ELECTRICAL CONNECTION POLICY

AUGUST 2018

1. INTRODUCTION

1.1 NBU BOARD POLICY

Pursuant to Chapter 130, Article II, Section 130-31 of the City of New Braunfels Code of Ordinances, the NBU Board of Trustees shall "adopt, alter, amend and enforce all such rules and regulations governing the conduct of the business of such systems as the board of trustees may deem necessary or proper".

This policy is adopted pursuant to such authority.

Electric rates, availability, applicability and service provisions are specified in Chapter 130 of the City of New Braunfels Code of Ordinances.

This policy shall supplement the specific Code of Ordinances presently in force within the City, requirements of the NEC or NESC, and any other local, state, or federal regulation.

The electric service area of NBU is defined by the Public Utility Commission of Texas.

It is the responsibility of NBU to establish and enforce minimum requirements for installation and connection of electrical equipment within its service area. NBU regulations and policy are subject to periodic revision and fees are subject to change.

This publication supersedes all previous versions of the Electrical Connection Policy.

NBU will endeavor to provide economical, reliable electric service in accordance with industry standards. NBU regulations and standards conform to accepted standards and strive to provide satisfactory service at the lowest possible rates and ensure prompt, courteous, and equitable treatment of all customer requirements.

NBU does not guarantee continuous service, standard voltage, or frequency.

NBU accepts no liability for acts of nature or other occurrences beyond its control.

NBU retains the right to discontinue electric service as specified in the Code of Ordinances or to prevent hazardous situations. NBU also retains the right to discontinue electric service for non-payment as provided for in the Customer Service Conditions Policy.

NBU shall only connect or reconnect electric service to meter loops or other equipment that meet or exceed the requirements of the NEC, NESC, any authorities having jurisdiction, and the minimum standards established in this policy.

These standards are to be administered by knowledgeable, certified electricians, qualified to understand all applicable codes and standards and assure its proper application.

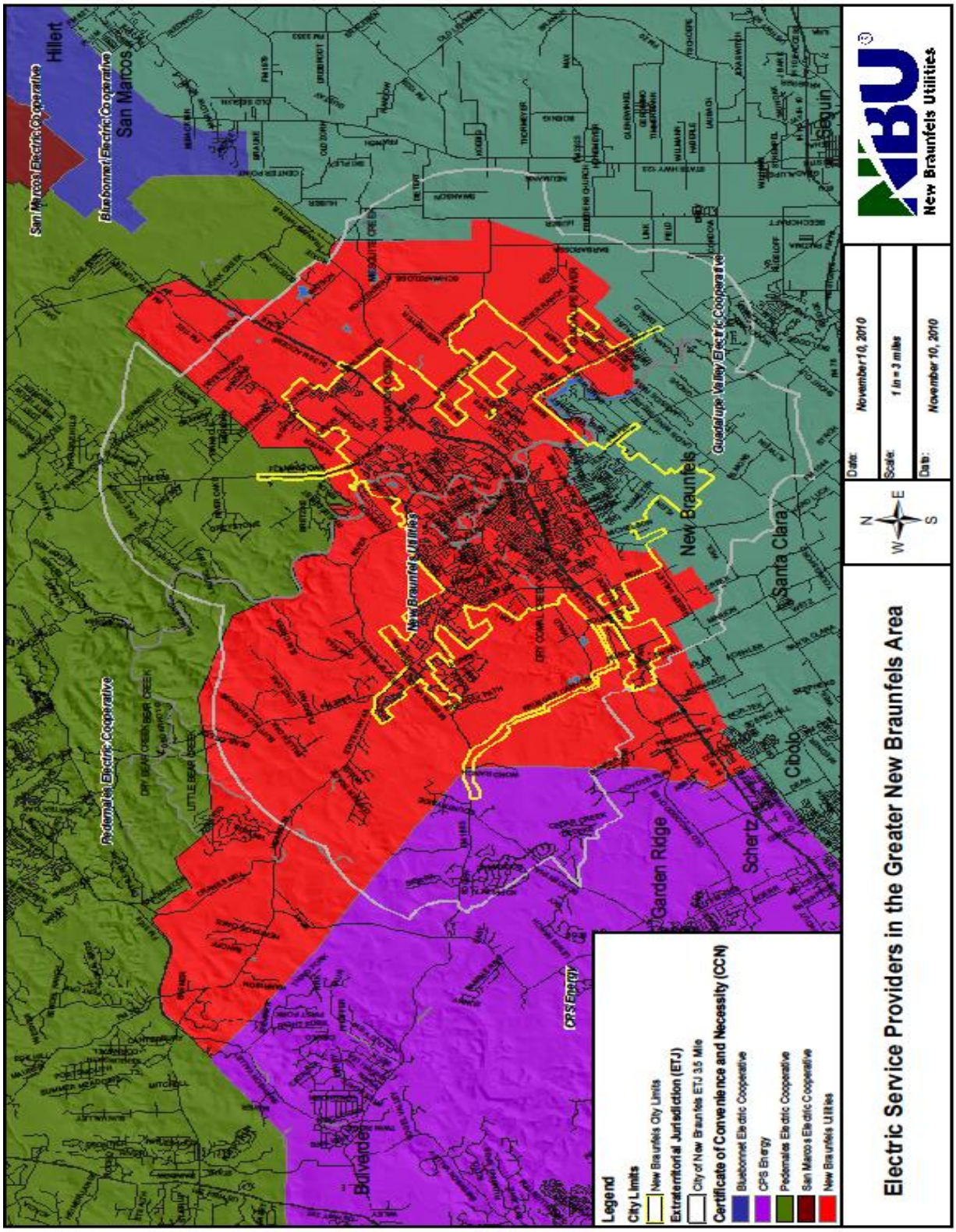
Responsibility to ensure compliance with all codes and standards remains with the customer.

