A. General

1. All electric service described in this Rule is subject to conditions in the applicable Rate Schedule, other pertinent Rules, and the Electric Service Guides.

2. Alternating-current service will be supplied by the District at a frequency of approximately 60 Hertz (cycles per second). The District will endeavor to maintain its frequency within reasonable limits, but does not guarantee same.

3. It is the responsibility of the customer to determine the type of service available at any particular location by inquiry at the District office prior to final design or the purchase of any equipment.

4. In areas where a certain standard secondary voltage is being served, or is planned to be served, to one or more customers, applicants may be required by the District to receive that same standard voltage.

5. It is the responsibility of the customer to ascertain and comply with the applicable codes and requirements of governmental authorities having jurisdiction unless otherwise specified by the District.

6. Service to a customer is normally established at one delivery point, through one meter, and at one voltage class. Arrangements for service at multiple delivery points, or for services at more than one voltage class, are permitted only where feasible and approved by the District. Metering to a customer will be provided subject to applicable sections of Rule No. 18.

7. District property is solely for the use of the District in the conveyance and supply of electric power. Customers, or third parties, may not use District property (such as poles or transformers) for any purpose, including but not limited to, supporting customer equipment (such as private lights or antennas) or supporting advertising or banners. Customer landscaping and property improvements may not impact District property by changing elevation in the vicinity of District property, or by limiting the ability of the District to access and work on District facilities. The District has the right to remove customer or third-party property from District facilities, and to remove any improvement that impacts District property. Customers will be billed for District's cost in correcting infractions to this Rule.

8. The District reserves the right to replace subsurface transformers with the current District standard pad mounted transformers. The District will replace the transformer(s) at the sole cost of the District. The District has the right to remove any vegetation, fences, or any other type of temporary structure that would otherwise prohibit the installation and/or maintenance of the newly set transformer(s), except where prohibited by separate contract.

9. To cancel a scheduled appointment with the District's Construction Department, the customer must notify the District's Engineering Department (or supplied contact person) within 24 hours of the scheduled appointment. If the customer fails to notify the District 24 hours prior to the scheduled appointment, a Project Cancellation Fee as specified in Appendix A will apply. Please note, the use of email, phone messages, or other communications media are not acceptable forms of cancelling projects. Customers must make contact and get confirmation from the Engineering Department or supplied contact person in order to properly cancel the appointment.

B. Service Delivery Voltages

1. Following are the standard service voltages normally available, although not all of them are available or can be made available at each service delivery point.

Distribution Voltages			Transmission Voltages
Single-Phase Secondary	Three-Phase Secondary	Three-Phase Primary	Three-Phase
120, 2-wire	240,3-wire[1]	4,160Y/2,400, 4-wire	69,000, 3-wire
120/240, 3-wire	240/120, 4-wire	12,000, 3-wire	115,000, 3-wire
120/208, 3-wire	208Y/120, 4-wire	12,000Y/6,930, 4-wire	230,000, 3-wire
	480,3-wire[2]	17,200, 3-wire	
	480Y/277, 4-wire	20,780Y/12,000, 4-wire	

2. All voltages referred to in this Rule and appearing in some Rate Schedules are nominal service voltages at the service delivery point. The District's facilities are designed and operated to provide sustained service voltage at the service delivery point, but the voltage at a particular service delivery point, at a particular time, will vary within a fully satisfactory range of 5% of the nominal values shown. The voltage balance between phases will be maintained as close as practicable to 2½% maximum deviation from the average voltage between three phases.

3. Voltages may be outside the limits specified when the variations:

   a. Arise from the temporary action of the elements.

[1] Not available for new or rebuilt installations.
[2] Limited availability.

b. Are infrequent momentary fluctuations of a short duration.

c. Arise from service interruptions.

d. Arise from temporary separations of parts of the system from the main system.

e. Are from causes beyond the control of the District.

