Rule No. 2
DESCRIPTION OF SERVICE

A. General

1. The character of service available at any particular location should be ascertained by inquiry at the Utility's office.

2. The tariff schedules included herein are applicable for service where the customer purchases his entire electrical requirements from the Utility, and are not applicable where a part of the Customer's electrical requirements are supplied from some other source.

3. The tariff schedules included herein are applicable for service provided from overhead distribution facilities, or where underground distribution facilities are provided for the Utility's operating convenience or in accordance with the provisions of Rule No. 15, except where a schedule specifically provides otherwise.

4. Alternating current service of approximately 60-cycle frequency will be supplied.

5. Voltages referred to in the tariff schedules are nominal voltages.

6. Standard nominal voltages of the Utility are as follows: however, not all of them are available at each delivery point:

   a. Distribution voltages – 120, 120/208, 120/240, 240, 277/480, 480, or depending on location, 2400 or 4160 volts.

   b. Voltages in excess of 4,160 volts are transmission voltages. For its operating convenience, the Utility may elect to supply a Customer from lines of transmission voltage. Where such transmission voltages is 33,000 volts, the Utility may select a standard delivery voltage of 2400 or 4160 volts, or such other voltage as the Utility may select, provided that in no case shall a Customer be required to advance to the Utility a greater amount of money to obtain service than he would be required to advance under the Utility's Rules applicable to the particular load, if he were regularly served from the Utility's nearest appropriate facilities ordinarily employed.

   c. Where the Utility maintains four-wire wye-connected polyphase secondary mains: 120, 120/208, 208 volts, or 277/480 volts. (T)

(Continued)

Rule No. 2
DESCRIPTION OF SERVICE

A. General (Continued)

d. Where specified in rate schedules, combined lighting and power service may be supplied at 120/208 volts four-wire wye or at 277/480 volts four-wire or 120/240 four-wire delta.

B. Phase and Voltage Specifications

1. Single-phase Service
   a. Power

Voltage	Minimum Load Required	Maximum Connected Load Allowed
120 Volts	None	2-15 amp. Branch Circuits
120/240 Volts	None	400 amp. main switch
240 Volts	None	400 amp. main switch
2400 Volts or over	At Utility's Option	At Utility's Option

   b. Motors
      (1) Installation consisting of one motor:

Voltage	Minimum Load Required	Maximum Connected Load Allowed
120 Volts	None	½ hp
240 Volts	None	10 hp

      (2) For a group of motors, the voltage shall be in accordance with the specifications for the largest motor in the group.

   c. Lighting is supplied at 120 or 120/240 volts, single-phase, except where otherwise specified in rate schedules. (T)

Rule No. 2
DESCRIPTION OF SERVICE

B. Phase and Voltage Specifications (Continued)

1. Single-phase Service (Continued)
   d. Single-phase service may be supplied to installations having a proposed maximum load in excess of the switch capacities specified above provided the written approval of the Utility has been first obtained as to the number and size of motors, switches, circuits, and related facilities. 120/240 volt installations will be supplied by the following method as determined by the Utility:

      (1) From two or three separate 120/240 volt service connections. Energy so supplied will be measured through one meter. The connected load on any service connections shall not be greater than twice that on any other service connection.

2. Three-phase Service

   a. Power and Motor Service

Voltage	Minimum Connected Load Required	Maximum Connected Allowed
240 Volts	5 hp	500 kva
480 Volts	30 hp	2,000 kva
2,400 or 4,160 Volts	As specified in Rate Schedules	At Utility's option

   b. Where three-phase service is supplied at 208 volts from a 4-wire wye-connected service of 120/208 volts, the maximum demand allowed is 500 kva.

   c. Service to all loads of 100 kva maximum demand, or over, must be approved by the Utility as to adequacy of facilities for service.

(T)

(Continued)

Rule No. 2
DESCRIPTION OF SERVICE

B. Phase and Voltage Specifications (Continued)

2. Three-phase Service (Continued)

d. Three-phase load must be balanced between phases in accordance with good engineering practice.