NBU shall not be deemed to have assumed any responsibility with respect to any such action herein authorized or taken by NBU, with respect to proper construction or compliance with any code or standard.

In exceptional cases where this policy appears impractical or unjust, to either NBU or the customer, the matter may be referred to NBU management.

NBU will review special conditions that are not included in the policy on a case-by-case basis.

1.2 ELECTRIC SERVICE AREA MAP



1.3 DEFINITIONS

AHJ: Authority Having Jurisdiction; a local governing jurisdictional authority with defined geographical boundaries.

Application for Service: The service agreement or contract between NBU and the prospective customer under which electric service is supplied by the former and taken by the latter.

CIAC: Contribution in Aid of Construction; a fee due to NBU from the customer to offset a portion of the expense to provide new electric distribution facilities.

City: City of New Braunfels

Commercial: Pertaining to line construction only, this term shall apply to all business and mercantile enterprises, all educational, institutional and assembly structures (schools, churches, etc.), all hospitals, commercial storage units, unapproved subdivisions, unapproved mobile home parks, and all privately owned residential associations or cooperatives such as condominiums, townhouses, and garden homes whose main access is by way of a private, non-dedicated street or drive.

Customer: Any present or prospective owner or operator of a business, firm, corporation, industry, or residence, or any person or entity representing him, such as the architect, engineer, contractor, developer, or builder.

D&R: Disconnect/Reconnect. Customer request for NBU to temporarily disconnect electric service to safely accomplish repairs or maintenance to customer owned equipment, after which service is reconnected.

DER: Distributed Energy Resources. De-centralized physical or virtual assets connected to the distribution network, typically located on the load side of the service delivery point. Per unit or aggregated, these assets provide constant, or as-needed, generation usage to the network.

Distribution Line: NBU's high voltage (7200/12,470 volts) electric lines located along streets, alleys, highways, easements or on private property when used or intended for use for general distribution of electric service to NBU customers.

Easement: The right of NBU to use the land of another for a specific purpose concerning its electric utility system.

Electric Service: The availability of electric power and energy, regardless of whether any electric power and energy is actually used.

Industrial: Pertaining to line construction only, this term shall apply to all factories, industries, large manufacturing firms or any enterprise that in all probability will be large or very large power users, as defined in the City Ordinance.

Meter: An instrument, or instruments, together with auxiliary equipment, for measuring the electric power and energy supplied to a customer.

Meter Loop: The opening in and/or extension of a customer's service entrance conductors provided for installation of NBU's meters.

NBU: New Braunfels Utilities; a municipal utility established by the City Council of New Braunfels, Texas, in December, 1942, to manage, control, and operate any or all of the electric, water and sewer systems owned or held by the City of New Braunfels. The NBU Board of Trustees consists of five Trustees (one being the Mayor) appointed by the City Council. As used in these Standards, the words NBU represent New Braunfels Utilities or any employee properly qualified to represent New Braunfels Utilities.

