GRAND RIVER DAM AUTHORITY

TERMS AND CONDITIONS

OF SERVICE

FOR

INDUSTRIAL OR COMMERCIAL

ELECTRIC CUSTOMERS

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SECTION 1

1. GENERAL INFORMATION

1.1. PURPOSE

The purpose of this document is to supply essential information to Customers, architects, engineers, contractors, and others concerned with electrical installations in the Grand River Dam Authority (hereinafter “GRDA”) service area. GRDA's objective is to cooperate with and assist Customers to obtain safe, efficient electric service at locations in and around the Mid America Industrial Park south of Pryor, Oklahoma and any other specific Industrial or Commercial Customers supplied by GRDA facilities.

To avoid misunderstanding and expense, Customers, architects, etc. should consult GRDA during the project planning stage about the electric service available. Information in this document is to cover normal installations. GRDA should be consulted for special cases and conditions.

GRDA is authorized pursuant to 82 O.S.Supp.2004, § 861A(F) to provide retail electric power and service to: i) those electric consuming facilities which were receiving GRDA services on August 29, 2003; and ii) any entity located within the boundary of the Oklahoma Ordnance Works Authority/Mid-America Industrial Park or within a two-mile radius of the boundary. Retail distribution of electric power is defined as any sale not for resale.

All electric utility systems and facilities installed and maintained within the Mid America Industrial Park shall adhere and conform to the installation and construction standards adopted by the GRDA.

1.2 CODES AND RULES

All wiring installations must conform to requirements of applicable federal, state, and local electrical codes.

GRDA is not required to inspect Customer wiring installations or equipment as to safety, suitability, or compliance with codes. GRDA may refuse to connect or disconnect service to any installation which does not comply with these service rules or which may be dangerous to persons or property.

1.3 CONTINUITY OF SERVICE

A. The GRDA goals are to provide continuous electric service, to restore service interruptions promptly, and to maintain its facilities with minimum inconvenience to Customers.

B. GRDA does not guarantee to supply continuous service or to maintain standard voltage or frequency at all times.

C. It shall be the responsibility of the Customer to install and maintain devices which will protect the Customer's equipment during abnormal service conditions or the failure of part or all of the electric service.

D. GRDA reserves the right to suspend service without notice to a Customer for such periods as may be reasonably necessary in order to make repairs to or changes in the GRDA's facilities. When conditions permit, an attempt will be made to notify affected Customers prior to planned outages insofar as is practicable.

1.4 QUALITY OF SERVICE

A. GRDA will strive to operate its electric system so that the quality of the electric service is consistent with normal, utility standards. However, GRDA does not represent that this quality level will result in a pure, smooth sine wave voltage, without spikes or dips, as required by some electronic equipment.

B. The Customer is responsible for supplying internal power conditioning equipment, as required, when the Customer's electronic equipment is unable to tolerate the voltage waveform aberrations which occur on the electric supply system.

C. It is the policy of GRDA that voltages within plus or minus five percent (+/-5%) of the nominal voltage shall be acceptable.

1.5 LIABILITY FOR ELECTRICAL EQUIPMENT DAMAGE

A. GRDA will not be liable for any service interruption, irregularity, or any other cause or abnormality not caused by the sole negligence of GRDA.

B. In arriving at the determination of whether negligence was involved, accidents, acts of God, acts of terrorism, and other failures beyond the control of GRDA shall not be considered as negligence.

1.6 FREQUENCY AND VOLTAGE

A. Frequency: All electric service is alternating current at 60 Hertz (cycles per second.)

B. GRDA provides each Customer with only one service voltage. Any exceptions must be approved by GRDA and also conform to the exceptions listed in Section 3. The service voltage provided to the Customer is based on its needs and available service voltages.

C. Standard service voltages: Standard service voltages provided by GRDA are listed below. Not every voltage is available at every location.

1) Single phase, 120 volt, 2 wire, 30-amp service entrance maximum, with grounded neutral conductor.

2) Single phase, 120/240 volt, 3 wire, service entrance, 167 KVA maximum, with grounded neutral conductor.

3) Single phase, 120/208 volt, 3 wire, 200-amp service maximum, with grounded neutral conductor.

4) Three phase, 120/208 volt, 4 wire wye, 750 KVA maximum, with grounded neutral conductor.

5) Three phase, 277/480 volt, 4 wire wye with grounded neutral conductor. Transformer capacities from 25 KVA to 167 KVA available from overhead service in banks of 75 KVA to 500 KVA; capacities from 45 KVA to 2,500 KVA available from pad mount transformers.

6) Three phase, 7,960/13,800 volt, 4-wire wye with grounded neutral. Primary voltage available only for large industrial Customers served through primary metering installations to Customer-operated primary disconnects. Customer is responsible for its own distribution and transformation equipment.

7) Three phase, 69,000 volt primary voltage available only for large industrial Customers served through primary metering installations to Customer-operated primary disconnects. Customer is responsible for its own distribution and transformation equipment.

D. Non-Standard Voltages: The following service voltages are **non-standard** and are being phased out of use on the GRDA system. However, they still exist at some locations and may be available in some cases with special approval. These services are only available from overhead construction.

1) Three phase, 240 volt, 3 wire, 300 KVA maximum, with one phase grounded.

2) Three phase, 120/240 volt delta, 4 wire, 300 KVA maximum, with grounded neutral conductor. The neutral point of one of the 3 secondary windings of the supply transformers is grounded.

3) Three phase, 480 volt, 3 wire delta, (no ground) for maximum demands over 75 KVA.

1.7 UNUSUAL CAPACITY REQUIREMENTS

Large power installations may require an extensive increase in the GRDA distribution or transmission system which may take considerable time to complete. Such projects must be discussed with GRDA well in advance to provide ample time for contract arrangements and construction of GRDA facilities to meet the Customer's start-up requirements and may require non- refundable contributions in aid of construction from the Customer.

1.8 ADDITION TO EXISTING LOADS

A. Contract demand values, as defined in written agreements between the Customer and GRDA, shall not be exceeded. If the Customer plans to modify its load requirements after a contract is in place, then the Customer shall inform GRDA of the expected changes in advance of the change so that appropriate contract modifications can be made, in accordance with the contract provisions and prior to the change taking place.

