

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

Tel. No. (415) 703-1691



January 3, 2006

Advice Letter 2749-E

Rose de la Torre
Pacific Gas & Electric
77 Beale Street, Room 1088
Mail Code B10C
San Francisco, CA 94105

Subject: Revised Rule 21, Generating Facility Interconnection

Dear Ms de la Torre:

Advice Letter 2749-E is effective January 1, 2006. A copy of the advice letter is returned herewith for your records.

Sincerely,

Sean H. Gallagher, Director
Energy Division

REGULATORY RELATIONS	
M Brown	Tariffs Section
R De la Torre	SShaw
T Novak	ASmith
	STatai
JAN 17 2006	
Return to _____	Records _____
File _____	



December 12, 2005

Advice 2749-E

(Pacific Gas and Electric Company ID U 39 E)

Subject: Revisions to Electric Rule 21-- *Generating Facility Interconnections*

Public Utilities Commission of the State of California

Pacific Gas and Electric Company (PG&E) hereby submits for filing revisions to its Electric Rule 21--*Generating Facility Interconnections*. The affected tariff sheets are listed on the enclosed Attachment 1.

Purpose

The purpose of this Advice Letter is to revise Rule 21, Generating Facility Interconnections to make it more consistent with the requirements of the American National Standards Institute and Institute of Electrical and Electronic Engineers Standard for Interconnecting Distributed Resources with Electric Power Systems (ANSI/IEEE 1547-2003). In conjunction with the goals of the Rule 21 working group, these revisions also will make Rule 21 more uniform for San Diego Gas and Electric (SDG&E), Southern California Edison Company (SCE), and PG&E.

To that end, this advice letter proposes the following changes to Rule 21:

1. Section J, Certification and Testing Criteria, to extend the date by which certified equipment will be accepted for interconnection applications from December 31, 2005 to May 7, 2007;
2. Section D. Generating Facility design and Operating Requirements, to correct a typographical error; and
3. Section F, Metering, Monitoring and Telemetry, to extend the date by which PG&E shall file permanent metering requirements with the Commission from December 31, 2005 to December 31, 2006.

Background

On December 21, 2000, the Commission issued Decision (D.) 00-12-037, which adopted new electric interconnection standards, an interconnection agreement, and an application form for distributed generation. In D. 00-12-037, the Commission recognized that, "...establishment of a post-implementation working group is a prudent and effective way to provide an opportunity for ongoing evaluation of implementation issued under the new rule and potential revisiting of areas of concern." (Conclusion of Law No. 9.) A post-implementation working group led by the California Energy Commission was developed to address the adequacy of Rule 21, and the associated agreement and application form on an ongoing basis. As part of this process, the working group has identified changes to Rule 21 needed to increase consistency with ANSI/IEEE 1547-2003, and to create a more uniform electric Rule 21 for the utilities.

This filing will not increase any rate or charge, cause withdrawal of service, or conflict with any other schedule or rule.

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, by facsimile or electronically, any of which must be received no later than January 3, 2006, 22 days from the date of this filing. The protest must state the grounds upon which it is based, including such items as financial and service impact, and should be submitted expeditiously. Protests should be mailed to:

CPUC Energy Division
Attention: Tariff Unit, 4th Floor
505 Van Ness Avenue
San Francisco, California 94102

Facsimile: (415) 703-2200
E-mail: jjr@cpuc.ca.gov and jnj@cpuc.ca.gov

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest also should be sent via U.S. mail (and by facsimile and electronically, if possible) to PG&E at the address shown below on the same date it is mailed or delivered to the Commission:

Pacific Gas and Electric Company
Attention: Brian Cherry
Director, Regulatory Relations
77 Beale Street, Mail Code B10C
P.O. Box 770000

San Francisco, California 94177

Facsimile: (415) 973-7226

E-mail: PGETariffs@pge.com

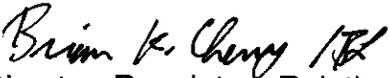
Effective Date

In accordance with General Order 96-A, Section V.B., PG&E requests that this advice filing become effective on **January 1, 2006**. An effective date of January 1, 2006 is consistent with the effective dates requested in the proposals submitted by SCE and SDG&E.¹

Notice

In accordance with General Order 96-A, Section III, Paragraph G, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list. Address changes should be directed to Rose de la Torre at (415) 973-4716. Advice letter filings can also be accessed electronically at:

<http://www.pge.com/tariffs>


Director, Regulatory Relations

Attachments

¹ See SCE Advice 1931-E and SDG&E Advice 1753-E.