3. Where three-wire single-phase or polyphase service is supplied, the load must be balanced as nearly as practicable between two sides or several phases, respectively. In no case is the load on one side of a three-wire single-phase service to be greater than twice that on the other, nor the load on any one phase of a polyphase service greater than twice that of any other.

C. Motor Protection and Equipment. Customer's motor equipment must conform with the following requirements:

1. Motors that cannot be safely subjected to full rated voltage on starting or that drive machinery of such a nature that the machinery, itself, or the product it handles will not permit the motor to resume normal speed upon the restoration of normal supply voltage shall be equipped with devices that will disconnect them from the line upon failure of supply voltage and that will prevent the automatic reconnection of the motors upon restoration of normal supply voltage.

2. All motors of 1 hp or larger shall be equipped with thermal relays, fuses, of other automatic over-current interrupting devices to disconnect completely such motors from the line as a protection against damage due to overheating.

3. Three-phase motors driving elevators, hoists, tramways, cranes, conveyors, or other equipment, which would create hazard to life in the event of uncontrolled reversal of motor rotation, shall be provided with reverse-phase and open-phase protection to disconnect completely the motors from the line in the event of phase reversal or loss of one phase. (T)

(Continued)

Rule No. 2
DESCRIPTION OF SERVICE

D. Allowable Motor Starting Currents

1. The starting current drawn from the Utility's lines shall be considered the name-plate locked rotor current or that guaranteed by the manufacturer. At its option the utility may determine the starting current by test, using a stop ammeter with not more than 15% overswing or an oscillograph, disregarding the value shown for the first 10 cycles subsequent to energizing the motor.

   If the starting current for a single motor exceeds the value stated in the follow-ing tables, reduced voltage starting or other suitable means must be employed, at the Customer's expense, to limit the current to the value specified, except where specific exemptions are provided in Sections D-2, 3, and 4. (T)

Rule No. 2
DESCRIPTION OF SERVICE

D. Allowable Motor Starting Currents (Continued)

Table 1
Alternating Current – Single-phase Motors

Rated Size	Allowable Locked Rotor Currents 120 Volts	240 Volts
½ hp and less	40 amperes	20 amperes
¾ and 1 hp		27 amperes
1 ½ hp		30 amperes
2 hp		40 amperes
3 hp		60 amperes
5 hp		100 amperes
7 ½ hp		110 amperes
10 hp		147 amperes

Table 2
Alternating Current – Single-phase Motors
Allowable Locked Rotor Currents

Rated Size	240 Volts	480 Volts	2,400 Volts
3 hp	60 amperes	30 amperes	
5 hp	90 amperes	45 amperes	
7 ½ hp	120 amperes	60 amperes	
10 hp	150 amperes	75 amperes	
15 hp	220 amperes	110 amperes	
20 hp	250 amperes	125 amperes	
25 hp	304 amperes	152 amperes	
30 hp	360 amperes	180 amperes	
40 hp	380 amperes	190 amperes	
50 hp	400 amperes	200 amperes	40 amperes
60 hp		240 amperes	48 amperes
75 hp		300 amperes	60 amperes
100 hp		400 amperes	80 amperes
125 hp		500 amperes	100 amperes
150 hp		600 amperes	120 amperes
200 hp and over		4 amperes per hp	0.8 amperes per hp

(T)

(Continued)

Rule No. 2
DESCRIPTION OF SERVICE

D. Allowable Motor Starting Currents (Continued)

2. Reduced-voltage starters may be omitted on any motor of a group installation provided that its starting current does not exceed the allowable starting current of the largest motor of the group.

3. A reduced-voltage starter may be omitted on any motor in a group installation provided that its starting current does not exceed three times the maximum demand in amperes of the entire installation.

4. Where service conditions permit, subject to Utility approval, reduced-voltage starters may be omitted in the original installation until such time as the Utility may order the installation of a reduced-voltage starter to be made, and similarly, the Utility may at at any time require starting current values lower than set forth herein where conditions at any point on its system require such reduction to avoid interference with service.