B. The Customer shall give GRDA reasonable notice of substantial load increases (permanent or temporary) which require a larger transformer, service, or meter. This notice will enable GRDA to change out its equipment, preventing poor service or burned-out transformers and meters. Customer failing to notify GRDA may be charged for the replacement cost of damaged GRDA equipment.

1.9 SERVICE CONNECTIONS

GRDA will make all service connections to its electric distribution system. Connection or alteration of GRDA's electric service or other equipment is prohibited unless specifically authorized by GRDA.

1.10 CUSTOMER OR PUBLIC ATTACHMENTS

GRDA prohibits unauthorized attachment of wires, guys, signs, antennas, fences, etc. to its poles, pedestals, pad-mounted transformers, or other structures.

1.11 EXCLUSIVE USE

A. The Customer's electrical service from GRDA shall be exclusive. GRDA does not allow Customers to have service connections from other electric utilities to the same premises served by GRDA.

B. Nothing in this Section shall prevent an individual Customer from installing its own generation or power producing equipment (cogeneration, wind generators, diesel generation, etc.) However, the Customer shall not connect any such equipment in parallel with the GRDA electrical system without permission. As a minimum, GRDA will require the following:

1) Verification that the generation system has been designed and installed under the direction of a registered professional electrical engineer.

2) The existence of a signed contract concerning at a minimum the operation, liability, power interchange, and responsibility of the parties involved with the interconnection and GRDA.

C. Auxiliary, breakdown, or supplementary service as furnished by GRDA is not to be connected or operated in parallel with a Customer's generating equipment except when such operation is provided for by a special contract.

1.12 ADDITIONAL INFORMATION

A. Contact the GRDA Marketing Department for specific information concerning electric rates, their application, and to apply for service.

B. Contact the GRDA Transmission and Engineering Center for information about service installations, voltage availability, and transformer locations.

C. Contact information and phone numbers for the above listed departments are contained in Appendix A.

1.13 DEFINITIONS

The following definitions are added here for use with this chapter of the Terms and Conditions of Service.

"AUXILIARY, BREAKDOWN, OR SUPPLEMENTARY SERVICE" is that electric service supplied by GRDA which is used to augment the normal electric service that the Customer secures from another source. This service is available to the Customer in the event of failure of the Customer's normal source, or to relieve, sustain, or reinforce the Customer's normal source.

"SERVICE DROP" means the overhead service conductors from the last pole or other aerial support, to and including the splices, if any, connecting to the service entrance conductors at the weatherhead, building, or other structure on the premises.

"SERVICE ENTRANCE CONDUCTORS" means the conductors between the terminals of the service equipment and a point usually outside the building, clear of building walls, where they are joined by tap or splice to the service drop. The service entrance conductors are installed, owned, and maintained by the Customer.

"SERVICE ENTRANCE CONDUCTOR RACEWAY" means the conduit that encloses the service entrance conductors.

"GRDA" means the division of GRDA which is responsible for electrical service. In this document, GRDA and Utility are used interchangeably.

"UNDERGROUND SERVICE" means the service conductors installed underground between the utility secondary and the first point of connection to the Customer service entrance conductors. This termination point may be a meter base, a terminal box, or other enclosure with adequate space, located outside the building wall. On existing Customers where there is no terminal box, meter, or other enclosure with adequate space, the point of connection is considered to be the point of entrance of the service conductors into the building.

"UNDERGROUND SERVICE RACEWAY" means the conduit which encloses the underground service conductors from the pedestal, transformer, or riser pole to the Customer’s meter base or junction box.

"UNMETERED ELECTRIC POWER" is any electricity which has not passed through an authorized utility metering device before being used by a Customer.

"TARIFF" means inclusion of every rate schedule, or provision thereof, and all terms, conditions, rules, and regulations for furnishing utility service.

SECTION 2

2. GRDA EQUIPMENT ON CUSTOMER PREMISES

2.1 GENERAL

GRDA shall have the right to install its equipment on the Customer's premises as required to supply adequate service. All such equipment shall remain GRDA property and will be removed when service is discontinued.

2.2 ACCESS TO GRDA EQUIPMENT

GRDA shall have the right of access to its equipment for inspection, maintenance, and restoration of service. GRDA will attempt to give advance notice of the need for access when possible, but may not be able to do so during emergencies.

2.3 ENCLOSURE OF GRDA EQUIPMENT

The Customer shall not erect fences, walls, or other constructions nor shall the Customer plant shrubbery, trees, or bushes which would limit GRDA access to pad mounted transformers, junction boxes, or other equipment on the Customer's property. This Section shall specifically prohibit the erection of such items around transformers which would limit ventilation to the transformers or provide an enclosure for the accumulation of debris around the transformer. This Section shall not apply to fence enclosures around substations, high voltage switches, and other areas containing exposed energized equipment that may provide a safety hazard to the general public.

2.4 CUSTOMER PAINTING OF GRDA EQUIPMENT

A. Customers and/or property owners shall not be permitted to paint, decorate, or otherwise modify the finish of GRDA overhead or underground distribution equipment located on private or public property.

B. The only exception to this rule shall be that the meter base and underground riser conduit located on the Customer's building may be painted by the Customer to conform to the Customer's building color scheme. However, the Customer shall not paint the glass or any other part of the electric meter itself.

2.5 PADMOUNT TRANSFORMER LOCATIONS NEAR BUILDINGS

A. For all new installations, pad mounted transformers may not be located within ten feet (10') of combustible walls, building overhangs, or building openings.

B. The concrete pads for padmount transformers must be located a minimum of three feet (3') from the walls of non-combustible building structures, provided that the ten foot (10') clearance from building openings in 2.5.A is met, and provided that a reasonable wall clearance is left for air circulation and access to the back of the transformer along the wall.

C. For purposes of definition of this section, building openings shall be defined to include doors, windows, air vent penetrations, or any other opening which would allow flames to penetrate an otherwise non-combustible wall.

SECTION 3

3. CUSTOMER ELECTRICAL SERVICES

3.1 RESPONSIBILITY

GRDA designs, constructs, owns, and maintains all extensions of its transmission, subtransmission, and distribution systems. It makes all service and secondary connections on this system. Rules governing services are defined in this Section.