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **Pacific Gas and Electric Company (ID U39)**

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: Bernard Lam

Phone #: (415) 973-4878

E-mail: bxlc@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas
PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: **2749-E**

Subject of AL: Revisions to Electric Rule 21-- Generating Facility Interconnections

Keywords (choose from CPUC listing): Rules

AL filing type: Monthly Quarterly Annual One-Time Other _____

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:

N/A

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL¹: _____

Resolution Required? Yes No

Requested effective date: 1/1/2006

No. of tariff sheets: 5

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed¹: N/A

Pending advice letters that revise the same tariff sheets: N/A

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

**CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Ave.,
San Francisco, CA 94102
jjr@cpuc.ca.gov and jnj@cpuc.ca.gov**

**Pacific Gas and Electric Company
Attn: Brian K. Cherry
Director, Regulatory Relations
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177
E-mail: PGETariffs@pge.com**

¹ Discuss in AL if more space is needed.

**ATTACHMENT 1
Advice 2749-E**

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
24026-E	Rule 21--Generating Facility Interconnections	23687-E
24027-E	Rule 21 (Cont.)	23701-E
24028-E	Rule 21 (Cont.)	23719-E
24029-E	Table of Contents -- Rules, Maps, Contracts and Deviations	23738-E
24030-E	Table of Contents -- Rate Schedules	24013-E



RULE 21—GENERATING FACILITY INTERCONNECTIONS
(Continued)

D. GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS (Cont'd.)

1. GENERAL INTERCONNECTION AND PROTECTION FUNCTION REQUIREMENTS (Cont'd.)

a. Protective Functions Required (Cont'd.)

- 2) A voltage and frequency sensing and time-delay function to prevent the Generating Facility from energizing a de-energized Distribution System circuit and to prevent the Generating Facility from reconnecting with PG&E's Distribution System unless PG&E's Distribution System service voltage and frequency is within the ANSI C84.1-1995 Table 1 Range B Voltage Range of 106V to 127V on a 120V basis, inclusive, and a frequency range of 59.3 Hz to 60.5 Hz, inclusive, and are stable for at least 60 seconds, and
- 3) A function to prevent the Generating Facility from contributing to the formation of an Unintended Island, and cease to energize the PG&E system within two seconds of the formation of an Unintended Island.

(T)

The Generating Facility shall cease to energize PG&E's Distribution System for faults on PG&E's Distribution System circuit to which it is connected (IEEE1547-4.2.1). The Generating Facility shall cease to energize PG&E's Distribution circuit prior to reclosure by PG&E's Distribution System equipment (IEEE1547-4.2.2).

- b. Momentary Paralleling Generating Facilities. With PG&E's approval, the transfer switch or scheme used to transfer the Producer's loads from PG&E's Distribution System to Producer's Generating Facility may be used in lieu of the Protective Functions required for Parallel Operation.
- c. Suitable Equipment Required. Circuit breakers or other interrupting devices located at the Point of Common Coupling must be Certified or "Listed" (as defined in Article 100, the Definitions Section of the National Electrical Code) as suitable for their intended application. This includes being capable of interrupting the maximum available fault current expected at their location. Producer's Generating Facility and Interconnection Facilities shall be designed so that the failure of any one device shall not potentially compromise the safety and reliability of PG&E's Distribution System.

(Continued)



RULE 21—GENERATING FACILITY INTERCONNECTIONS
(Continued)

F. METERING, MONITORING AND TELEMETRY (Cont'd.)

4. POINT OF COMMON COUPLING METERING

For purposes of assessing PG&E charges for retail service, the Producer's PCC Metering shall be reviewed by PG&E, and if required, replaced to ensure that it will appropriately measure electric power according to the provisions of the Customer's electric service tariff. Where required, the Customer's existing meter may be replaced with a bi-directional meter so that power deliveries to and from the Producer's site can be separately recorded. Alternately, the Producer may, at its sole option and cost, require PG&E to install multi-metering equipment to separately record power deliveries to PG&E's Distribution System and retail purchases from PG&E. Where necessary, such PCC Metering shall be designed to prevent reverse registration.

Generating Facilities eligible for Net Energy Metering under Public Utilities Code Section 2827, 2827.8, 2827.9, or 2827.10 shall have metering provided pursuant to the terms of the applicable Net Energy Metering tariff schedule.