E. Interference With Service

1. Customers who operate equipment which causes detrimental voltage fluctuations (such as, but not limited to, hoists, welders, radio transmitters, x-ray apparatus, elevator motors, compressors, and furnaces) must reasonably limit such fluctuitions upon request by the Utility. The Customer will be required to pay for whatever corrective measures are necessary.

2. Any Customer who superimposes a current of any frequency upon any part of his electrical system, other than the current supplied by the Utility, shall, at his expense, prevent the transmission of such current beyond his electrical system.

F. Power Factor. The Utility may require the Customer to provide, at his own expense, equipment to increase the operating power factor of each complete unit of neon, fluorescent, or other gaseous tubelighting equipment to not less than 90%, lagging or leading.

G. Wave Form. The Utility may require that the wave form of current drawn by equipment of any kind be in conformity with good engineering practices. (T)

(Continued)

Rule No. 2
DESCRIPTION OF SERVICE

H. Added Facilities

1. Where an applicant requests and the Utility agrees to install facilities which are in addition to, or in substitution for, the standard facilities the Utility would normally install, the costs thereof shall be borne by the applicant. Such costs shall include continuing ownership costs as may be applicable. Unless otherwise provided by the Utility's filed tariff schedules, these Added Facilities (special facilities) will be installed, owned and maintained or allocated by the Utility solely as an accommodation to the applicant. Added Facilities are defined as: (N)

    a. Facilities requested by an applicant which are in addition to, or in substitution for, standard facilities (such as the Utility's standard line and service extension facilities), which would normally be provided by the Utility for delivery of service at one point, through one meter, at one voltage class under its tariff schedules, or

    b. A pro rata portion of the facilities requested by an applicant, allocated for the sole use of such applicant, which would not normally be allocated for such sole use.

    Added Facilities may include, but are not limited to, all types of equipment normally installed by the Utility in the development of its electrical transmission and distribution systems and facilities or equipment related to the Utility's provision of service to a customer or a customer's receipt or utilization of the Utility's electrical energy. Added Facilities may also include the differential costs for equipment for electrical transmission and distribution systems designed by the Utility which, in the Utility's sole opinion, is in excess of equipment required for the Utility's standard serving system or all costs of such Added Facilities, as agreed to by the Utility and the customer. Added Facilities may include poles, lines, structures, fixtures, transformers, service connections, load control devices and meters.

2. Added Facilities will be installed under the terms and conditions of a contract in the form on file with the California Public Utilities Commission. Such contract will include, but is not limited to, the following terms and conditions:

    a. Except as provided in subpart b, where new facilities are to be installed for applicant's use as Added Facilities, the applicant shall advance to the Utility the additional installed cost of the Added Facilities (which may include an Income Tax Component of Contributions (ITCC)) over the cost of standard facilities. At the Utility's option, the Utility may finance the new Added Facilities.

    b. Where new facilities are to be installed for applicant's use as Added Facilities, and both Utility and applicant agree that all costs of such Added Facilities will be borne by applicant (which may include ITCC), the applicant shall advance to the Utility all installed costs of such Added Facilities or, at the Utility's option, the Utility may finance the new Added Facilities. (N)

(Continued)

Rule No. 2
DESCRIPTION OF SERVICE

H. Added Facilities (Continued) (T)

2. (Continued)

c. Monthly Ownership Charge for Substation-Level Service. The following monthly ownership charges for substation-level service include a replacement component and are applicable to Added Facilities Agreements for their duration:

1) Applicants being served by the Utility-financed Added Facilities shall pay a Monthly Ownership Charge of 1.2488% for capital and operations and maintenance (O&M) cost components including: rate of return, depreciation rates, administrative and general (A&G) expense, Franchise Fees and Un- collectibles (FF&U), ad valorem tax, insurance, Federal income tax, State income tax, and O&M expense. An included replacement component allows the Utility to provide replacement facilities, if needed, at no additional cost to the customer during the term of the Added Facilities Agreement.

