to detect faults or abnormal operating conditions on SCE's Distribution System.

If the answer is operating mode option 2, "momentary parallel operation," only questions A, E and F of this Part 3 and questions A, B, E, F, I, L, M, N, and S of Part 4 need be answered. Be sure, however, to supply adequate information including diagrams and written descriptions regarding the switching device or scheme that will be used to limit the parallel operation period to one second or less. Please also describe the back up or protective device and controls that will trip the Generating Facility should the transfer switch or scheme not complete the transfer in one second or less.

If the answer is operating mode option 3, "Isolated Operation," only questions A, E, and F of this Part 3 and questions A, B, F, and S of Part 4 need be answered. Be sure, however, to supply adequate information including diagrams and written descriptions regarding the isolating switching device or scheme that will be used to prevent the Generating Facility from operating in parallel with SCE's Distribution System.

**Part 3 Cont'd - Describing the Generating Facility and Host Customer's Electrical Facilities**

B. <i>Parallel Operation Applications Only</i>	<p>If the Answer to Section A. above was operating mode option 1, please indicate the type of agreement that is being requested with this Application. If operating mode option 2 or 3 was selected, please skip to questions E and F.</p> <p>If agreement options 2, 3, 5, 6, 8, 9 10, 11, 12, 13 or 14 to this Section B are chosen, please provide an estimate of the maximum kW the Generating Facility is expected to export to SCE's Distribution System. If SCE determines that the amount of power to be exported is significant in relation to the capacity available on its Distribution System, it may request additional information, including time of delivery or seasonal kW/kWh estimates.</p>	<p>agreement options: _1 _2 _3 _4 _5 _6 _7 _8 _9 _10 _11 _12 _13 _14 (Choose all that apply)</p> <p>_____ Maximum kW</p>
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Instructions and Notes

Sample agreements are available from SCE for review. Choose from the following fourteen (14) agreement options:

**Customer Owned Generating Facility (not NEM-eligible)**



## GENERATING FACILITY INTERCONNECTION APPLICATION

1. **A Generating Facility Interconnection Agreement (Non-Export) (Form 14-731)** that provides for parallel operation of the Generating Facility, but does not provide for exporting power to SCE's Distribution System.
2. **A Generating Facility Interconnection Agreement (Inadvertent Export) (Form 14-745)** that provides for parallel operation of the Generating Facility, and the occasional, inadvertent, non-compensated, export of power to SCE's Distribution System.
3. **A "Qualifying Facility" Power Purchase Agreement** that provides for parallel operation of the Generating Facility, and exporting power to SCE's Distribution System for sale to SCE. This option is available only to "Qualifying Facilities" with a total Nameplate Capacity of 100 kW or less. See Question F for the definition of a Qualifying Facility. (This type of agreement has not yet been developed by SCE or approved by the CPUC. Check with SCE for availability)

### **Third Party Owned Generating Facility (not NEM-eligible)**

4. **A "Public Water and Wastewater Agency" power purchase agreement** that provides for parallel operation of the Generating Facility, and exporting power to SCE's Distribution System for sale to SCE. This option is available only to SCE customers who own and operate an "Eligible Renewable Generating Facility as defined in SCE's Tariff Schedule WATER ("Water Agency Tariff For Eligible Renewables") with a total effective generation capacity of not more than 1.5 megawatts (MW). Please indicate the power sale option and applicable contract that is being requested below:
  - Feed-In (wherein customer sells all power generated to SCE, and SCE provides all of customer's energy requirements) (Form 14-733)
  - Excess sale (wherein customer uses power generated to serve its energy requirements, and sells excess energy to SCE) (Form 14-734)
5. **A "California Renewable Energy Small Tariff" power purchase agreement** that provides for parallel operation of the Generating Facility, and exporting power to SCE's Distribution System for sale to SCE. This option is available only to SCE customers who own and operate an "Eligible Renewable Generating Facility as defined in SCE's Tariff Schedule CREST ("California Renewable Energy Small Tariff") For Eligible Renewables") with a total effective generation capacity of not more than 1.5 megawatts (MW). Please indicate the power sale option and applicable contract that is being requested below:
  - Feed-In (wherein customer sells all power generated to SCE, and SCE provides all of customer's energy requirements) (Form 14-786)
  - Excess sale (wherein customer uses power generated to serve its energy requirements, and sells excess energy to SCE) (Form 14-734)
6. **A Generating Facility Interconnection Agreement (Non-Export) (Form 14-742)** that provides for parallel operation of the Generating Facility, but does not provide for exporting power to SCE's Distribution System.
7. **A Generating Facility Interconnection Agreement (Inadvertent Export) (form 14-743)** that provides for parallel operation of the Generating Facility, and the occasional, inadvertent, non-compensated, export of power to SCE's Distribution System.
8. **A "Qualifying Facility" Power Purchase Agreement** that provides for parallel operation of the third party owned Generating Facility, and exporting power to SCE's Distribution System for sale to SCE. This option is available only to "Qualifying Facilities" with a total Nameplate Capacity of 100 kW or less. See Question F for the definition of a Qualifying Facility.
9. **A Customer Generation Agreement (Form 14-744)** that defines the relationship between SCE and the Customer whose name appears on SCE's Customer Account. This agreement must be executed in addition to agreements 6 and 7.

