

ORCAS POWER AND LIGHT COOPERATIVE

MEMBER SERVICE POLICY 3 TECHNICAL PROVISIONS

3.1 DETERMINATION OF USE AND METERING

The quantity of electrical energy and electrical demand shall be determined by the registration of the electric meters authorized and maintained by OPALCO.

- 3.1.1 Where the load is such that the amount of electrical energy consumed is fixed, OPALCO may elect not to meter the service and to bill the member for a fixed number of kilowatt hours. The amount charged shall be computed under the appropriate schedule including base charges.
- 3.1.2 Where service is rendered under conditions making metering impractical, OPALCO may estimate the amount of energy consumed based on the member's load.
- 3.1.3 OPALCO is required to maintain its meters within plus or minus two (2) percent accuracy. OPALCO maintains an ongoing meter calibration program. OPALCO will test a member's meter upon written request at no charge if the most recent calibration is more than ten years old. If a member requests a meter accuracy check less than ten years from the previous test, he must pay the charges as stated in Schedule of Deposits and Charges in the OPALCO Tariff book. In either case, should the meter, upon testing by OPALCO prove inaccurate, the charges will be refunded and billing adjusted per Member Service Policy 7.9. (The member will be furnished a test report stating the accuracy of the tested meter.) The member may request that the meter be sent to an independent third party for calibration. The member will be responsible for all costs associated with independent calibration of his meter. Should the meter prove inaccurate upon testing, the testing charges will be refunded and billing adjusted per Member Service Policy 7.9.
- 3.1.4 OPALCO requires commercial meterbases with manual bypass and electric meters with demand registers for all non-residential and all three phase accounts. OPALCO requires electric meters with demand registers for all accounts where the 15 minute demand at any time during the year is anticipated to exceed 15 kW. OPALCO will require demand meters on other services if required by the applicable rate schedule. OPALCO may install demand meters on any account for data collection purposes. Where demand meters are installed for data collection, the member will continue to be billed under the existing rate schedule unless the data gathered shows that a different rate schedule is required.
- 3.1.5 Commercial facilities containing electronic equipment, or where the fifteen minute demand at any time during the year does not exceed 15 KW, and having no other loads other than for heating and air conditioning, are required to have commercial meter bases with manual bypass, but are not required to have demand meters.

3.2 PROTECTIVE EQUIPMENT

It is the member's sole responsibility to provide suitable protective equipment for the devices and appliances in their premises. If three phase equipment is used, it is the member's responsibility to protect such equipment against single phase operation, reverse phasing, and under-

and-over voltage conditions. OPALCO will monitor and troubleshoot member related problems from the member's serving substation to the secondary lugs of the member's meterbase. All other investigation into electrical problems beyond the secondary lugs of the member's meterbase shall be at the member's expense.

3.2.1 Non-Standard Tolerances

OPALCO regulates power characteristics to the point of member interconnection, which is generally the serving transformer. Where the member requires a degree of protection or regulation of the characteristics of the electrical service greater than that normally furnished by OPALCO, the member shall be responsible for obtaining, installing and maintaining the required regulating equipment.

3.2.2 Protection

The member is responsible for protection of the member's own equipment due to loss of power, voltage surges and sags, or loss of phase/phases of a three phase line. Certain protective devices normally considered necessary are recommended below:

3.2.2.1 Line Starting Protection

Any motor which, in starting, might be damaged by the full line voltage requires some type of protective device to disconnect it from the line during interruptions in service, thus protecting the motor when service is restored. OPALCO further recommends that such a device be equipped with a time delay mechanism so that the motor will not be disconnected by momentary fluctuations in voltage.

3.2.2.2 Overload Protection

Since the intense heat caused by overload might seriously damage the motor, the member should install a device that will disconnect the motor if overload occurs. Fuses, thermal relays or circuit breakers, which are specifically designed to operate when excessive current occurs, are the devices used for this purpose. Where the member receives three phase service, OPALCO recommends that such protective devices be connected to all phases.

3.2.2.3 Protection from Loss of Phase/Phases

Where the member receives three phase service, phase protecting relays should be installed which will disconnect the motor from the lines in the event that one phase of the line becomes open.

3.2.2.4 Reverse Phasing Protection

For three phase installations of electric cranes, hoists, elevators, pumps and similar equipment which may be damaged by reverse phasing, the member should install relays that will disconnect the motor from the line in the event of accidental phase reversal.

3.2.2.5 Surge Suppressors

The member should install surge suppression devices to protect sensitive electronic equipment such as computers, and other home electronic appliances from transient voltage spikes caused by lightning, system failures, normal

3.3 ADDITIONAL LOAD

OPALCO will attempt to meet the additional load requirements of our members. OPALCO will work with the responsible party to accurately size the transformer to meet the needs of the responsible party's prospective load and to incorporate said load onto OPALCO's power distribution network.