2) Applicants being served by the customer-financed Added Facilities shall pay a Monthly Ownership Charge of 0.270% for operations and maintenance (O&M) cost components including administrative and general (A&G) expense, Franchise Fees and Un-collectibles (FF&U), ad valorem tax, insurance, and O&M expense. An included replacement component allows the Utility to provide replacement facilities, if needed, at no additional cost to the customer during the term of the Added Facilities Agreement.

3) Where existing facilities are allocated for applicant's use as Added Facilities, the applicant shall pay a monthly ownership charge for the Added Facilities of 1.2488% of the Utility's Reconstruction Cost New Less Depreciation value of that portion of the existing facilities which are allocated to the customer as Added Facilities.

d. Monthly Ownership Charge for Non-Substation Level Service. Upon receipt of an application by a customer seeking non-substation level service from Added Facilities, Utility shall develop a Monthly Ownership Charge for such requested service and an Added Facilities Agreement with such changes, if any, as may be appropriate. If the customer executes an Added Facilities Agreement with the newly developed Monthly Ownership Charge, Utility shall file a Tier 2 Advice Letter to seek approval of such Added Facilities Agreement.

e. Where the Utility determines that there are unacceptable credit risks regarding the collection of continuing monthly ownership charges, the applicant will be required to provide credit enhancement measures acceptable to the Utility in its sole opinion, or make an equivalent one-time payment in lieu of the monthly ownership charges for a 20-year term. The applicable payment options, if any, will be selected solely by the Utility.

f. All monthly ownership charges shall be reviewed and refiled with the commission when changes occur in the Utility's costs for providing such service. However, the Utility will not re-file if the Utility's cost change is less than 10 basis points. (T)

(Continued)

Rule No. 2
DESCRIPTION OF SERVICE

H. Added Facilities (Continued) (N)

3. The Utility shall not be liable for any loss, damage, or injury arising from the Utility's installation, operation, maintenance, or control of the Added Facilities, unless such loss, damage, or injury results from the Utility's sole negligence, and, in no event, shall the Utility be liable for loss of profits, revenues, or other consequential damages. No adjustment shall be made to reduce the billings if damage to, or malfunction of the Added Facilities results from any cause other than the negligence or willful act of the Utility.

4. The Utility will not accept requests under the Added Facilities provision of Rule 2, Section H, for underground distribution systems that call for specified pieces of electrical equipment to be installed in below-ground structures in circumstances where it is technically feasible to install the equipment above ground. Such requests will not be accepted for situations indicated in 4.a, 4.b, and with certain exceptions 4.c, below.

   a. New construction on any property except public property and public rights-of-way;

   b. Circumstances in which capacity upgrades, conversions, and relocations are required due to customer-driven renovations of existing structures or other building activities on any property except public property and public rights of way resulting in a change of use or occupancy as defined in state or local law;

   c. Except for situations on a case-by-case basis in which the local authority and the Utility agree to locate Equipment above ground because the above-ground location is technically feasible for the installation. For purposes of this provision, specified pieces of equipment include all primary voltage from 4 kV to 35 kV electrical distribution system equipment (Equipment), including, but not limited to, transformers, switches and fuses, capacitors, and junction bars.

      "Technically feasible" means that enough space is, or can be made, available above ground for the electrical distribution Equipment needed for the Utility to serve customers and that other requirement, such as obtaining the required permits, is met. The required space is defined by existing design standards within the operation and maintenance requirements that are in compliance with applicable safety codes and regulations such as CPUC General Order 128.

(N)

(Continued)

Rule No. 2
DESCRIPTION OF SERVICE

H. Added Facilities (Continued) (N)

4. (Continued)

c. (Continued)

Where the Utility has existing primary voltage distribution equipment installed in below-ground structures, the equipment will continue to be operated and maintained below ground. However, in accordance with Section 4.c., above, where existing below-ground Equipment must be modified by the Utility, above-ground retrofits shall only occur in circumstances in which capacity upgrades, conversions, and relocations are required due to customer-driven renovations of existing structures or other building activities resulting in a change of use or occupancy as defined in state or local law; or when agreed to by the local authority and the Utility on a case-by-case basis.