3.2 APPLICATION FOR SERVICE

A. Application for service shall be in writing and shall be made well in advance of the date service is desired to be available, in order to permit GRDA to plan and schedule its work to provide adequate service.

B. A single application for service cannot be made to apply to different locations, nor to cover more than one (1) point of delivery at the same location to be used by the same Customer, unless GRDA determines that the physical or electrical characteristics of the facility served requires more than one point of delivery according to good engineering and operating practices.

C. Where service of the type desired by the Customer is not already available at the point of delivery, non-refundable contributions in aid of construction and special contract arrangements may be required from the Customer. See Section 11.

3.3 CUSTOMER'S WIRING SYSTEM

All electrical wiring and apparatus connected or to be connected to GRDA's distribution system shall be at the Customer's expense and shall be installed and maintained by the Customer.

3.4 POINT OF DELIVERY OF ELECTRIC SERVICE

The Customer may request a particular location for the electrical service entrance but the location must be approved by an authorized representative of GRDA. If for a technical or code related reason the service cannot be supplied at that point, the GRDA representative shall explain the problem, and a mutually-agreed location will then be determined.

3.5 OVERHEAD SERVICE DROPS

A. GRDA Responsibility: GRDA installs, owns, and maintains an overhead service drop to a suitable point of support on the Customer's premises.

B. Location: Overhead service conductors supported by insulators or other devices shall not be run along the exterior faces of buildings. Service conductors shall be installed in compliance with clearances specified in applicable sections of the National Electric Code or National Electrical Safety Code.

C. Minimum Capacity: No service connection of less than three (3) wires shall be made to a Customer's single phase electric installation consisting of more than two (2) circuits.

D. Tree Clearance on Private Property: Maintenance of the service drop does not include necessary tree trimming on private property along the service drop path. Trimming on private property is the responsibility of the property owner. A clear line-of-sight path from the pole to the service attachment point must be provided before a new or replacement service will be installed.

3.6 UNDERGROUND SERVICE

GRDA installs, owns, and maintains underground secondary and primary voltage service conductors to a suitable point of termination on the Customer's premises in accordance with GRDA rules defined in Section 6.

3.7 EXTENSION OF CUSTOMER'S UTILITY SYSTEM

A Customer shall not extend its electric utility installation over, under, or across space dedicated for public use in order to obtain service at a lower rate for adjacent property, unless such extension is made pursuant to a special contract or filed rate schedule.

3.8 RETAIL RATE CUSTOMERS; SINGLE AND THREE PHASE

Retail rate Customers may be served with single phase or three-phase power, as requested by the Customer, subject to the following provisions:

A. Single phase service shall be available for single phase motors subject to the provisions in Section 5,

B. Three-phase service shall be available for three-phase motors rated for 5 horsepower or more, subject to provisions of the Standard Extension Policy, Section 6.

C. Three-phase service for motors smaller than 5 horsepower, at locations where three phase service is available, may be provided by GRDA subject to the payment conditions of the Standard Extension Policy.

D. When three-phase service is furnished, the Customer shall arrange its wiring so that all single phase and three-phase service can be taken through one, three-phase meter.

3.9 BILLING FOR MULTIPLE ELECTRIC SERVICES

A. If GRDA is requested to furnish two (2) or more metering installations for one (1) Customer, each such installation shall be considered as a separate point of service and charges shall be calculated separately for each.

B. If GRDA determines that it is in the best interest of the electric utility that the Customer be served with multiple metering points, and if such service configuration is in keeping with good engineering and operating practices, then this rule (3.9.A) may be waived.

SECTION 4

4. METERS

4.1 GENERAL

A. All meters shall be furnished, installed, and maintained by GRDA.

All meter bases and meter enclosures shall be furnished and usually installed by the GRDA. In some specific cases, listed in this document, the Customer may be required to mount the meter base and install connecting conduit on the Customer's building. In any case, this equipment shall remain the property of GRDA.

B. The meters used for serving Customer shall be connected to GRDA's real time telemetry network using an electronic communication link to provide GRDA with information regarding

Customer loads on a continuous basis. If the Customer provides all necessary equipment and pays for any additional costs required, GRDA will make the metering information available to Customer, provided, in GRDA's sole discretion, the continuation of such access provides no security or operational risks to GRDA.

4.2 METER LOCATION

A. Meters and associated equipment shall be placed outside in accessible, non-hazardous locations. They shall not be located where subject to damage, vibration, excessive dust, chemical vapors, or corrosive liquids.

B. Meter bases shall be installed so that the center of the meter will be located from 4-1/2 feet to 5 feet above the finished grade at the meter location.

C. On new buildings and during remodeling of existing buildings involving the electrical services, all meter bases shall be installed or relocated outside.

D. The meter base shall be installed on the source side of the service disconnect equipment.

4.3 INSTRUMENT TRANSFORMER METERING INSTALLATIONS

A. In general, all new permanent services shall be metered with instrument transformer type metering installations. These systems require the installation of a meter base and conduit for metering conductors to the instrument transformer location.

B. GRDA will provide and install the meter base when the meter will be located at the transformer.

C. In cases when the service requires a junction box located on the Customer's building, the Customer shall install a GRDA provided junction box and meter base at a mutually agreeable location on the building. All metering wiring and connections will be done by the GRDA.

4.4 RELOCATION OF METERS

GRDA may relocate any meter at its option and expense.

SECTION 5

5. MOTORS AND SPECIAL REQUIREMENTS EQUIPMENT

5.1 GENERAL

Many types of electric equipment adversely affect the quality of electric service. Close consultation by the Customer with GRDA will be required before such equipment is connected, or when it is necessary to remedy an unsatisfactory condition on GRDA's system.

5.2 MOTORS - ALLOWABLE STARTING CURRENTS

A. The following motors may be started across the line in the starting current (which is the locked rotor current of the motor at name plate voltage) does not exceed the limits given below. Groups of motors starting simultaneously shall be classed as one (1) motor.