3.3.1 Notice

Responsible parties shall give 60 days written notice to the OPALCO engineering department of any proposed increase in required service capacity and/or meterbase upgrade. Increased service capacity, additional facilities or feeders added to an existing meterbase, or meterbase upgrades, are to be treated as a new service request and require an application. OPALCO's engineering department requires time to assess the impact of the increased load on the power distribution network. OPALCO will issue a preliminary design estimate based on the information supplied by the responsible party. Responsible party is responsible for all costs to accommodate increased service capacity on the primary distribution network.

3.3.1.1 Addition to Single Phase Loads

Responsible party shall give at least sixty (60) days written notice to OPALCO's engineering department of any additional load requirements on single-phase transformers or additional facilities added to an existing meterbase. Specialized equipment such as transformers may have lengthy delivery schedules, and the engineering department requires time to assess the impact of the increased load on the power distribution network. OPALCO will issue a preliminary design estimate based on the information supplied by the responsible party. Responsible party is responsible for all costs to accommodate increased service capacity on the primary distribution network.

3.3.1.2 Addition to Three Phase Loads

Responsible party shall give at least sixty (60) days written notice to OPALCO's engineering department of any additional load requirements, or of the addition of facilities or service runs to an existing meterbase, on any three-phase transformer or bank of transformers forming a three-phase system. Specialized equipment such as three phase transformers may have lengthy delivery schedules, and the engineering department requires time to assess the impact of the increased load on the power distribution network. OPALCO will issue a preliminary design estimate based on the information supplied by the responsible party. Responsible party is responsible for all costs to accommodate increased service capacity on the primary distribution network.

3.3.1.3 Conversion from Single Phase to Three Phase

Three phase service is made available only in specific portions of OPALCO's service area. Responsible parties planning to convert from single phase to three phase should check with OPALCO to determine the availability and cost of providing three phase service. All costs associated with conversion from single phase to three phase shall be paid for by the requesting responsible party. OPALCO's power distribution network has no single phase protection of three phase lines. It is the responsible party's responsibility to protect their three phase equipment from single phase or reverse direction conditions.

3.3.2 OPALCO/Responsible Party Obligations

3.3.2.1 If the load of an *existing* facility increases, requiring a change in transformer size or meter class and the responsible party has been paying for power at this facility for more than five (5) years, OPALCO shall change out the transformer and/or meter at OPALCO's expense as long as the responsible party has not added additional facilities on to the power distribution network.

3.3.2.2 If the load of an *existing* facility increases, requiring a change in transformer size or meter class and the responsible party has been paying for power at this facility for less than five (5) years, the responsible party shall change out the transformer and/or meter at their expense, as outlined in Member Service Policy 5.2

3.3.2.3 If the load of a transformer or meter increases due to the addition of new facilities being served by the transformer, the responsible party of the added facilities shall pay all costs to change out the transformer and/or meter as outlined in Member Service Policy 5.2.

3.4 UNDESIRABLE SERVICE CHARACTERISTICS

Undesirable service characteristics are defined as service(s) connected to OPALCO's distribution network which affect the power quality, reliability, and cost to distribute power on the power distribution network. To limit the affects of undesirable service characteristics to the membership, OPALCO may require the following for continued service:

3.4.1 Reduced Voltage Starting

Individual single phase or three phase motor units rated seven and a half (7.5) horsepower or more shall be controlled by soft start or reduced voltage starters.

3.4.2 Three Phase Required

Individual motor units rated at seven and a half (7.5) horsepower shall be three phased when three phase service is available, unless otherwise approved in writing by OPALCO's engineering department prior to installation. Phase adders such as rotary phase converters and static phase converters up to seven and a half (7.5) horsepower and lower can be used on single phase lines as long as they are protected by a responsible party supplied voltage stabilizer, current harmonics are being filtered, and service supplying power to the motor is a commercial account (see Member Service Policy 3.4.3).

3.4.3 Highly Fluctuating Loads

OPALCO may disconnect service to a member who adds any load that causes a large fluctuation in voltage or a significant disruption to the electric system, or otherwise disturbs the service provided to other members.

3.4.4. Failed Secondaries – When a member's secondary service fails and results in outages to OPALCO's primary system, OPALCO may require the member to install a circuit breaker in compliance with Member Service Policy 6.2.2.1.

3.4.5 Harmonics

Responsible parties installing equipment which can be expected, or are found, to generate harmonics will be required to install appropriate filters to remove the

harmonics at the responsible party's expense. OPALCO may require that a responsible party increase the size of the neutral conductor to accommodate for increased neutral conductor load as a condition of continuing to provide power to the facility(ies) from which the harmonics are emanating.

3.4.6 Additional Protection Devices

Responsible party installing electrical service(s) or electrical equipment which OPALCO, at its sole discretion, determines could potentially cause additional risk to the distribution network will be required to pay for additional protection device(s) on the primary side of the serving transformer.

3.5 IMMEDIATE DISCONNECTION

OPALCO will immediately disconnect service to a member without advance notice under the following conditions:

3.5.1 Immediate Hazard

Service will be disconnected if an immediate hazard exists which threatens the health or safety of the responsible party, the general population, or OPALCO's personnel or facilities.

3.5.2 Meter Tampering

Service will be disconnected if OPALCO determines, at its sole discretion, that there is evidence of meter tampering, power theft, or fraud by the responsible party.