Design and installation of any above-ground Equipment shall comply with the typical installations depicted by the Utility, as well as land use laws, including local ordinances respecting matters of public health, safety and convenience, that are of general applicability to above-ground utility structures regardless of ownership, to the extent the same would not directly or effectively require the Equipment to be located underground.

When modifying existing Equipment installed in the above-ground public rights-of-way, the Utility shall comply with local ordinances respecting matters of public health and safety and convenience, to the extent that the same area of general applicability to other utility and public works structures or equipment, regardless of ownership, installed in the public rights of way, do not directly or effectively require the Equipment to be located underground, or otherwise conflict with the Utilities design standards and similar documents.

(N)

Rule No. 2
DESCRIPTION OF SERVICE

I. Welder Service (L)

1. Rating of Welders.
Electric welders will be rated for billing purposes as follows:
   a. Motor Generator Arc Welders
   The horsepower rating of the motor driving a motor generator type arc welder will be taken as the horsepower rating of the welder.

   b. Transformer Arc Welders
   Nameplate maximum kVa input (at rated output amperes) will be taken as the rating of transformer type arc welders.

   c. Resistance Welders
   Resistance welder ratings will be determined by multiplying the welder transformer nameplate rating (at 50% duty cycle) by the appropriate factor listed below:

Type of Welder	Transformer Nameplate Rating @ 50% Duty Cycle	Factor Distribution Transformer Utility Owned	Factor Distribution Transformer Customer Owned
Rocker Arm, Press or Projection Spot	20 kva or less	.60	.50
Rocker Arm or Press Spot Projection Spot Flash or Butt Seam or Portable Gun	Over 20 kva) 21 to 75 kva, incl) 100 kva or over) All Sizes)	.80	.60
Flash or Butt	67 to 100 kva, incl	*	*
Projection Spot Flash or Butt	Over 75 kva) 66 kva or less)	1.20	1.90

   *Each flash or butt welder in this group will be rated at 80 kva where distribution transformer is owned by the Utility or 60 kva where distribution transformer is owned by the Customer

   d. Rating prescribed by a, b, and c, above, normally will be determined from nameplate data or from data supplied by the manufacturer. If such data are not available or are believed by either the Utility or Customer to be unreliable, the rating will be determined by test.

   e. If established by seals approved by the Utility, the welder rating may be limited by the sealing of taps which provide capacity greater than the selected tap and/or by the inter-locking lockout of one or more welders with other welders.

(L)

(Continued)

Rule No. 2
DESCRIPTION OF SERVICE

I. Welder Service (Continued) (L)

1. Rating of Welders. (Continued)

   f. When conversion of units is required for tariff application, 1 welder kva will be taken as 1 horsepower for tariffs stated on a horsepower basis and 1 welder kva will be taken as 1 kilowatt for tariffs stated on a kilowatt basis.

2. Billing of Welders.
   Welders will be billed at the regular rates and conditions of the tariffs on which they are served subject to the following provisions:
   a. Connected Load Type of Schedule
      Welder load will be included as part of the connected load with ratings as determined under Section 1, above, based on maximum load that can be connected at any one time, and no allowance will be made for diversity between welders.

   b. Demand Metered Type of Schedule
      Where resistance welders are served on these schedules the computation of diversified resistance welder load shall be made as follows:
      Multiply the individual resistance welder ratings, as prescribed in Sections 1-c to 1-f inclusive, above, by the following factors and add the results thus obtained:

      1.0 times the rating of the largest welder;
      0.8 times the rating of the next largest welder;
      0.6 times the rating of the next largest welder;
      0.4 times the rating of the next largest welder;
      0.2 times the rating of all additional welders.

      If this computed diversified resistance welder load is greater than the metered demand, the diversified resistance welder load will be used in lieu of the metered demand for rate computation purposes.

(L)

(Continued)