5. TELEMETERING

If the nameplate rating of the Generating Facility is 1 MW or greater, Telemetering equipment at the Net Generator Metering location may be required at the Producer's expense. If the Generating Facility is interconnected to a portion of PG&E's Distribution System operating at a voltage below 10 kV, then Telemetering equipment may be required on Generating Facilities 250 kW or greater. PG&E shall only require Telemetering to the extent that less intrusive and/or more cost effective options for providing the necessary data in real time are not available. PG&E will report to the Commission or designated authority, on a quarterly basis, the rationale for requiring Telemetering equipment in each instance along with the size and location of the facility.

6. SUNSET PROVISION

Sections F.3 and F.5 are interim provisions only. PG&E shall file permanent Metering requirements with the Commission on or by December 31, 2006. At that time, PG&E shall serve its application for approval of permanent Metering requirements on the service list in Order Instituting Rulemaking (OIR) 04-03-017.

(T)

(Continued)



RULE 21—GENERATING FACILITY INTERCONNECTIONS
(Continued)

J. CERTIFICATION AND TESTING CRITERIA (Cont'd.)

1. INTRODUCTION (Cont'd.)

Section J also provides criteria for "Certifying" Generators or inverters. Once a Generator or inverter has been Certified per this Rule, it may be considered suitable for Interconnection with PG&E's Distribution System. Subject to the exceptions described in Section J, PG&E will not repeat the design review or require retesting of such Certified Equipment. It should be noted that the Certification process is intended to facilitate Generating Facility Interconnections. Certification is not a prerequisite to interconnect a Generating Facility.

The revisions made to this Rule relative to IEEE 1547-2003 have resulted in changes in set points, test criteria, test procedures, and other requirements that will impact previously certified or listed equipment as well as equipment currently under evaluation. These changes were made to provide consistency with IEEE 1547. Equipment that is certified or that has been submitted to a Nationally Recognized Testing Laboratory (NRTL) for testing prior to the adoption of the revised Underwriters Laboratories (UL) 1741 standard titled "Inverters, Converters, Controllers and Interconnection Systems Equipment for use with Distributed Energy Resources" and that subsequently meets the previous Rule 21 Certification requirements will continue to be accepted as Certified Equipment for Interconnection Applications submitted through May 7, 2007, the effective date of the revised UL 1741 standard.

(T)

(T)

(Continued)



TABLE OF CONTENTS
(Continued)
RULES

RULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.
1	Definitions.....	14855,16368,14857,14858,14859,14860,14861, 22891,22892,14864,14865,19403,14867,19761,14869,14870,14871,15564,14873,14874-E
2	Description of Service.....	11257,11896,11611, 14079,11261 to 11264,11498,11266,11267,11499,11269 to 11278,14055,11280 to 11283-E
3	Application for Service.....	11714,18973-E
4	Contracts.....	13612-E
5	Special Information Required on Forms.....	11287,14192,11289-E
6	Establishment and Re-establishment of Credit.....	21155,21156-E
7	Deposits.....	11300,11301-E
8	Notices.....	20965,14145,20966,14146,13139-E
9	Rendering and Payment of Bills.....	20967,22704,20969,23965,21660,20972,20973,20974-E
10	Disputed Bills.....	11308 to 11310-E
11	Discontinuance and Restoration of Service.....	13140,13141,13142,13143,23966,23967, 13146,13147,13148,13149,13150-E
12	Rates and Optional Rates.....	16872,16873,16874-E
13	Temporary Service.....	22472-E
14	Shortage of Supply and Interruption of Delivery.....	19762,15527-E
15	Distribution Line Extensions.....	20093,20094,15577,21551,17850,17851, 21552,21553,15583,20095,22154,22155,22156,15588,17856,22157,15591,16986,15593-E
16	Service Extensions.....	20096, 15595,14880,14881,15596 to 15598,16987,15600 to 15608,14254,13775,15609,15610-E
17	Meter Tests and Adjustment of Bills for Meter Error.....	20099,12050,12051,22705-E
17.1	Adjustment of Bills for Billing Error.....	22706,12054-E
17.2	Adjustment of Bills for Unauthorized Use.....	22707,12056 to 12058-E
18	Supply to Separate Premises and Submetering of Electric Energy.....	14329,14330,13396,13276-E
19	Medical Baseline Quantities.....	18974,18975,18976-E
19.1	California Alternate Rates for Energy for Individual Customers and Submetered Tenants of Master-Metered Customers.....	23932,23968,23969,23970-E
19.2	California Alternate Rates for Energy for Nonprofit Group-Living Facilities.....	13728,23971,13589,13730,23972-E
19.3	California Alternate Rates for Energy for Qualified Agricultural Employee Housing Facilities.....	23935,23973,23953,23974-E
20	Replacement of Overhead with Underground Electric Facilities.....	19012,11240,11241,19013,16665,15611,19014-E
21	Generating Facility Interconnections.....	23678 to 23686,24026,23688 to 23700,24027, 23702 to 23718,24028,23720 to 23735-E
22	Direct Access Service.....	14888,19763,15565, 14891 to 14901,16448,14903,14904,16449,16235 to 16243,14913,16244,16245,16384, 14917,15833 to 15836,14920,14921,15568,14923,15569,14925,14926,15190,15191, 14929,14930,16385,16386,14933,16387,14935,14936,15192,14938 to 14946,16388-E
22.1	Direct Access Service Switching Exemption Rules.....	20996 to 21003-E