3.5.3 Curtailment

Service will be disconnected if the responsible party has failed to comply with the curtailment procedures imposed by OPALCO during an emergency.

3.5.4 Undesirable Service Characteristics

Service(s) which cause undesirable service characteristics on OPALCO's power distribution network will be immediately disconnected until the responsible party has corrected the condition to OPALCO's satisfaction. OPALCO has sole authority in determining the effect of a connected service on OPALCO's distribution network, and whether or not a connected service is causing, or is likely to cause, undesirable service characteristics, and OPALCO shall not be liable for disconnecting said service for the purpose of protecting the power distribution network.

3.5.5 Failure to Provide OPALCO with Easement on Property

All facilities owned and maintained by OPALCO on private property require an easement (see Member Service Policy Introduction – Easements). Orcas Power and Light Cooperative's membership application agreement includes the requirement for a member property owner to grant to the Cooperative and its assigns reasonable requests for easement(s) to achieve the Cooperative's purposes. Failure to fulfill this obligation may result in the denial or revocation of membership.

In the event that the responsible party will not provide OPALCO with an easement for an existing primary distribution line and serving transformer on the responsible party's property, OPALCO may, at its sole discretion, disconnect the responsible party's

service and relocate OPALCO owned facilities back to a point of legal private easement or public right-of-way.

In such cases, all reconnections to OPALCO facilities will be treated as new service requests. The responsible party refusing legal easement is responsible for all costs associated with installation of their meterbase and the reconnection of secondary conductors, regardless of date of service or installation. OPALCO shall give the responsible party a thirty (30) day notice in advance of relocation of OPALCO facilities. It is the responsible party's responsibility to: apply to OPALCO for a new service; obtain any electrical permits required; secure all secondary easements required to connect to OPALCO facilities; and arrange and pay for trenching and installation of secondary conductors.

3.5.6 Failure to Provide Adequate Clearances for and around OPALCO Facilities.

It is the responsible party's responsibility to maintain adequate clearances and not hinder access in any manner around all OPALCO facilities on their property. Failure to maintain facilities in a manner requested by OPALCO may result in removal of facilities from service. Responsible party shall be responsible for the full disposal and replacement cost of any equipment found to have failed due to inadequate clearances.

3.5.7 Failure to Meet Contractual Obligations Agreed to as a Requirement of Membership.

OPALCO is a member owned, non-profit electric cooperative governed by a board of directors that is elected by the membership. In an effort to treat all members equally, the board has elected to require a defined, consistent level of cooperation by individuals and parties as a condition of membership. Failure to meet the spirit or intent, or otherwise not comply with, the provisions of OPALCO's articles of incorporation, bylaws, member service policies or membership application will result in loss of membership. Responsible parties who do not comply with all provisions in OPALCO's articles of incorporation, bylaws, member service policies, or membership application will be notified of violation or required action in writing. Responsible parties shall be given one hundred twenty (120) days to comply with membership obligations. After the one hundred twenty (120) day notice time period has expired, OPALCO shall deem failure to comply with the provisions of the articles of incorporation, bylaws, member service policies, or obligations agreed to on the membership application as a surrender and forfeiture of membership. OPALCO shall be allowed to remove any and all meter(s) connected in person(s) name. OPALCO shall provide the responsible party(ies) with written notice of the surrender and forfeiture of membership. Any such notice of surrender and forfeiture of membership may be appealed to the board of directors by delivering a written request for reconsideration to OPALCO's manager within sixty (60) days of the date of the notice of surrender and forfeiture. The board's decision shall be final and conclusive and not subject to further appeal or review.

3.5.8 Unauthorized Attachments

Written permission is required prior to the attachment of any equipment or material to any OPALCO property including poles, guys, transformers, or other equipment or structures. Any unauthorized attachment is subject to removal at any time without notice. OPALCO assumes no liability for and will not be responsible for any unauthorized attachments. OPALCO shall not be held responsible for any consequences related to the removal of any unauthorized attachment.

3.6 INSPECTION AND ACCESSIBILITY

The responsible party is responsible for installing, providing the required clearances around facilities, and maintaining the secondary wiring and equipment in accordance with current applicable electric and building codes and OPALCO facility installation specifications. Prior to OPALCO energizing any services, the State of Washington Electrical Inspector must approve the installation, and the secondary trenches must be backfilled. Landscaping around OPALCO's facilities must comply with Member Service Policy 6.1.5.

3.7 INTERCONNECTION WITH RESPONSIBLE PARTY OWNED GENERATION EQUIPMENT

3.7.1 Alternative Technology Generation

OPALCO will permit the interconnection and operation of alternative technology generation as specified in Member Service Policy 14.

3.7.2 Fossil Fuel Standby Generation

OPALCO will not permit the interconnection and operation of fossil fuel standby generation facilities, such as diesel, propane or gasoline driven standby generators on its system. Diesel, propane or gasoline driven standby generators shall be connected to the responsible party's load only through a state inspected double throw switch that will prevent parallel operation with OPALCO's system.



Randy J. Cornelius, General Manager

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