NEC: National Electrical Code.

NESC: National Electrical Safety Code.

Owner: When applied to any land, building, or structure, shall include any part owner, joint owner, tenant in common, tenant in partnership, or joint tenant, of the whole or of a part of such land, building, or structure.

PEV: Plug-in vehicles.

Point of Delivery: The point where the electric energy first leaves the line or apparatus owned by NBU and enters the line or apparatus owned by the customer. The Point of Delivery shall be determined by NBU, and is not necessarily the point of location of the electric meter. Typical points of delivery include weatherheads, meter sockets, service junction boxes and pad-mounted transformers. The point of delivery for an NBU owned and maintained underground residential service lateral is the line side of the meter socket. For an NBU owned and maintained overhead service drop the point of delivery is the attachment to the customer's weatherhead.

Primary: NBU's high voltage electric system, 7200 volts single-phase or 12,470 volts three-phase, consisting of poles, crossarms, conductors, conduit, junction boxes, transformers, and other associated equipment and hardware; overhead and underground.

Residential:	Pertaining to line construction only, this term shall apply to all private individual dwellings, all wells and noncommercial barns. Residential shall also include multi-family complexes where there is one service meter per living unit.
Secondary:	NBU's electric system from the low voltage connections on the transformers to the customer's service entrance, meter, or main disconnect devices. The maximum voltage is 480 volts. This system consists of conduit, conductors, junction boxes, and connections, overhead and underground.
Service Drop:	The portion of NBU's overhead secondary service conductors extending from NBU's overhead distribution system to the customer's service connection.
Service Lateral:	The portion of NBU's underground secondary service conductors extending from NBU's overhead or underground distribution system to the customer's service connection.
Service Entrance Conductors:	The wires provided by the customer extending from his main line switch, to the terminals of NBU's service connection.
Street:	Includes streets, avenues, boulevards, roads, alleys, lanes, viaducts, drives, highways, and all other public places commonly used for the purpose of travel.

2. GENERAL INFORMATION

2.1 CUSTOMER SAFETY

The customer shall comply with federal, state, and local laws and regulations concerning activities near electrical lines and equipment. The customer shall comply with all laws and regulations to protect themselves, their family, their employees, NBU and its employees, contractors and all third parties from injury, loss, or damage.

State statute and Federal OSHA laws require that no work take place within 10 feet of high-voltage facilities. Some lines require even greater clearance.

If you operate within proximity to power lines, you must contact NBU so appropriate protective measures can be taken.

A. DIGGING

Texas state law requires the customer/excavator to call for the location of underground utilities to be marked. This call must be made at least 2 working days, but no more than 14 days, prior to excavation. Excavation shall not begin until underground utility locations have been marked.

TEXAS ONE CALL – Dial 811

Or on the web at:

www.texasonecall.com

2.2 ATTACHMENTS TO NBU PROPERTY

NBU lighting standards, poles, wires, towers, structures, and other facilities are for the exclusive purpose of supplying electric service. Unless specifically authorized by agreement, any radio or television equipment, customer-owned lighting, wire, ropes, signs, banners, or anything of any nature not necessary to the supply of electric service by NBU, which is in proximity or attached to NBU poles, wires, towers, or structures, may be dangerous to life and property and is prohibited. NBU reserves the right to remove all such hazards without notice and bill the customer for associated cost. NBU assumes no liability for damage to customer property so removed.

2.3 INTERRUPTION OF SERVICE

Safe work practices may require NBU to interrupt service to perform necessary maintenance and/or upgrades, or make additions to the electric system. NBU will contact those customers involved with as much notice as is practical. In some instances, it may not be possible to give notice. NBU will make interruptions in service as short as is reasonably possible. When possible, NBU will work with those involved, trying to find a mutually acceptable time to perform the work.

2.4 CUSTOMER RESPONSIBILITY FOR EQUIPMENT/WIRING

It is customer responsibility to install equipment and wiring that conforms to NBU, NESC, and NEC standards, and all federal, state, and local regulations. NBU shall refuse to connect service when customer wiring or installation does not comply with these minimum standards. If the AHJ condemns a building or its wiring, NBU will disconnect service at the authority's request.