Nominal Name Plate Voltage	**Maximum Locked Rotor Current**
Single Phase	
120 volt	50 amps
208 or 240 volt	200 amps
Three-phase	
208, 240, or 480 volt	200 amps

B. Larger across-the-line starting currents than those stated above may be permitted where GRDA's facilities are adequate and the frequency of motor starts is such that other Customers' service will not be adversely affected. Upon request of the Customer, GRDA will make individual studies to determine the maximum allowable starting current for each specific installation and, if necessary, recommend a motor starting device.

C. When part-winding, wye-delta, auto transformer, or resistor-type motor starting devices are required, closed-transition transfer from the starting to running conditions must be used unless an open-transition type starter is specifically approved.

D. In the case of thermostatically controlled air conditioning or heat pumping equipment, a time delay device to prevent simultaneous starting of the compressor motor and associated fan motors is an acceptable method for reducing the locked rotor starting currents to acceptable values.

5.3 INTERMITTENT ELECTRIC LOADS

Electric equipment such as spot and arc welding machines, x-ray machines, arc-furnaces, elevators, dredges, locomotives, shovels, feed grinders, etc., whose use of electricity is

intermittent and subject to violent fluctuations, may be served with other electrical loads or by a transformer dedicated solely to that equipment and served as a separate account. Customers contemplating the installation of such equipment must make specific prior arrangements with GRDA.

5.4 INTERFERENCE PRODUCING EQUIPMENT

A. In the event that any Customer operates or connects any electrical device to its electric system which causes an interference, noise, distortion of the 60 Hz sine wave, or other disturbance on the GRDA electric system that results in a disruption, disturbance, or interference to the utility, its other Customers, or a communication company or its Customers, GRDA will:

1) Require the Customer causing the problem to take corrective measures by installing suitable or special equipment necessary to eliminate or reasonably limit such adverse effect, or

2) Install, at the Customer's expense, equipment specifically designed to limit such adverse effect(s).

B. The Customer causing the problem shall bear all expenses necessary to eliminate the adverse conditions or be subject to a discontinuance of service after written notice so that other Customers are not deprived of the quality of service provided prior to the existence of the problem. Where GRDA believes that the condition creates a hazard to the public, the utility, or the Customer's property, the disconnection may be made without prior notice. However, GRDA will notify the Customer as soon as practical after the disconnection.

5.5 HARMONICS

In 60 Hz electric power systems, a harmonic is a sinusoidal component of the 60 Hz fundamental wave having a frequency that is an integral multiple of the fundamental frequency of 60Hz. "Excessive harmonics" in this Section, shall mean levels of current or voltage distortion at the connection between the Customer and GRDA that exceed the levels recommended in IEEE Standard 519-1992, subsection (f)(1). (IEEE Recommended Practices and Requirements for Harmonic Control in Electric Power Systems,) or any successor standards.

A. In addressing harmonic problems, the Customer and GRDA will implement, to the extent reasonably practicable, and in conformance with prudent operation, the practices of IEEE Standard 519.

B. After receipt of notice by a Customer or communications provider that it is experiencing problems caused by harmonics, GRDA will determine whether the condition constitutes excessive harmonics. If so, GRDA will investigate and determine the cause of the excessive harmonics.

C. If the excessive harmonics are caused by the Customer, GRDA will provide written notice to the Customer causing the excessive harmonics. The notice shall provide two options to cure the problem:

1) GRDA may cure the problem by working on the Customers' electric facilities at a mutually agreeable time and charge the investigation and repair costs to the Customer.

2) The Customer may elect to cure the problem at its option and its cost, within a reasonable time approved by GRDA.

D. Failure of the Customer to remedy the problem may result in the GRDA disconnecting the Customer's service. In the event that the Customer refuses to allow GRDA to remedy the problem and the Customer does not stop creating excessive harmonics within the time period specified, GRDA will disconnect the Customer's service until such time as the correction has been completed. Prior to disconnecting the service, GRDA will provide written notice of its intent to disconnect at least five working days before doing so.

SECTION 6

6. ELECTRIC UTILITY STANDARD EXTENSION POLICY

6.1 GENERAL

A. Applicability: GRDA's Standard Extension Policy governs the extension and furnishing of electrical service to its Customers. The standard Extension Policy shall be considered in conjunction with the provisions of GRDA's various rate schedules and other provisions of these Terms and Conditions.

B. Philosophy: The basic philosophy of the GRDA is to provide the best possible service to the Customer at the most reasonable investment. All applicable options shall be given consideration when applying the extension policy.

C. Authority: This document supersedes all previously issued directives concerning the extension policy. The application of the extension policy to the various situations and types of Customers shall be as outlined below.

6.2 RIGHT OF WAY

A. Easement: The Customer shall, upon request, furnish a written easement for the location of the GRDA service facilities upon, over, or under the Customer's premises.

B. Non-Owner Customer: In the event that the Customer is not the owner of the premises occupied by such Customer, it shall be required to obtain from the property owner, or owners, the necessary easement for the installation, maintenance, and operation of the GRDA service facilities upon, over, or under said premises.

D. GRDA's Obligation: GRDA's obligation to render service to a Customer is contingent upon GRDA's

ability to secure the necessary rights of way for its facilities across intervening properties at a cost which in its judgment is reasonable. The Customer shall be required to pay any such right of way costs in excess of that amount which GRDA determines to be reasonable.

SECTION 7

7. UNDERGROUND INDUSTRIAL OR COMMERCIAL SERVICE SECONDARY METERING

7.1 DELIVERY AT SECONDARY VOLTAGE THROUGH GRDA-OWNED TRANSFORMERS

When in GRDA's judgment a new commercial or industrial Customer's load is sufficient to make an underground secondary extension impractical, generally any load in excess of 400 amps, GRDA may provide service as defined below.

GRDA reserves the right to require easements for primary conductor installation necessary for the service.

The wording in this Section shall not prohibit GRDA from doing any of the following:

A. Installing overhead conductors to access the Customer's property from across roads or adjacent properties;

B. Installing overhead conductors to underground riser poles on the Customer's property;

C. Using self-contained metering equipment on specific Customer installations.

7.2 SINGLE SECONDARY METERING POINT, TRANSFORMER RATED METERING

A. A primary voltage supply shall be extended to a transformer located near the point of usage under extension rules stated in Section 11.