**Part 3 Cont'd- Describing the Generating Facility and Host Customer's Electrical Facilities**

**Net Energy Metering Generating Facility**

10. **A Net Energy Metering And Renewable Electrical Generating Facility Interconnection Agreement (Form 16-344)** that provides for parallel operation of the Generating Facility, and exporting energy to SCE's Distribution System for credit under the terms of SCE's Schedule NEM for Generating Facilities of 1 MW or less.
11. **A Biogas Digester Electrical Generating Facility Net Energy Metering And Renewable Electrical Generating Facility Interconnection Agreement (Form 14-750)** that provides for parallel operation of the Generating Facility, and exporting energy to SCE's Distribution System for credit under the terms of SCE's schedule BG-NEM for qualifying bio gas digester Generating Facilities only.
12. **A Fuel Cell Electrical Generating Facility Net Energy Metering And Renewable Electrical Generating Facility Interconnection Agreement (Form 14-755)** that provides for the parallel operation of the Generating Facility, and exporting energy to SCE's Distribution System for credit under the terms of SCE's schedule FC-NEM for qualifying fuel cell Generating Facilities only.
13. **Generating Facility Interconnection Agreement (Multiple tariff) (Form 14-773)** that provides for the parallel operation of a Generating Facility that utilizes generators eligible for service under NEM or other applicable NEM tariffs (e.g., NEM, BG-NEM, FC-NEM) that are electrically connected behind the same Point of Common Coupling (PCC) with generators not eligible to receive service under a NEM tariff.
14. **Other, please describe:** \_\_\_\_\_

C.  
*Parallel  
Operation  
Applications  
Only*

<p>If the answer to Section B above was agreement option 1 or 6, please indicate the protection option that will be used to prevent energy from being exported to SCE's Distribution System.</p> <p>If protection option 3 to this Section C is selected, please provide the continuous current rating of the host Customer facility's service entrance equipment (service panel rating):</p> <p>_____</p> <p style="text-align: right;">Amps</p> <p>If protection option 4 to this Section C is selected, please provide the minimum load of the host Customer facility:</p> <p>_____</p> <p style="text-align: right;">kW</p>	<p>protection option:  <u>  </u>1 <u>  </u>2 <u>  </u>3 <u>  </u>4          (Choose one)</p>
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Instructions and Notes

Refer to SCE's Rule 21, Section G.1.i., for additional information as to how to answer this question. If the Generating Facility will never export power to SCE's Distribution System, a simpler, lower cost, protection scheme may be used to control the interface between the Generating Facility and SCE's Distribution System. Choose from the following four options:

1. A reverse-power protection device will be installed to measure any export of power and trip the Generating Facility or open an inter-tie breaker to isolate the Generating Facility if limits are exceeded. Note: Please check with SCE before you elect this option. The required relay sensitivity levels are often difficult to achieve.
2. An under-power protection device will be installed to measure the inflow of power and trip or reduce the output of the Generating Facility if limits are not maintained.
3. The Generating Facility Interconnection Facility equipment has been certified as Non-Islanding and the incidental export of power will be limited by the design of the interconnection. If this option is to be used, the continuous ampere rating of the service entrance equipment (service panel rating) that is used by the host Customer facility must be stated in the space provided above.
4. The Gross Nameplate Rating of the Generating Facility will not exceed 50% of the host Customer facility's minimum electrical load. If this option is to be used, the minimum load of the host Customer facility must be stated in the space provided above.