NBU is not responsible for the installation or maintenance of electrical equipment or wiring on customer's point of delivery side of NBU's electric service, except for meters and their appurtenances.

NBU uses standard protective devices and all reasonable care to ensure a steady and continuous service to its customers, but cannot be responsible or liable for damages due to irregularities.

NBU does not provide equipment to protect the customer's facilities. The customer will meet or exceed all applicable guidelines of the NEC and manufacturer requirements. NBU will provide fault current and electrical data at customer request. Available fault currents may exceed 10,000 amperes in some locations. NBU's power system provides high speed re-closing of protective equipment following power interruptions. Three-phase loads may require protection from single-phasing. It is possible for one phase of a three-phase service to be de-energized for an extended period. Use ground fault protective equipment where appropriate.

2.5 POWER QUALITY

A. GENERAL

Customer's electrical equipment and devices must allow the NBU distribution system to operate efficiently without undue interference to NBU service or to other customers. When customer equipment has characteristics that cause undue interference with NBU service to other customers, the customer shall make equipment changes or provide, at the customer's expense, additional equipment to eliminate the interference. Otherwise, NBU may refuse service or decline to serve under the established rate schedule.

Prior to installation, the customer should submit to NBU all information regarding equipment that might cause power quality problems.

B. VOLTAGE PERFORMANCE

Electric service supplied by NBU may be subjected to voltage disturbances, which do not normally affect the performance of typical electrical equipment. These disturbances may result in the improper operation of voltage-sensitive equipment, such as computers or microprocessors. The customer should provide power-conditioning devices needed to obtain the quality of power necessary for optimum performance of voltage-sensitive equipment.

NBU's voltage, measured at the NBU meter, may acceptably vary ±5% from nominal voltage. As an example, for a single-phase 240V service, NBU's voltage may vary within a range of 228V to 252V. NBU's three-phase voltage may also be imbalanced up to 5%.

C. HARMONICS

The design and operation of high-frequency equipment and equipment that generate harmonics shall not create disturbances on the NBU electrical system that interfere with any other customer's proper operation of equipment.

Devices that can produce harmonic distortion shall be filtered such that the harmonic distortion caused by such devices is kept within the limits specified in The Institute of Electrical and Electronics Engineers (IEEE) Standard 519-1992, Section 10. Compliance with this requirement is judged upon NBU's measurement near the point of delivery.

D. MOTORS

PROTECTION

To ensure adequate safety to personnel and equipment, the customer is responsible for providing and maintaining code-approved protective devices that protect motors against overloading, short circuits, ground faults, low voltage, and single-phasing of three-phase motors.

STARTING

Motor starts may cause unacceptable voltage dips to adjacent customers or on the customer's premises. Frequently started motors, three-phase motors rated larger than 25 hp served from a three-phase system, or single-phase motors larger than 3 hp may require reduced voltage starters. Motors that meet any of these criteria require consultation with NBU.

Motor inrush shall not result in any distribution voltage flicker exceeding the 'Borderline of Irritation' curve as referenced in IEEE 1453 Annex A.