B. GRDA will supply the conduit, trenching and backfill, the primary cable, the transformer, and the labor to install this equipment as needed. The Customer will supply and install the concrete pad for the transformer, the service conduit, and the service conductor. The Customer shall identify (label) the service conductors at the transformer and shall leave, as a minimum, a sufficient length of each conductor inside the transformer to reach the top of the transformer secondary compartment.

C. The point of delivery will be defined as the lugs on the secondary bushings of the transformer and the Customer shall be responsible for installing, owning, and maintaining all of the Customer's

distribution system beyond those lugs. Customer shall provide the secondary lugs and GRDA will make the secondary terminations on the transformer bushings.

D. GRDA will furnish and install a meter base and the conduit to the secondary compartment of the transformer. GRDA will install necessary metering equipment and metering wiring. Metering will normally be located at the transformer pad.

E. If a single Customer is to be provided secondary service, and due to service requirements, GRDA determines that more than one transformer station is required, primary metering may be used at the option of GRDA. The point of delivery to the Customer remains at the lugs on the secondary bushings.

7.3 MULTIPLE SECONDARY METERING POINTS, TRANSFORMER RATED METERING

A. In cases in which several commercial Customers are to be supplied from one pad mounted transformer the following applies.

B. GRDA will make a reasonable estimate as to the capacity to be supplied and size its system accordingly. Any capacity requested by the Customer in excess of that amount shall be at the expense of the Customer.

C. The electric supply and service will be extended to the service point(s) located on the Customer's property under extension rules stated in Section 11.

D. The Customer shall be responsible for providing and installing the concrete transformer pad. For each metering point, the Customer shall also install a GRDA-provided junction box and meter base in a mutually-agreed location on the Customer's building. The Customer shall install its conduit and service entrance conductors into the junction box, identify (label) the conductors, and leave a three-foot (3') length of each conductor inside the junction box for connection to GRDA service conductors. Customer shall install a ¾" conduit from the junction box to its corresponding meter base. GRDA will install, operate, and maintain all of the wiring required for the metering equipment.

E. GRDA will provide and install the primary and secondary conduit and conductors, transformer, metering transformers, and meters. GRDA will connect the service conductors to the Customer's service entrance conductors in the junction box.

7.4 REQUIREMENTS FOR PAD MOUNTED TRANSFORMERS

A. The Customer shall provide, at its expense on its premises, an approved transformer vault or transformer pad for each transformer installation, as required by GRDA. GRDA shall provide to the Customer a detailed drawing showing pad dimensions based upon the size of transformer that will be installed and additional drawings of required metering equipment, if needed.

B. When pad mounted transformers are to be used, the pad location shall be chosen to protect the transformers from damage by traffic, or the Customer shall provide adequate guards as approved by the GRDA.

The Customer shall not enclose the transformer location so as to impair ventilation by the transformers or restrict access by GRDA personnel for maintenance or replacement of the GRDA's equipment.

C. The Customer shall not paint the transformer or in any way alter its exterior finish.

7.5 STANDARD CONSTRUCTION FOR PRIMARY VOLTAGE ROAD CROSSINGS

The electric utility's standard method for crossing roads and state highways will be with overhead primary conductors. Where such crossings are necessary to serve a Customer on the side of the road opposite the location of the distribution line, GRDA will require that the Customer provide the necessary easement(s) on its side of the road for installation of pole(s) and anchor(s) as required for the road crossing. If the needed easement is granted, this over- head crossing will be made at no charge to the Customer.

7.6 OPTIONAL UNDERGROUND CONSTRUCTION FOR PRIMARY VOLTAGE ROAD CROSSINGS

In areas where underground service methods will be employed for the new Customer, the following options are available.

A. Multiple Customers: If the road crossing will be located such that it is economically feasible for GRDA to provide service to more than one Customer from the crossing, and if the Customer on whose land the crossing terminates provides the necessary easements so that GRDA can serve the additional Customers, then GRDA will pay the costs necessary to have the road bored for the underground crossing.

B. Single Customer: If the underground road crossing will be located such that it will serve only one (1) Customer, or such that it is not economically feasible to provide service to other Customers from the terminal end of the road bore, then GRDA will provide the crossing with a road bore only if the Customer to be served assumes half the total cost of the road bore. GRDA will assume the other half of this cost. The total cost shall include the costs of labor, materials, and any contract charges necessary for the installation from the base of the pole on one side of the road to the Customer's property line on the other; charges associated with the underground riser on the pole shall not be included.

SECTION 8

8. UNDERGROUND INDUSTRIAL OR COMMERCIALS SERVICE PRIMARY METERING

8.1 LOADS SERVED AT PRIMARY VOLTAGE TO CUSTOMER-OWNED EQUIPMENT (PRIMARY METERING)

If the Customer requests single phase or three-phase underground service from GRDA's primary system (7,960 or 13,800 volts) and if GRDA finds such service to be feasible, GRDA shall provide the service based upon the following criteria.

8.2 STARTING POINT

GRDA will bring its primary system source to a location adjacent to the Customer's property line via overhead or underground system extensions assuming cost calculations in Section 11. The costs for any road crossings shall be as described in Section 7.6.

8.3 CUSTOMER'S SERVICE EQUIPMENT

A. The Customer shall supply 15 KV rated, pad mounted, outdoor, metal enclosed switchgear as its point of service.

B. The switchgear shall be mounted on a concrete pad outside of any buildings or enclosed structures.

C. GRDA will terminate its primary underground conductors upon the bus entrance connections in this switchgear.

8.4 CUSTOMER'S PRIMARY SWITCHGEAR REQUIREMENTS

The bays of the Customer's switchgear shall be configured as follows:

A. Bay #1: Entrance and primary main disconnect. Disconnect shall be a gang-operated three-phase switch, externally operable by the Customer's employees, and capable of providing a visual open point when the disconnect is open. Bay shall include primary main fuses or main breaker with protective relaying.

B. Bay #2: Metering equipment bay. GRDA will define the space needed for the potential and current transformers required to meter the service. GRDA will either supply and install standard metering transformers after arrival of the switchgear, or participate in the cost of the gear by paying to have the factory install the potential and current transformers. The metering bay shall be locked by GRDA and inaccessible to the Customer.