Note: With the approval of SCE, a Producer that wishes to retain the option to export power from a Generating Facility to SCE's Distribution System may use a different protection scheme that provides for the detection of faults and other abnormal operating conditions.

**Part 3 Cont'd – Describing the Generating Facility and Host Customer's Electrical Facilities**

D.  
*Parallel  
Operation  
Applications  
Only*

<p>What is the maximum 3-phase fault current that will be contributed by the Generating Facility to a 3-phase fault at the Point of Common Coupling (PCC)? (If the Generating Facility is single phase in design, please provide the contribution for a line-to-line fault.)</p> <p>Please indicate the short circuit interrupting rating of the host Customer facility's service panel:</p> <p>_____</p> <p style="text-align: right;">Amps</p>	<p>_____</p> <p style="text-align: right;">Amps</p>
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Instructions and Notes

Refer to SCE's Rule 21 Sections H.4.a. and G.1.f. for significance and additional information. To determine this value, any transformers and/or significant lengths of interconnecting conductor used between each of the Generators (if there are more than one) that make up the Generating Facility and the PCC must be taken into account. The details, impedance, and arrangement of such transformers and interconnecting conductors should be shown on the single-line diagram that is provided. Consult an electrical engineer or the equipment supplier if assistance is needed in answering this question.

It is expected that most Applicants will want to reserve the flexibility to operate any or all of their Generators in parallel. If the design of the proposed Generating Facility limits the amount of generation that may be interconnected at any time to SCE's Distribution System, please describe the assumptions used in calculating the maximum fault current contribution value.

E. (MP&I)	Please indicate how this Generating Facility will be operated.	___1 ___2 ___3 ___4 ___5 ___6 ___ (Please choose all options that may apply.)
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**Instructions and Notes**

Choose from the following five operation options:

1. **Combined Heat and Power or Cogeneration** – Where the operation of the Generating Facility will produce thermal energy for a process other than generating electricity.
2. **Peak Shaving/Demand Management** – Where the Generating Facility will be operated primarily to reduce electrical demands of the host Customer facility during SCE's "peak pricing periods".
3. **Primary Power Source** – Where the Generating Facility will be used as the primary source of electric power and power supplied by SCE to the host Customer's loads will be required for supplemental, standby, or backup power purposes only.
4. **Standby / Emergency / Backup** – Where the Generating Facility will normally be operated only when SCE's electric service is not available.
5. **Net Energy Metering** – Where the Generating Facility qualifies and receives service under one of SCE's Net Energy Metering tariffs.
6. **Multiple Tariff** – Generating Facilities that have a combination of non-Net Energy Metering (non-NEM) generator(s) and Net Energy Metering (NEM) generator(s). Select one of the following four options:
  - New facility installing non-NEM generator(s) and/or differently tariffed NEM generators at the same time.
  - Existing facility with non-NEM generator(s) and planning to add NEM generator(s). Please provide data for the table below.
  - Existing facility with NEM generator(s) and planning to add non-NEM generator(s). Please provide data for the table below.
  - Existing facility with NEM generator(s) and planning to add NEM generator(s) under a different NEM tariff. Please provide data for the table below.

**Part 3 Cont'd - Describing the Generating Facility and Host Customer's Electrical Facilities**

F. Generator Interconnection – Point of Interconnection/Tie-in Point

1. Does your interconnection satisfy SCE's ESR?

Yes  
 No. Reason \_\_\_\_\_

2. Is the currently proposed tie-in point a result of restrictions placed on altering the existing panel or equipment within, as imposed by the local authority having jurisdiction?

Yes  
 No. Reason \_\_\_\_\_

3. Are there existing utility facilities in the vicinity of the proposed point of interconnection?

Yes  
 No

(Note: Minimum clearances must be maintained from SCE facilities, as specified in SCE's ESR and or UGS)

G. (MP&I)	Please indicate if Qualifying Facility Status will be obtained from the FERC for this Generating Facility.	<input type="checkbox"/> Yes <input type="checkbox"/> No
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Instructions and Notes

Parties operating Generating Facilities complying with all of the requirements for qualification as either a small power production facility or cogeneration facility pursuant to the regulations of the FERC (18 Code of Federal Regulations Part 292, Section 292.203 et seq.) implementing the Public Utility Regulatory Policies Act of 1978 (16 U.S.C.A. Section 796, et seq.), or any successor requirements for "Qualifying Facilities," may seek certification from FERC to have the Generating Facility designated as a Qualifying Facility or "QF." In summary, QFs are Generating Facilities using renewable or alternative fuels as a primary energy source or facilities that utilize the thermal energy given off by the generation process for some other useful purpose. QFs enjoy certain rights and privileges not available to non-QF Generating Facilities.