(T)

(Continued)



TABLE OF CONTENTS

	CAL P.U.C. SHEET NO.	
Title Page.....	8285-E	
Table of Contents:		
Rate Schedules	24030,23902,24012,23904-E	(T)
Preliminary Statements.....	23901,21010,24008-E	
Rules, Maps, Contracts and Deviations.....	24029,23053-E	(T)
Sample Forms	19880,23984,23985,19236,20509,10572,23225-E	

RATE SCHEDULES

SCHEDULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.
RESIDENTIAL RATES		
E-1	Residential Service	23768,23769,21589,19910,23770,21221-E
E-2	Experimental Residential Time-of-Use Service	22122,22118,22266,22120,22267,22122, 22297,22124,22268,21231,21614,21232,22126-E
E-3	Experimental Residential Critical Peak Pricing Service.....	22429,23771,23772,23773, 23774,22434,23775,22435,23776,21243,22436,22437,22438-E
EE	Service to Company Employees.....	23777-E
EM	Master-Metered Multifamily Service.....	23778,23779,21248,20648,23780,21250-E
ES	Multifamily Service.....	23781,23782,21592,22142,23783,21256-E
ESR	Residential RV Park and Residential Marina Service	23784,23785,22593,20657,23786,21261-E
ET	Mobilehome Park Service.....	23787,23788,21594,22149,23789,21267-E
E-7	Residential Time-of-Use Service	21268,23790,23791,21595,22909,23792-E
E-A7	Experimental Residential Alternate Peak Time-of-Use Service	21274,23793,23794,21277,22912,23795-E
E-8	Residential Seasonal Service Option	23796,23797,23798,22159-E
E-9	Experimental Residential Time-of-Use Service for Low Emission Vehicle Customers.....	20891,23799,23800,23801,23802,21596,21289,23803,21291-E
EL-1	Residential CARE Program Service	22918,23804,21597,22919,23805-E
EML	Master-Metered Multifamily CARE Program Service.....	22920,23806,21299,23807,22170-E
ESL	Multifamily CARE Program Service	23808,23809,21598,22923,23810,21307-E
ESRL	Residential RV Park and Residential Marina CARE Program Service	23811,23812,21599,22926,23813,21313-E
ETL	Mobilehome Park CARE Program Service	23814,23815,21600,22180,23816,21319-E
EL-7	Residential CARE Program Time-of-Use Service	21320,22930,23817,22542,21601,23818,21325-E
EL-A7	Experimental Residential CARE Program Alternate Peak Time-of-Use Service	21326,22932,23819,19783,23820,21330-E
EL-8	Residential Seasonal CARE Program Service Option.....	22934,23821,23822,22190-E
E-FERA	Family Electric Rate Assistance	23963,23964,21643-E
COMMERCIAL/INDUSTRIAL		
A-1	Small General Service	23823,21824,22937,23825,21339-E
A-6	Small General Time-of-Use Service	21340,23826,23827,21343,23828,21345-E
A-10	Medium General Demand-Metered Service	22941,23829,23830,23831,23832,21351,22942,23823,21354,21355-E
A-15	Direct-Current General Service	23834,23835-E
E-19	Medium General Demand-Metered Time-of-Use Service.....	21358,17092, 22946,23836,23837,23838,23839,21364,22207,22208,22110,18864,21016,22111,21018, 21019,16414,15330,21020,23840,23841,22210,20935,23842,20729,19805,21370,21371-E
E-20	Service to Customers with Maximum Demands of 1,000 Kilowatts or More	21372,21373,23843,23844,21377,22213,19314,22214,22112,21022,22113,21024, 21025,22114,15358,21027,23845,23846,23847,23154,17101,20945,21383-E