C. Bay #3, and on. Customer's distribution equipment.

8.5 UNDERGROUND PRIMARY CONDUCTOR INSTALLATION

A. GRDA will furnish and install the underground primary cable system required for one, three-phase circuit from the location where GRDA has electric service available to the Customer's service equipment. This circuit shall be of sufficient capacity to carry the Customer's electrical demand and may require multiple phase conductors. GRDA will, at its expense, operate and maintain the primary cable and required conduit to the terminations at the Customer's main disconnect.

B. If the Customer requires a second and/or back-up three-phase circuit from GRDA's source, the Customer shall reimburse GRDA for the total cost of the cable and all utility-supplied materials and equipment for the second primary service, in addition to the trench, backfill, and labor for the installation.

C. The point of delivery shall be at the point on the source side of the Customer's service equipment where the primary conductors are terminated.

D. Requests for service to large loads should be made far in advance and will be judged in view of the GRDA's extension policy as covered herein or considered as special cases.

E. At the option of the GRDA, the metering may be installed on the secondary voltage side of the equipment. Plans for the facilities to be provided for the meter installation shall be submitted to the GRDA before the work is started in order to assure compliance with GRDA and other regulatory code requirements.

SECTION 9

9. OVERHEAD SERVICE TO A SINGLE CUSTOMER FROM A PRIMARY OVERHEAD SYSTEM PRIMARY METERING

9.1 SERVICE AT PRIMARY VOLTAGE TO CUSTOMER-OWNED OVERHEAD EQUIPMENT (PRIMARY METERING)

If the Customer requests single phase or three-phase overhead service from GRDA's primary system (7,960 or 13,800 volts), and if GRDA finds such service to be feasible, GRDA will provide the service based upon the following criteria.

9.2 GRDA RESPONSIBILITY

A. Requests for service to primary metered loads should be made far in advance. Requests will be analyzed in view of GRDA's extension policy as covered herein or considered as special cases.

B. For primary metered, overhead service, GRDA will terminate its primary overhead conductors on the line side of the Customer's switch.

C. The point of delivery will be defined as the line side of the Customer's gang operated disconnect switch.

D. Metering will be done at primary voltage with equipment placed on a pole one span prior to the Customer's point of service.

E. At the option of GRDA, the metering may be installed on the secondary voltage side of the service. In this case, plans for the facilities to be provided for the meter installation shall be submitted to GRDA before the work is started in order to assure compliance with GRDA and regulatory code requirements.

F. The Customer costs associated with service extensions of this type shall be calculated in accordance with Section 11.

9.3 CUSTOMER'S RESPONSIBILITY

A. The Customer shall be responsible for the installation, ownership, maintenance, and operation of the Customer's distribution system beginning with the gang operated three-phase switch and the pole on which it is mounted. The connections on the line side of this switch shall be the utility’s point of service to the Customer.

B. The Customer shall be responsible for providing qualified personnel trained in high-voltage maintenance and operations to oversee its system and equipment. GRDA is not required to provide personnel, materials, or equipment for repairs on any equipment on the Customer's side of the point of service.

9.4 CUSTOMER'S OVERHEAD SERVICE EQUIPMENT

A. The Customer shall supply a lockable, gang operated, three-phase, 15 KV, loadbreak switch which shall have an insulated operating handle and which shall be operable by the Customer's employees from ground level. The switch shall be of sufficient capacity to carry the Customer’s maximum electrical loads and to open successfully under loaded conditions.

B. The switch shall be mounted on a substantial and sound pole owned and installed by the Customer on the Customer's property. As a minimum, the pole shall be a forty-foot (40') Class 2, Southern Yellow Pine or steel pole equivalent to that size and class.

C. The Customer shall provide a set of high voltage fuses sized for its electrical load and installed on the switch pole immediately after the switch. The fuses shall have an interrupt rating exceeding the available fault current at that location on the electric system.

9.5 SUBMETERING

Wording in this Section shall not prohibit GRDA from installing primary or secondary voltage submetering equipment, if necessary, for metering Customer usage for special tariffs.

9.6 TRANSMISSION VOLTAGE SERVICES

A. Primary service at the transmission voltage of 69 KV and above may be available to qualified industrial Customers. If the size of the proposed industrial load indicates or requires a transmission voltage service, as determined by GRDA staff, the general intent of this chapter shall be applied to the proposed service, but at the corresponding higher voltage and with the appropriate higher voltage class of equipment. In general, the minimum required Customer loading needed to qualify for transmission voltage class service shall be Customer electrical demands greater than 10,000 KW.

B. The Customer shall contact GRDA staff for a determination of the availability of such service. It is noted that transmission line construction and source substation modifications will require a significant lead time, and the Customer should contact GRDA as soon as possible to avoid excessive delays in receiving transmission voltage service.

SECTION 10

10. OTHER UNDERGROUND DISTRIBUTION SYSTEMS

10.1 VAULTS FOR GRDA-OWNED EQUIPMENT

A. When an indoor installation of transformers or other equipment is required by the Customer, or when the condition of the property is such that an outdoor installation is impractical, the Customer shall furnish upon the property, without cost to GRDA, a building, room, or vault adequate for the housing of this equipment. This space shall meet the requirements of the National Board of Fire Underwriters and the GRDA Engineering Inspection department and shall have adequate access for installation and replacement of the transformer.

B. Where the service requirements are such that a transformer vault must be installed, the Customer shall provide and install the primary conduit system from an access point outside the building to the vault location. Customer shall also extend and terminate the service entrance conductors, as approved by GRDA, inside the vault. GRDA will provide and install the primary conductors to the vault and the transformer for the vault.

Cost contributions from the Customer shall be as calculated in Section 11.

SECTION 11

11. CUSTOMER COST CALCULATIONS

11.1 PERMANENT ELECTRIC SERVICE

Permanent electric service is provided as outlined below:

A. For all service extensions involving the extension of the primary electric system, including but not limited to overhead and underground taps originating from the present primary system to new transformer locations, cost calculations shall be made to determine the total expense to be incurred by GRDA to provide the extension. Any expenses paid directly by the Customer for its own system installation or upgrade shall not be included in the GRDA total. Charges may be assessed to the Customer based upon 11.2 and 11.3.