QF status is not required to interconnect and operate in parallel with SCE's Distribution System.

H.	Please indicate if Generating Facility will meet the annual Efficiency and Operating Standards of PUC Code 218.5. (Applicable to Co-Generation only.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
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Part 4 – Describe each of the Generators (See Instructions.) Use additional sheets, if necessary.

**Describe each of the Generators (See Instructions.) Use additional sheets, if necessary**

Instructions  
(see Part 4)

	<b>Generator Information</b>	<b>New Generator Type</b>	<b>New Generator Type</b>	<b>Existing Generator Type</b>	<b>Totals For All Generators</b>
#	Please indicate the number of each "type" of Generator being installed:  (See instructions)				
A (MP&I)	Generator/Inverter Manufacturer (Name)				
B (MP&I)	Generator/Inverter Model (Name/Number)				
C	Generator/Inverter Software Version (Number)				
D	Is the Generator Certified by a Nationally Recognized Testing Laboratory (NRTL) according to Rule 21?	__Yes __No	__Yes __No	__Yes __No	
E (MP)	Generator Type (Choose One)	__Synchronous __Induction __Inverter	__Synchronous __Induction __Inverter	__Synchronous __Induction __Inverter	
F (MP&I)	Gross Nameplate Rating (kVA)				
G	Gross Nameplate Rating (kW)				
H	Net Nameplate Rating (kW)				
I	Energy Storage Electrical Source Function (in addition, please complete section F for further description regarding operations)*	Max kWH Capacity:  Rated kW Discharge:  Max kW Discharge:  List (if any) Device Used to	Max kWH Capacity:  Rated kW Discharge:  Max kW Discharge:  List (if any) Device Used to	Max kWH Capacity:  Rated kW Discharge:  Max kW Discharge:  List (if any) Device Used to	Max kWH Capacity:  Rated kW Discharge:  Max kW Discharge:  List (if any) Device Used to

(N)  
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	* This section is only applicable to AES or battery storage.	Limit Discharge (inverter/Power Control/etc.) _____ _____	Limit Discharge (inverter/Power Control/etc.) _____ _____	Limit Discharge (inverter/Power Control/etc.) _____ _____	Limit Discharge (inverter/Power Control/etc.) _____ _____	       (N)
J (MP)	Operating Voltage (Volts or kV)					(T)
K	Power Factor Rating (%)					(T)
L	PF Adjustment Range (%)	Min. _____ Max. _____	Min. _____ Max. _____	Min. _____ Max. _____		(T)
M (MP)	Wiring Configuration (Choose One)	<input type="checkbox"/> Single-Phase <input type="checkbox"/> Three-Phase	<input type="checkbox"/> Single-Phase <input type="checkbox"/> Three-Phase	<input type="checkbox"/> Single-Phase <input type="checkbox"/> Three-Phase		(T)