4. Where the operation of the customer's equipment requires unusually stable voltage regulation or other stringent voltage control beyond that supplied by the District in the normal operation of its system, the customer, at the customer's expense, is responsible for installing, owning, operating and maintaining any special or auxiliary equipment on the load side of the service delivery point as deemed necessary by the customer.

5. Responsibility for designing and operating the system between the service delivery point and the utilization equipment to maintain proper utilization voltage at the line terminals of the utilization equipment shall be borne by the customer.

C. Connected Load Ratings

1. The connected load is the sum of the rated capacities of all of the customer's electric utilization equipment that is served through one metering point and that may be operated at one time, computed to the nearest horsepower, kilowatt or kilovolt-ampere. Motors will be counted at their nameplate rating in horsepower and all other devices at nameplate rating in kilowatts or kilovolt-amperes. Unless otherwise stated in the Rate Schedule, conversions between horsepower, kilowatt and/or kilovolt ampere rating will be made on a one to one basis. The District reserves the right to rate any device by actual test.

2. Motor-generator sets shall be rated at the nameplate rating of the alternating-current drive motor of the set.

3. Where a customer requires new service or modification to existing service to supply x-ray equipment, welding equipment or other equipment which presents large demands of short duration to the District's system, such loads shall be served through a separate meter and transformer. The billing demand for such loads will be based on the sum of the nameplate kVA rating of the equipment or on the nameplate kVA of the District's transformer, whichever is smaller.

D. General Load Limitations

1. Single-Phase Service

a. Single-phase service will normally be 120/240 volts (or three-wire 120/208 volts at certain locations as now or hereafter established by the District) where any single motor does not exceed 7½ horsepower. For any single-phase service, the maximum demand as determined by the District is limited to the capacity of a 100 kVA transformer. If a load requires a transformer installation in excess of 100 kVA, the service normally will be three-phase.

b. In locations where the District maintains a 120/208 volt secondary system, three-wire single-phase service will be limited to that which can be supplied by a main switch or service entrance rating of 200 amperes. Single-phase loads in these locations in excess of that which can be supplied by a 200 ampere main switch or service entrance rating will normally be supplied with a 208Y/120 volt, three-phase, 4-wire service.

2. Three-Phase Service 480 Volts or Less

a. Secondary service normally available from overhead primary distribution systems:

Nominal Voltage	Minimum Load Requirements	Maximum Demand Load Permitted
208Y/120	30 kVA, 3-phase demand	75 kVA
240	5 HP, 3-phase connected	75 kVA
240/120	5 HP, 3-phase connected	75 kVA
480	30 HP, 3-phase demand	112.5 kVA

b. Secondary service from underground primary distribution systems or from underground taps of overhead primary distribution systems (where the District maintains existing three-phase primary circuits):

Nominal Voltage	Minimum Load Requirements	Maximum Demand Load Permitted
208Y/120	Demand load justifies a 75 kVA transformer	1,000 kVA
480Y/277	Demand load justifies a 75 kVA transformer	2,500 kVA

c. Where three-phase service is supplied, the District reserves the right to use single-phase transformers connected wye, open-delta, or closed delta, or use three-phase transformers.

d. Three-phase service will be supplied on request for installations aggregating less than the minimums listed above, but not less than 3 HP, three-phase, where existing transformer capacity is available. If three-phase service is not readily available, or for service to loads less than 3 HP, three-phase service will be provided only if the customer pays to the District its estimated difference between single-phase and three-phase construction costs at that location.

e. Three-phase metering for one service voltage supplied to installations on one premise at one delivery location normally is limited to a maximum of a 3,000 ampere service rating. Metering for larger installations, or installations having two or more service switches with a combined rating in excess of 3,000 amperes, or service in excess of the maximum demand load permitted, may be installed provided approval of the District has been first obtained as to the number, size and location of switches, circuits, transformers and related facilities. New service supplied to two such approved installations meeting the District's standard design requirements and in excess of the capacity of a single 2,500 kVA transformer (or of a single primary service as described in paragraph 3.c below) may be totalized for billing purposes. In every case, the cost for providing special facilities needed for meter totalization will be borne by the requesting party (see paragraph f below for other conditions relating to totalization of existing services).