B. Secondary extensions and/or service drops from existing 13,800/7,960 volt transformers and transformer banks to new Customers shall be made at no additional cost to the Customer. These extensions shall include those made from existing transformer installations for which the transformer size must be increased due to the new Customer loads.

C. Increases in existing secondary or service size or transformer capacity of an existing service due to increased Customer loading and/or growth shall be made at no additional charge to the Customer.

D. In the case of all other extensions, the formula included in Section 11.2, shall be applied.

11.2 ALLOWABLE EXPENDITURE FORMULA (Extension of Service Allowance)

The Allowable Expenditure for an extension of service to a customer is to be determined as follows:

For extensions of service planned or calculated by GRDA before January 1, 2019:

Allowable Expenditure = 0.11 x EAR x 3

0.11 = That portion of the EAR from this Customer not needed to cover O&M, fuel, production costs, and general expenses.

3 = Return Factor; The number of years assumed for Return on Investment. In this case, ROI equals 3 years.

EAR = Estimated Annual Revenue computed from estimated demand, power factor, and KWH.

For extensions of service planned or calculated by GRDA on or after January 1, 2019:

Extension of Service Allowance = NR x R

NR = 3 years of Net Revenue

Net Revenue = MRE – MC

MRE = Marginal Revenue Estimated will be computed by GRDA based upon GRDA's estimate of the demand, power factor, and kWh for this Customer's load for a 3 year period. Provided, the MRE does not include revenue recovered by the PCA for fuel & purchased power costs.

MC = Marginal Cost will be calculated as the additional cost of serving the additional Customer load, including any applicable marginal costs for energy, capacity, transmission, ancillary services, and other related costs, for a 3 year period as determined by GRDA. Provided, the MC does not include costs that will be recovered by the PCA for fuel & purchased power costs.

R = by default this factor is 0.20.
Provided, in accordance with Section 1.7 of these Terms and Conditions, GRDA may modify this value as approved by the GRDA Board of Directors.

11.2.1 GRDA may, in GRDA's discretion, provide Customer a rate credit-in-lieu of GRDA expending capital related to a Justified Expenditure ('CIL'). The CIL calculation will be subject to the same assumptions used to calculate the Extension of Service Allowance, and GRDA will take title to any electrical infrastructure furnished by Customer and deemed by GRDA to be system upgrades if that infrastructure is included in the CIL calculation. The CIL calculation may not be used if it would cause GRDA's rate to be lower than GRDA's projected short-run marginal costs, as determined and calculated by GRDA

11.3 COST OF EXTENSION TO RENDER SERVICE

A. The initial estimate of the Cost of Extension to render service will be determined by estimating all GRDA incurred costs and expenses necessary to make the installation, including service drops, transformers, rearrangement of transmission and distribution systems, labor, vehicles, outside engineering (if needed), contractor expenses, etc. based upon current cost data, excluding the cost of the meter. As actual costs become available they will be used in determining the final Cost of Extension.

11.4 PAYMENT OF COST OF EXTENSION OF SERVICE

A. If the Allowable Expenditure exceeds the Cost of Extension, the Customer will not be required to initially pay for the cost of the GRDA construction of the system extension required to

supply the Customer.

B. If the Allowable Expenditure does not exceed the Cost of Extension, the Customer will be required to pay the amount of the Cost of Extension that exceeds the Allowable Expenditure ("Unjustified Expenditure").

C. In the case under which the estimate of the Allowable Expenditure does not exceed the estimate of the Cost of Extension, GRDA will incur the initial costs of the total extension and maintain the extension at its own expense. In the month following the connection of the service, GRDA will include on the Customer's monthly electric billing, a "Monthly Adder" equal to 1/36 of the Unjustified Expenditure for the next thirty-six (36) months.

D. In all cases, the ESA will be recalculated using the actual Cost of Extension, and , based on actual revenues as those amounts become available, for determining if there is an Unjustified Expenditure. GRDA may recalculate the Allowable Expenditure at the end of the first twelve (12) months of service, and again at the end of the first twenty-four (24) months of service. If the then current Allowable Expenditure justifies a higher or lower expenditure on the part of GRDA, that amount shall be reflected in an adjustment to the Monthly Adder for the remaining number of months in the first 36 months of service.

B. GRDA will recalculate the Allowable Expenditure at the end of the first thirty-six (36) months of service, if it is found that the revenue from service rendered justifies a higher or lower expenditure on the part of GRDA, the Customer shall receive an appropriate adjustment. If the revenue indicates that a smaller contribution was required from the Customer, the Customer shall receive a credit equal to the excess contribution on the next regular billing(s) until the excess has been repaid. If the revenue indicates that the contribution should have been more than originally estimated, the Customer shall be billed for the additional amount and allowed three months to pay the excess.

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C. GRDA and Customer may enter into a Memorandum of Understanding to memorialize the terms of the Allowable Expenditure, and any associated repayment. However, the Customer's obligations pursuant to these Terms and Conditions of Service will be enforceable without a separate agreement

11.5 SERVICE EXTENSIONS REQUESTED WITH NO EXPECTED LOAD INCREASES

From time to time a Customer may request service extensions for a reason other than for increased load. In such instances the Customer shall pay for the entire estimated Cost of Extension in advance of the work being started. If, upon completion of the work, the actual cost to extend service is less than the original estimate, the Customer shall receive a credit for such amount on the Customer's next regular billing. If the actual costs were more than originally estimated the Customer shall be billed for the additional amount.

11.6 INDETERMINATE ELECTRIC SERVICE

Indeterminate Electric Service is service where the indications are that its use in the location will be for an indeterminate period of time. Extensions for this type of service shall be considered under the following policies:

A. Installation and Removal (In and Out) Charges:

1) GRDA may require from the Customer a payment of the estimated cost of installing and removing the facilities. This cost shall include the estimated costs of materials to be used which will be unsalvageable after removal of the installation.

2) At the option of GRDA, the payment may be waived and a guarantee accepted in lieu thereof. If service is continued for at least twelve (12) months, GRDA will refund to the Customer at the termination of service, or at the end of three (3) years from beginning of service, whichever is the earlier date, such portion of his payment as is equal to fifteen percent (15%) of the amount of the accumulated revenue, exclusive of rentals of area lighting or other utility-supplied rented equipment. This refund is all that will be made unless the service on or before the end of three (3) years can be classified as permanent. If the service becomes permanent, the entire payment for the initial installation will be refunded, without interest.