(Continued)

**PG&E Gas and Electric Advice
Filing List
General Order 96-A, Section III(G)**

ABAG Power Pool	Department of Water & Power City	Northern California Power Agency
Accent Energy	DGS Natural Gas Services	Office of Energy Assessments
Agllet Consumer Alliance	DMM Customer Services	Palo Alto Muni Utilities
Agnews Developmental Center	Douglass & Liddell	PG&E National Energy Group
Ahmed, Ali	Downey, Brand, Seymour & Rohwer	Pinnacle CNG Company
Alcantar & Elsesser	Duke Energy	PITCO
Anderson Donovan & Poole P.C.	Duke Energy North America	Plurimi, Inc.
Applied Power Technologies	Duncan, Virgil E.	PPL EnergyPlus, LLC
APS Energy Services Co Inc	Dutcher, John	Praxair, Inc.
Arter & Hadden LLP	Dynegy Inc.	Price, Roy
Avista Corp	Ellison Schneider	Product Development Dept
Barkovich & Yap, Inc.	Energy Law Group LLP	R. M. Hairston & Company
BART	Energy Management Services, LLC	R. W. Beck & Associates
Bartle Wells Associates	Enron Energy Services	Recon Research
Blue Ridge Gas	Exelon Energy Ohio, Inc	Regional Cogeneration Service
Bohannon Development Co	Exeter Associates	RMC Lonestar
BP Energy Company	Foster Farms	Sacramento Municipal Utility District
Braun & Associates	Foster, Wheeler, Martinez	SCD Energy Solutions
C & H Sugar Co.	Franciscan Mobilehome	Seattle City Light
CA Bldg Industry Association	Future Resources Associates, Inc	Sempra
CA Cotton Ginners & Growers Assoc.	G. A. Krause & Assoc	Sempra Energy
CA League of Food Processors	Gas Transmission Northwest Corporation	Sequoia Union HS Dist
CA Water Service Group	GLJ Energy Publications	SESCO
California Energy Commission	Goodin, MacBride, Squeri, Schlotz &	Sierra Pacific Power Company
California Farm Bureau Federation	Hanna & Morton	Silicon Valley Power
California Gas Acquisition Svcs	Heeg, Peggy A.	Smurfit Stone Container Corp
California ISO	Hitachi Global Storage Technologies	Southern California Edison
Calpine	Hogan Manufacturing, Inc	SPURR
Calpine Corp	House, Lon	St. Paul Assoc
Calpine Gilroy Cogen	Imperial Irrigation District	Stanford University
Cambridge Energy Research Assoc	Integrated Utility Consulting Group	Sutherland, Asbill & Brennan
Cameron McKenna	International Power Technology	Tabors Caramanis & Associates
Cardinal Cogen	Interstate Gas Services, Inc.	Tansev and Associates
Cellnet Data Systems	J. R. Wood, Inc	Tecogen, Inc
Chevron Texaco	JTM, Inc	TFS Energy
Chevron USA Production Co.	Kaiser Cement Corp	Transcanada
Childress, David A.	Luce, Forward, Hamilton & Scripps	Turlock Irrigation District
City of Glendale	Manatt, Phelps & Phillips	U S Borax, Inc
City of Healdsburg	Marcus, David	United Cogen Inc.
City of Palo Alto	Masonite Corporation	URM Groups
City of Redding	Matthew V. Brady & Associates	Utility Cost Management LLC
CLECA Law Office	Maynor, Donald H.	Utility Resource Network
Commerce Energy	McKenzie & Assoc	Wellhead Electric Company
Constellation New Energy	McKenzie & Associates	Western Hub Properties, LLC
Cooperative Community Energy	Meek, Daniel W.	White & Case
CPUC	Mirant California, LLC	WMA
Cross Border Inc	Modesto Irrigation Dist	
Crossborder Inc	Morrison & Foerster	
CSC Energy Services	Morse Richard Weisenmiller & Assoc.	
Davis, Wright Tremaine LLP	Navigant Consulting	
Davis, Wright, Tremaine, LLP	New United Motor Mfg, Inc	
Defense Fuel Support Center	Norris & Wong Associates	
Department of the Army	North Coast Solar Resources	