f. Totalization of existing services: Meters which have been in active service for three years may be totalized as one account for billing purposes, provided all meters are at one premise and within an integral parcel of land, or adjacent parcels of land, or served by a single transformer. Meters which are on separate parcels of land, such as those separated by public roads or railroads (other than local railroad spur line easements) are not eligible for totalization. Meters on separate parcels of land that are interconnected by existing customer-owned, private utility facilities such that the separated parcels are made part of an integrated complex that were totalized prior to the adoption of this Rule may continue to be totalized. Once meters are totalized, any subsequent meter installations that meet the criteria above may be totalized when service is energized. If new meters and/or communication facilities are required for totalization, the customer shall pay for the material and installation cost of the totalizing meters, and installation and monthly costs of communications to the totalized meters. Commencing on January 1, 2011, any new meter to be totalized must have a peak demand of 250 kW or greater. Installation will be subject to availability of the totalizing meters. Prior to totalization of meters, the District may impose additional requirements to ensure efficient use of District installed infrastructure, including transformers.

The customer's bill will reflect the appropriate Schedule's rates plus the total number of totalized meters, less one, times the Totalized Meter and Reading Fee in Appendix A. Demand charges will be based on coincident peak demand.

3. Three-Phase Service Above 480 Volts

a. Three-phase demand loads less than 2,500 kVA will normally be served at a secondary distribution voltage.

b. Three-phase demand loads in excess of 2,500 kVA, but less than 5,000 kVA may, with District approval, be supplied by means of a primary service at the primary distribution voltage available at the location.

c. Three-phase demand loads in excess of 5,000 kVA will normally be served by means of a primary service at the distribution or transmission voltage available at the location.

d. See paragraph 2.f above for conditions relating to totalization of existing services.

4. Load Balance

The customer shall balance the load as nearly as practicable between the two sides of a three-wire service and between all three phases of a three-phase service. The difference in amperes at the customer's peak load shall not be greater than 10% or 50 amperes, whichever is greater; except that the difference between the load on the lighting phase of a four-wire delta service and load on its power phase may be more than these limits. It shall be the responsibility of the customer to keep the load balanced within these limits.

E. Interference with Service

1. General

The District reserves the right to refuse to serve new loads or to continue to supply existing loads of a size or character that may be detrimental to the District's operations or to the service of its customers. Any customer who operates or plans to operate any equipment such as, but not limited to, pumps, welders, furnaces, compressors or other equipment where the use of electricity is intermittent, causes intolerable voltage fluctuations or service interference, must reasonably limit such interference or restrict the use of such equipment upon request by the District.

2. Harmful Wave Form

Customers shall not operate equipment that superimposes a current of any frequency or wave form upon the District's system, or draws current from the District's system of a harmful wave form, which causes interference with the District's operations, or the service to other customers, or inductive interference to communication facilities. Please reference IEEE 519-1992 for specified limits.

3. Customer Responsibility

   Any customer causing service interference to others must take corrective action within the specified time limit approved by the District. If the customer does not take timely corrective action within the specified time period, the District may, after written notice to customer, either install and activate control devices at the customer's expense on the District's facilities that will temporarily prevent the detrimental operation, or discontinue electric service until a suitable permanent solution, provided by the customer, is operational.

4. Motor Starting Current Limitations

   a. The starting of motors shall be controlled by the customer, as necessary, to avoid causing voltage fluctuations that will be detrimental or interfere with the operation of the District's distribution or transmission system, or to the service of any of the District's customers.

   b. Motor starting current is defined as the steady state current taken from the supply line with the motor rotor or rotors locked, with all other power consuming components, including a current reducing starter, if used, connected in the starting position, and with rated voltage and frequency applied.

   c. Motor starting current limitations are as follows:

      1) Single-phase

         a) Automatically controlled, single-phase motorized equipment (except as provided in paragraph b) below) shall be equipped with motors having starting currents not in excess of the following:

            (1) 50 amperes at 120 volts

            (2) 80 amperes at 208 volts

            (3) 100 amperes at 240 volts

         b) Manually controlled, single-phase motorized equipment shall be equipped with motors having starting currents not in excess of the following:

            (1) 100 amperes at 120 volts

            (2) 160 amperes at 208 volts

            (3) 200 amperes at 240 volts

            Unitary air-conditioners and heat pumps, because of their long operating cycles and infrequent starts, will be governed by this section even if they are automatically controlled.