B. At the option of the GRDA, a payment of less than $75 may be waived.

11.7 TEMPORARY ELECTRIC SERVICE FOR CONSTRUCTION

A. Purpose: Temporary Service for Building Construction is supplied as a convenience to contractors for powering hand tools and work lights during the early stages of construction of a building. It is not meant to provide power for air conditioning or electric heating loads during the final completion of the building, while the building is being shown to prospective buyers, or while the building stands empty after completion.

B. Temporary Power for Building Construction service shall be installed and billed under the provisions of the General Service, Small Commercial rate or the rate scheduled applicable to the expected load.

C. Temporary Power for Construction service status shall cease when either of the following conditions are met:

1) A certificate of occupancy is completed,
OR
2) The permanent service and/or meter is installed.

At that time, the service will be subject to the requirements of and billed under its proper rate classification.

11.8 MODIFICATIONS OF GRDA'S ELECTRICAL SYSTEM

GRDA attempts to install its electrical system equipment on, over, and in easements, designated rights-of-way, and public property. GRDA will consider relocating existing facilities in these areas only in the following cases.

A. Equipment Relocation for Property Owner's Convenience: The relocation, for the convenience of a property owner, of an existing underground or overhead line, padmount transformer, junction box, pedestal, guy, pole, and/or other piece of equipment or conductor which is properly located on an easement, right-of-way, or public property, will only be performed if the following conditions are met:

1) The requesting property owner shall pay the total estimated cost for installing, removing, and/or relocating the affected facilities. The cost shall include the estimated costs of any expendable materials and costs of materials to be used which will be unsalvageable after removal of the installation. Labor charges plus overheads shall be included at the actual rate(s) being paid during the work. The estimated costs shall be paid prior to the work. After completion of the work, any excess contribution shall be returned to the Customer; if the actual cost was higher than estimated, the additional cost will be billed to the Customer.

2) The system equipment will only be relocated onto another easement, right-of-way, or public property location. If none is readily available, then a suitable qualifying location must be procured or the equipment will not be relocated.

3) If the relocation requires that additional easement(s) be acquired, the cost(s) involved in securing the required easement(s) shall be included in the estimated cost of the construction.

B. Electrical Equipment Relocations Caused by Property Owner's Infringement on Clearance Spaces: When a property owner knowingly or unknowingly constructs a structure, deck, sign, wall, fence, or other obstruction which creates a violation of clearances from overhead or underground electric facilities as defined in the National Electric Safety Code (ANSI C2), or as required by GRDA construction practices, the violation must be corrected as soon as possible. Corrective action shall be the responsibility of the property owner, regardless of whether the obstruction was constructed with or without the knowledge and/or approval of GRDA. The property owner shall be given the following alternatives:

1) The property owner, at its expense, may remove the structure causing the violation, or the violating part thereof, to the level or location at which the structure is no longer in violation.

2) GRDA will relocate the electric facilities, as required, to eliminate the clearance violation. All costs associated with this relocation shall be charged to the property owner. Charges may be paid outright or billed in equal monthly installments on the electric bill over a twelve (12) month period.

C. Relocations to Provide Clearances for House Moves and Transport of Oversized Materials: Where a structure or equipment is to be moved upon, across, or over roadways, or

along a way over which electric wires are strung, advance notice in writing must be made to GRDA. Notice shall include the dimensions of the object, the time of the move, and the precise route over which the object is to be moved. GRDA will calculate the costs involved in providing clearance to overhead power lines. Payment shall be made to GRDA in advance for the costs involved in providing the necessary clearance. In no case shall anyone other than employees of GRDA remove, cut, raise, or handle any wires in connection with the moving and providing of clearance.

SECTION 12

12. RENTAL LIGHTS

12.1 RENTAL LIGHTS

A. GRDA will make available rental lights of various types and sizes, as economically feasible, for installation at the request of Customers. Costs for installation and monthly rental rates shall be as listed in a separate tariff.

B. Rental lights will normally be installed on existing wood poles in areas where overhead distribution is present. If the installation of a pole is required for the rental light, charges for the pole will be included in the monthly light rental fee.

Rental lights are not available in areas with underground distribution systems.

SECTION 13

13. CHANGES TO TERMS AND CONDITIONS OF SERVICE FOR INDUSTRIAL OF COMMERCIAL ELECTRIC CUSTOMERS

The terms and conditions in this Terms and Conditions of Service for Industrial or Commercial Electric Customers may be changed by GRDA from time to time as provided by the “Grand River Dam Authority Act” (82 O.S.A. § 861, et seq., as amended and supplemented).

Appendix A

Customer Contact Information

For information concerning new Customer service policies, applications, contracts, and rates:

Call:	Cameron Philpott	918-610-9752, Direct Line 918-931-1911, Cell Phone

For information concerning electric system extensions, metering, construction coordination, and project scheduling:

Call:	Jeff Tullis	918-610-9717, Direct Line 918-230-3236, Cell Phone

14. Document Control

14.1 Revision History

REVISION HISTORY			
Version	Brief Description of Changes Made:	Date	Last Name
V 01.00	Initial version; Approved by GRDA Board	07/13/05	Herron
V 01.01	Added Grant Burget to replace J. Weatherford	6/10/10	Herron
V 01.02	Changed D. Willis phone number	7/26/11	Herron
V 01.03	Updated document to reflect standardized formatting. Added column in document control table to reflect name of person making changes. Removed Appendix A Connection Certificate from document. Updated Appendix B to Appendix A.	3/11/13	Shrum
V 02.00	Submitted for Board Approval	4/10/13	Herron
V 02.01	Update contact information from Dale Willis to Gary Cupp.	12/04/13	Townsend
V 02.02	Update contact information from Gary Cupp to Mike Waddell.	5/18/15	Herron
V 03.00	Update Section 11 Customer Cost Calculations	11/14/18	Marquis
V 03.01	Added Section 11.2.1 provide a rate credit-in-lieu	08/12/21	Mayfield
V 03.02	Update contact information from Mike Waddell to Jeff Tullis.	04/10/24	Champion