**Part 4 Cont'd – Describe each of the Generators (See instructions) Use additional sheets if necessary**

	<b>Generator Information</b>	<b>New Generator Type</b>	<b>New Generator Type</b>	<b>Existing Generator Type</b>		
(MP)	N	3-Phase Winding Configuration (Choose One)	__ 3 Wire Delta __ 3 Wire Wye __ 4 Wire Wye	__ 3 Wire Delta __ 3 Wire Wye __ 4 Wire Wye	__ 3 Wire Delta __ 3 Wire Wye __ 4 Wire Wye	(T)
(MP)	O	Neutral Grounding System Used (Choose One)	__ Ungrounded __ Solidly Grounded __ Ground Resistor _____ Ohms	__ Ungrounded __ Solidly Grounded __ Ground Resistor _____ Ohms	__ Ungrounded __ Solidly Grounded __ Ground Resistor _____ Ohms	(T)
	P	<i>For Synchronous Generators Only:</i> Synchronous Reactance: Transient Reactance: Subtransient Reactance:	_____ (Xd %) _____ (X'd %) _____ (X''d %)	_____ (Xd %) _____ (X'd %) _____ (X''d %)	_____ (Xd %) _____ (X'd %) _____ (X''d %)	(T)
	Q	<i>For Induction Generators Only:</i> Locked Rotor Current: <b>OR</b> <i>Stator Resistance:</i> Stator Leakage Reactance: Rotor Resistance: Rotor Leakage Reactance:	_____ (Amps) _____ (%) _____ (%) _____ (%) _____ (%)	_____ (Amps) _____ (%) _____ (%) _____ (%) _____ (%)	_____ (Amps) _____ (%) _____ (%) _____ (%) _____ (%)	(T)
	R	Short Circuit Current Produced by Generator:	_____ (Amps)	_____ (Amps)	_____ (Amps)	(T)
	S	For Generators that are Started as a "Motor" Only: 1. In-Rush Current Host Customer's Service Entrance Panel (Main Panel) Continuous Current Rating	_____ (Amps) _____ (Amps)	_____ (Amps) _____ (Amps)	_____ (Amps) _____ (Amps)	(T)
(MP&I)	T	Prime Mover Type: (Circle One)	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	(T)



**Part 4 Cont'd – Additional Information Required for Energy Storage**

**Energy Storage System Operations (if applicable):**

Describe the intended use of the storage device (note 1):

Note 1: Example of this can be peaking shaving, export to grid, load shifting, etc. The intended use may be taken into account in the study process

**Electrical Load Function:**

Rated Charge Demand (Load): \_\_\_\_\_ kW

Will the distribution grid be used to charge the storage device (yes/no): \_\_\_\_\_

**If yes,:** Will charging the storage systems from the grid increase the host facility's current peak load

- **Yes:** Provide the amount added of demand in (kW): \_\_\_\_\_
- **No:** Provide technical description of charger control systems including charging periods, source of energy (if applicable), and/or mechanism to prevent charging from the grid:

\_\_\_\_\_

**Generating Facility:**

Including all generation sources such as PV, storage, and other technologies, provide the following information:

Will the generating facilities export power to the grid (yes/no): \_\_\_\_\_

If yes, specify Generating Facility's maximum coincident export to the grid: \_\_\_\_\_ kW

If all generation sources are not simultaneously exporting to the grid, provide technical description of the controls systems for this function:

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<b>Instructions for Part 4 – Describing the Generators</b>		
	<b>Generator Information</b>	<b>Instructions and Comments</b>
#	Please indicate the number of each “type” of Generator being installed:	Please provide the following information for each Generator “type”. Be sure all Generators classified as one “type” are identical in all respects. If only one type of Generator is to be used, only one column needs to be completed. Please be sure the information in the “Totals” column is correct and reflects the total number of Generator units to be installed.
A	Generator/Inverter Manufacturer	Enter the brand name of the Generator.
B	Generator/Inverter Model	Enter the model name or number assigned by the manufacturer of the Generator.
C	Generator/Inverter Software Version	If this Generator’s control and or protective functions are dependent on a “software” program supplied by the manufacturer of the equipment, please provide the version or release number for the software that will be used.
D	Is the Generator Certified by a Nationally Recognized Testing Laboratory (NRTL) according to Rule 21?	Answer “Yes” only if the Generator manufacturer can or has provided certification data. See SCE’s Rule 21, Section L for additional information regarding Generator certification.
E	Generator Design	Please indicate the designated type of each Generator. Designate “Inverter” anytime an inverter is used as the interface between the Generator and the electric system regardless of the primary power production/storage device used.
F	Gross Nameplate Rating (kVA)	This is the capacity value normally supplied by the manufacturer and stamped on the Generator’s “nameplate”. This value is not required where the manufacturer provides only a “kW” rating. However, where both kVA and kW values are available, please indicate both.
G	Gross Nameplate Rating (kW)	This is the capacity value normally supplied by the manufacturer and stamped on the Generator’s “nameplate”. This value is not required where the manufacturer provides only a “kVA” rating. However, where both kVA and kW values are available, please indicate both.
H	Net Nameplate Rating (kW)	This capacity value is determined by subtracting the “Auxiliary” or “Station Service” loads used to operate the Generator or Generating Facility. Applicants are not required to supply this value but, if it is not supplied, applicable Standby Charges may be based on the higher “gross” values.
I	Operating Voltage	This value should be the voltage rating designated by the manufacturer and used in this Generating Facility. Please indicate phase-to-phase voltages for 3-phase installations. See SCE’s Rule 21, Section H.2.b. for additional information.
J	Power Factor Rating	This value should be the nominal power factor rating designated by the manufacturer for the Generator. See SCE’s Rule 21, Section H.2.i. for additional information.