      2) Three-phase

         a) Automatically controlled three-phase motors shall comply with all applicable NEMA standards and shall have maximum starting currents not in excess of the following:

            (1) 830 amperes at 208 volts

            (2) 722 amperes at 240 volts

            (3) 361 amperes at 480 volts

            The values listed permit, in general, the installation of a single 50 HP NEMA standard motor without starting current reducing equipment.

         b) Manually controlled three-phase motors shall comply with all applicable NEMA standards and shall have starting currents not in excess of the following:

            (1) 1,660 amperes at 208 volts

            (2) 1,444 amperes at 240 volts

            (3) 722 amperes at 480 volts

            The values listed permit, in general, the installation of a single 100 HP NEMA standard motor without starting current reducing equipment.

   d. The starting current values in paragraph c above apply only to the installation of a single motor. Starting current reducing equipment may be omitted on the smaller motors of a group installation when their omission will not result in a starting current in excess of the allowable starting current of the largest motor of the group. Where motors start simultaneously, they will be treated as a single unit equal to the sum of their individual starting currents.

   e. The customer shall contact the District regarding motors with voltage ratings in excess of 480 volts.

   f. Three-phase motors to be used where large loads or special conditions exist may, with specific permission of the District, have starting currents in excess of the values shown.

g. It is the responsibility of the customer to insure that the customer's electrical system is capable of handling the starting currents permitted without excessive voltage drop.

h. Notwithstanding the foregoing, the District may limit the maximum size and the type of any motor that may be operated at any specific location on its system to that which, in the opinion of the District, will not be detrimental to the District operation or to the service of its customers.

5. S.T.E.P. Device

Any customer with a S.T.E.P. device found disconnected, bypassed, or disabled in any way shall forfeit any discounts for the year.

Any customer with a S.T.E.P. device found missing or damaged shall forfeit any discounts for the year and shall be subject to the fee listed in Appendix A of these Rules.

6. Meters

Any customer that interferes with the ability of the District to remotely read the meter will be charged a Rolling Truck Fee as depicted in Appendix A.

Repeat offenders will have their service disconnected after the second instance and be charged a Rolling Truck Fee and a tampering fee, in addition to a Restoration of Service Fee (per Rule No. 11) as depicted in Appendix A, prior to service reactivation.

F. Protective Devices

1. It shall be the customer's responsibility to furnish, install, inspect and keep in good and safe condition at the customer's own risk and expense, all appropriate protective devices of any kind or character, which may be required to properly protect the customer's facilities. The District shall not be responsible for any loss or damage occasioned or caused by the negligence, or wrongful act of the customer or of any of the customer's agents, employees or licensees in omitting, installing, maintaining, using, operating or interfering with any such protective devices.

2. It shall be the customer's responsibility to select and install such protective devices as may be necessary to coordinate properly with the District's protective devices to avoid exposing other customers to unnecessary service interruptions.

3. It shall be the customer's responsibility to equip the customer's three-phase motor installations with appropriate devices, or use motors with inherent features to completely disconnect such motors from their power supply, giving particular consideration to the following:

   a. Protection in each set of phase conductors to prevent damage due to overheating in the event of overload.

   b. Protection to prevent automatic restarting of motors or motor-driven machinery which has been subjected to a service interruption and, because of the nature of the machinery itself or the product it handles, cannot safely resume operation automatically.

   c. Open-phase protection to prevent damage due to overheating in the event of loss of voltage on one phase.

   d. Reverse-phase protection where appropriate to prevent uncontrolled reversal of motor rotation in the event of accidental phase reversal.