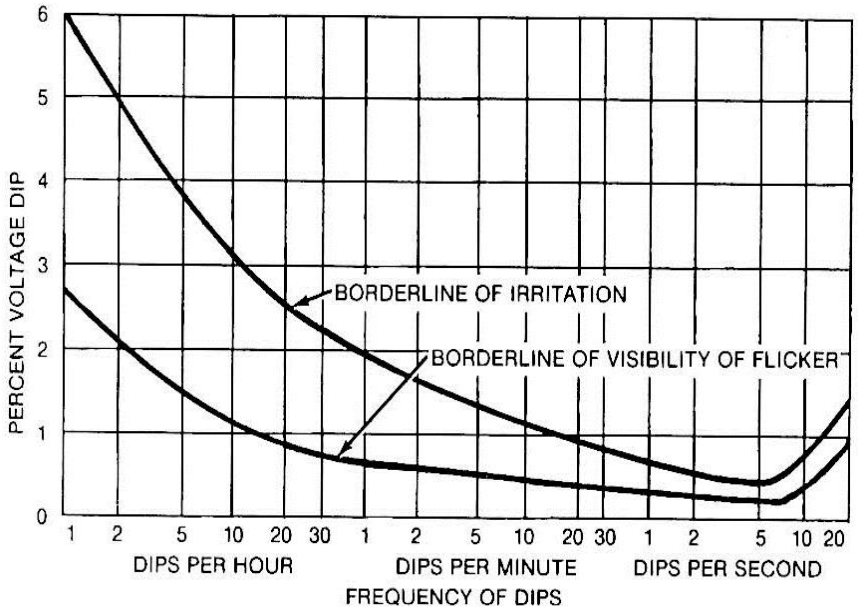


Figure A.1—Flicker tolerance curve from IEEE Std 141-1993/IEEE Std 519-1992

NBU will furnish permitted starting currents, which are dependent upon motor size, starting amperage, frequency of starts and impedance of the distribution system.

If the customer requires additional NBU facilities, such facilities will be installed at the customer's expense.

E. LOAD BALANCE

To prevent overloading of service conductors and transformer coils, customer must properly balance the electrical load on the service entrance conductors and service equipment. For both single-phase and three-phase services, the customer shall connect equipment so that the load in any one phase at the point of delivery will not exceed the load in any other phase by more than 10 percent.

F. POWER FACTOR CORRECTION

NBU encourages customers to achieve power factor at or above 95%. Where a customer has power factor correction equipment past the NBU point of delivery, all power factor correction equipment shall be three-phase operable. Power factor correction / kVAR balancing shall also be within 10% phase to phase. Allowable leading kVAR may not exceed the lesser of 25% of a customer's kW peak monthly demand, or 1,000 kVAR total. Failure to switch power factor correction equipment off and/or exceeding allowable leading kVAR may result in disconnection of service.

G. STANDARD FEE ADJUSTMENTS

Any and all fees listed within this Electrical Connection Policy, typically included within Appendix A, may be adjusted to reflect the Consumer Price Index (CPI) upon a yearly basis. CPI based increases shall not require NBU Board of Trustees approval.

3. OPTIONAL SERVICES

3.1 AFTER HOURS CONNECTIONS

Service connections are scheduled by NBU and will occur during normal working hours. A customer may request a service connection for times other than normal working hours, subject to approval by NBU and personnel availability. SUCH APPROVAL IS SOLELY AT THE DISCRETION OF NBU. Connection shall be done only if all applications are signed, required deposits, and construction fees have been paid and all the necessary inspections passed.

Residential Customers: A minimum fee of $150.00 will be assessed. On overhead installations, this fee includes installing the service from a single point of attachment on a pole to the customer's point of attachment, making the final connections and/or setting the meter. On underground installations this fee includes installing the service from an underground enclosure to the customer's equipment that is less than 80 feet in lateral length and 4/0 or smaller in conductor size, making the final connections, and/or setting the meter. This fee does not include the building of risers, pulling of conductor between service enclosures, installing conductor larger than 4/0, or distances greater than 80 feet in lateral length. If the installation exceeds any of the above guidelines, the additional work will be billed to the customer at actual cost of labor. This cost is in addition to the minimum fee. NBU will furnish a total cost estimate upon request by the customer.

Commercial Customers: The customer is billed for actual labor and equipment charges, but not less than $150.00. NBU will furnish a cost estimate upon request by the customer.

3.2 DISCONNECT/RECONNECT

NBU will disconnect and reconnect (D&R) utility service to allow a licensed electrician to safely work on the customer side of the electric service point of delivery. The customer work may include scheduled upgrades as well as unscheduled and/or emergency repair work. NBU may waive the D&R fee for a major service modification for which NBU assesses a Contribution in Aid of Construction in advance of the project.

D&R with less than 2 hours crew involvement..... $75.00 per instance

Additional fees may be assessed for D&R's requested at times other than normal business hours, or if NBU personnel are required to be on site longer than two hours.

Except in an emergency, a twenty-four hour notice is required.

4. EASEMENTS AND RIGHT-OF-WAY

4.1 USE AND RESTRICTIONS

An easement provides the right to use an owner's property for a particular purpose. A utility easement allows NBU the right to use an owner's property for specific purposes such as to construct, repair, maintain, operate, and manage utility facilities. Sometimes other utility providers, such as cable and telephone companies, also have the right to use the same utility easement. The property owner owns the land upon which the easement is located. However, NBU has the right of way to enter upon that land for specified utility purposes. A utility easement is created when a property is platted, or created by specific agreement between a property owner and NBU.