<b>Instructions for Part 4 Cont'd – Describing the Generators</b>		
	<b>Generator Information</b>	<b>Instructions and Comments</b>
K	PF Adjustment Range	Where the power factor of the Generator is adjustable, please indicate the maximum and minimum operating values. See SCE's Rule 21, Section H.2.i.
L	Wiring Configuration	Please indicate whether the Generator is a single-phase or three-phase device. See SCE's Rule 21, Section H.3.
M	3-Phase Winding Configuration	For three-phase generating units, please indicate the configuration of the Generator's windings or inverter systems.
N	Neutral Grounding	Wye connected generating units are often grounded – either through a resistor or directly, depending upon the nature of the electrical system to which the Generator is connected. If the grounding method used at this facility is not listed, please attach additional descriptive information.
O	<i>For Synchronous Generators Only:</i>	If the Generator is of a "synchronous" design, please provide the synchronous reactance, transient reactance, and subtransient reactance values supplied by the manufacturer. This information is necessary to determine the short circuit contribution of the Generator and as data in load flow and short circuit computer models of SCE's Distribution System. If the Generator's Gross Nameplate Capacity is 10 MW or greater, SCE may request additional data to better model the nature and behavior of the Generator with relation to its Distribution System.
P	<i>For Induction Generators Only:</i>	If the Generator is of an "induction" design, please provide the "locked rotor current" value supplied by the manufacturer. If this value is not available, the stator resistance, stator leakage reactance, rotor resistance, rotor leakage reactance values supplied by the manufacturer may be used to determine the locked rotor current. If the Generator's Gross Nameplate Capacity is 10 MW or greater, SCE may request additional data to better model the nature and behavior of the Generator with relation to its Distribution System.
Q	For Generators that are Started as a "Motor" Only: 1. In-Rush Current  2. Host Customer's Service Entrance Panel (Main Panel) Continuous Current Rating	This information is needed only for Generators that are started by "motoring" the generator. See SCE's Rule 21, Section G.1.c. for significance and additional information.  If this question was answered in Part 3, question C of this Application, it need not be answered here.
R	Short Circuit Current Produced by Generator	Please indicate the current each Generator can supply to a three-phase fault across its output terminals. For single phase Generators, please supply the phase-to-phase fault current.

<b>Instructions for Part 4 Cont'd – Describing the Generators</b>		
	<b>Generator Information</b>	<b>Instructions and Comments</b>
S	<p><i>For Generators that are Started as a "Motor" Only:</i></p> <ol style="list-style-type: none"> <li>In-Rush Current</li> <li>Host Customer's Service Entrance Panel (Main Panel) Continuous Current Rating</li> </ol>	<p>This information is needed only for Generators that are started by "motoring" the generator.</p> <p>See SCE's Rule 21, Section G.1.c. for significance and additional information.</p> <p>If this question was answered in Part 3, question C of this Application, it need not be answered here.</p>
T	<p>Prime Mover Type</p>	<p>Please indicate the type and fuel used as the "prime mover" or source of energy for the Generator.</p> <ol style="list-style-type: none"> <li>Internal Combustion Engine – Natural Gas Fueled</li> <li>Internal Combustion Engine – Diesel Fueled</li> <li>Internal Combustion Engine - Other Fuel</li> <li>Microturbine– Natural Gas Fueled</li> <li>Microturbine – Other Fuel</li> <li>Combustion Turbine Natural Gas Fueled</li> <li>Combustion Turbine - Other Fuel</li> <li>Steam Turbine</li> <li>Photovoltaic Panels</li> <li>Solar-thermal engine</li> <li>Fuel Cell– Natural Gas Fueled</li> <li>Fuel Cell– Other Fuel</li> <li>Hydroelectric Turbine</li> <li>Wind Turbine</li> <li>AES or Battery Storage</li> <li>Other (please describe)</li> </ol>

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(T)