4. The available short-circuit current varies from one location to another, and also depends on the ultimate design characteristics of the District's supply and service facilities. Consult the District for the ultimate maximum short-circuit current at each service termination point.

5. Any non-District owned emergency standby generation equipment that can be operated to supply power to facilities that are also designed to be supplied from the District's system shall be controlled with suitable protective devices by the customer to prevent parallel operation with the District's system in a fail-safe manner, such as the use of a double-throw switch to disconnect all conductors, except where the District has given permission to parallel through a written agreement or contract.

6. For primary customers, see District document, "Protection Requirements for Electric Service Interconnection at Primary Distribution Voltages and Transmission Voltages." Contact the District Electrical Engineering Department.

G. Power Factor Correction

In the case of neon, fluorescent, luminous, gaseous or mercury vapor lighting equipment, electric welders and other devices having low power factors, the customer may be required by the District to provide, at the customer's expense, the necessary power factor corrective equipment to increase the power factor of such devices to not less than 90%.

H. Relocation of District Facilities

1. Relocations Requested by Non-Governmental Agencies

   The District will relocate District-owned electric facilities upon customer request, provided that the relocation is technically feasible, that easements or rights-of-way can be acquired for the relocated facilities, and that the relocated facilities are acceptable to neighboring customers. The customer is responsible for all costs associated with the relocation.

2. Relocations Requested by Governmental Agencies

   The District will relocate District-owned electric facilities upon request of a governmental agency, provided that the relocation is technically feasible, that easements or rights-of-way can be acquired for the relocated facilities, and that the relocated facilities are acceptable to neighboring customers.

   Governmental agencies requesting pole relocations due to the safety of the travelling public will be done at the District's cost provided the requesting agency adheres to the following steps. Otherwise, the requesting agency will be responsible for all costs associated with the relocation.

   a. Pole relocation projects that request District funding assistance shall have included in its request an independent Traffic Engineer assessment regarding whether the project is needed for the safety of the travelling public.

   b. Requesting agency must include utility or pole relocation costs in its initial request for grant funding (such evidence to be provided to the District upon request) prior to requesting District funding for pole relocation projects.

   c. Requesting agency shall provide the District with an opportunity to review and comment on any pole relocation project plans (with the District to provide timely comments) prior to seeking grant funding or prior to a project plan's submission to the agency's Council or Board for approval. A collaborative approach should reduce project costs and avoid redesign delays by both the agency and the District.

I. Non-Residential Customer Requested Scheduled Outages

The District will disconnect service(s), per customer request, under the following conditions:

1. The customer shall provide a written request with the necessary information (scheduled date, time, site address, purpose of the outage, etc.) to the Electrical Engineering Department with a minimum of seven to ten (7-10) business days' notice.
2. The customer shall be required to submit a signed District service letter. Note: The District service letter will be provided by the Electrical Engineering Department.
3. The customer shall pay to the District, prior to scheduling construction, the estimated cost of the District's work. The estimated cost provided by the District will include labor, material, transportation, and administration fee.
4. After completion of the project, the District will audit the work order. After completion of the work order audit, the customer will be billed or refunded the difference between the actual costs and the estimated costs.
5. Additional cost will be incurred if the customer requests a District crew to stand by for the duration of the outage.
6. Per Rule No. 16, Section D, if the major parts of this electric service(s) are replaced during the outage, the District will require an electrical inspection signed by the local governing authority prior to re-energizing the service(s).

J. Special Facilities

Where the customer requests the District to install special facilities and the District agrees to make such an installation, the additional cost thereof including the present value of continuing ownership costs, if any, shall be borne by the customer.

K. Engineering Services

Customers are responsible for the cost of Engineering Services they request. After the first plan check, all subsequent plan reviews are subject to an Engineering Plan Check Fee as per Appendix A. Other services are estimated with a true-up of charges at the conclusion of the work.