At all times, a property owner must provide continuous, unobstructed access to easements held by NBU. A property owner or resident may not place or construct any structure or improvement on an NBU easement without prior NBU written approval. Some examples of structures not allowed include: building additions, sheds, patios, swimming pools, ponds, spas, signs, mast-type equipment, abandoned vehicles, mobile homes, and buildings of any type, wells, and decorative landscaping. Some examples of improvements requiring written approval include: driveways, cart paths, fences (provided 16-foot gates are installed), parking lots, and streets. The failure to obtain written approval may result in the structure being removed at the property owner's expense. Any damage to an unapproved structure is at the owner's risk. In the event that NBU facilities require relocation due to unauthorized encroachment, NBU may require that all costs associated with the relocation or removal be customer responsibility.

4.2 NEW CONSTRUCTION EASEMENTS

Utility easements will typically be 15 feet wide but may vary in dimensions depending on the type of facilities necessary. Utility easements are generally located along streets, lot lines, or between two lots when created by a subdivision of land. Where three or more utility buried trenchlines or other infrastructure items are to exist within a frontage easement, 20’ frontage easements are required. Other infrastructure items may include customer owned street lighting service cable, sidewalks, water systems, or parallel drainage.

When platted utility easements do not exist or do not provide adequate right-of-way for utilities, a utility easement may be created by a separate agreement between the owner of the property and NBU. Except for service drops, service laterals and security lighting, an easement is required when it is necessary for NBU to locate its facilities on property not designated as a public right-of-way to serve the customer on whose property the facilities are to be located. The customer shall provide NBU a copy of the recorded deed to verify ownership and legal description of the property affected by the utility easement.

Easements will also be required when it is necessary for NBU facilities to cross over property not designated as public right-of-way and not owned by the customer receiving service. The customer requesting service is responsible for obtaining this easement from other property owners.

If it becomes desirable to relocate or remove NBU facilities from the customer's property for reasons initiated by the customer all costs associated with the request, including the abandonment of existing easements, are charged to the customer making the request.

4.3 CLEARING

The initial clearing of the easement is the responsibility of the customer and shall be done before any construction by NBU. All clearing shall be approved by NBU. Under normal clearing procedures, easements shall be prepared by removing all obstructions so that the right-of-way is cleared close to the ground and is the width specified. Obstructions that should be removed include all trees, stumps, brush, debris, boulders, and/or any obstacles along the entire width and length of the easement.

In addition, a private property extension easement must be vehicle traversable. If not traversable, a 12’ wide pathway consisting of 6” compacted TxDOT A-2 base shall be required. To maintain access during inclement weather, drainage crossings shall be in culverts.

4.4 METES & BOUNDS

For any commercial new extension easement or modified electric routing easement, Metes & Bounds shall be provided to NBU by the customer requesting service. Metes & Bounds shall be drafted by a Registered Professional Land Surveyor (RPLS). In addition, NBU may require the easement be staked and/or re-staked at any time prior to installation of electric facilities.

For any residential new extension easement or modified electric routing easement, NBU shall assume responsibility for the Metes & Bounds.

4.5 GRADING

Grade changes within easements, whether Public Utility Easements (PUEs) or standalone private easements, shall be approved in advanced by NBU. Shielding installed grade from predictable erosion shall also be the responsibility of the private property owner.

5. TEMPORARY/ CONSTRUCTION SERVICE STANDARDS

5.1 GENERAL SERVICE STANDARDS

Temporary service is a means of supplying electricity to a site with an active duration of no more than 180 days**.** Usually a temporary service is installed to provide power during the construction phase of a project while provisions are being made for permanent power.

NBU standard temporary service is a 100 amp or 200 amp, single-phase, 120/240 volt service, served from existing distribution facilities. Availability of other service types will be determined on its feasibility, and if approved, may be provided with the estimated cost of installing and removing such additional electrical facilities paid by customer as a CIAC.

Any temporary service that requires the installation and removal of electrical facilities not required for permanent electric service may be provided subject to approval and based on the estimated cost of installing and removing such additional electrical facilities, to be paid by customer as a CIAC.

A customer requesting temporary service for one-time ventures or for short-term duration, not to exceed 180 days, to locations where permanent power will not be provided, such as construction projects, exhibitions, or festivals, shall be responsible for all associated costs for the installation and removal of all required NBU facilities as estimated by NBU. Temporary service provided under this option shall not serve residential loads. Temporary service may be denied to customers requesting service exceeding these requirements. In such cases customer may install permanent metering equipment in accordance with other sections of this policy.

If an inspection of the temporary service is required by a non-utility AHJ, it is the customer's responsibility to contact that authority for permitting and/or inspection requirements. If an inspection is required, NBU must be notified that a temporary inspection has been granted before NBU can connect temporary service. NBU inspection requirements may still apply.

Any connected temporary service found to be damaged or in violation of any applicable codes shall result in the immediate removal of the meter. The customer will be responsible for any repairs and inspection required before service is reconnected. Repeated damage may result in temporary service being denied.

5.2 OVERHEAD TEMPORARY SERVICE

An overhead temporary meter loop shall be located on the property being served and for which application for service has been made.

The service line path shall avoid areas where vehicular traffic will occur, unless the temporary service pole height is increased to provide adequate clearance.

If the service line will pass through trees or brush, a path must be cleared to allow personnel to run the line and to allow lines to hang without contacting trees or limbs. Maintaining the clear path is the customer's responsibility.

The temporary meter loop shall be installed according to NBU specification drawing EH-110 and inspected by NBU.

5.3 UNDERGROUND TEMPORARY SERVICE

Temporary underground service is available where the existing primary power facilities are installed underground.

A temporary meter loop shall be located on the property being served and for which application for service has been made.

The temporary meter loop shall be installed according to NBU specification drawing EU-110 and inspected by NBU.

6. MODIFICATION OF EXISTING SERVICE

Customer's needs and desires for utilizing their property change periodically, potentially resulting in a physical conflict that necessitates the modification of NBU electrical distribution facilities. The customer must give notice to and obtain approval from NBU for the requested modifications as far in advance as possible. Modifications requiring NBU notice and approval include a major change of load, addition of motors, HVAC systems, auxiliary equipment, pumps, living units, plug-in vehicle (PEV) service, Distributed Energy Resources, etc. Customer may be held financially responsible for damage to NBU infrastructure resulting from unreported modifications to customer load.

If the requested modification on the customer's property is solely for the benefit of the customer, the customer is responsible for the entire cost of the modification. This includes overhead to underground conversions. Costs associated with any modification to avoid or correct a NEC or NESC violation shall be determined on an individual basis.

When a modification requires NBU personnel to disconnect existing service and reconnect the modified service, the customer must schedule the disconnect/reconnect (D&R) in advance to ensure proper coordination. Additional fees may apply for the D&R. Approval by the AHJ is required before NBU is permitted to reconnect the service. Additional applications, easements and deposits may be required. The customer is responsible for arranging the wiring on their side of the point of delivery to receive the modified service.

When electrical distribution facilities on a customer's property are removed or abandoned at customer request, the customer is responsible for removal cost due to early retirement of facilities.

7. NON-STANDARD DESIGN

Where unusual circumstances exist, NBU reserves the right to estimate costs based on those circumstances rather than the standard fees. NBU will confer with customers about those circumstances and charges. Other facilities and special considerations (such as rock pole holes) will be estimated by NBU.

NBU electrical distribution facilities will be designed in the most cost-effective, safe and reliable manner along the shortest, most practical route. If a customer requests a design that is not the most cost effective and the customer's request is feasible, the cost difference between the most cost effective design and the customer requested design will be charged as a CIAC. These charges may include engineering, installation, material, and maintenance costs required to provide and maintain this non-standard construction.

A feasible design is defined as an alternative design that does not compromise safety or reliability and allows adequate access. If the feasibility criterion is not met, then NBU cannot offer the customer the requested design.

New residential service request which would normally qualify for the residential installation credit will receive only that portion of the credit that would be allowed based on the most cost effective design.

8. ESTIMATES/FEES

Throughout this policy, reference is made to Contributions In Aid of Construction (CIAC) whereby the customer pays for a portion or all of the requested service.

The CIAC is a fee to help recover the costs of extending electric facilities to those requesting the facilities.

Payments are required well in advance of NBU construction, allowing for proper scheduling and procurement of material. Withholding payment until the latter stages of a project's development may cause unnecessary delays and added expense to the customer.

Fees are nonrefundable after work is performed.

Under no circumstances do any fees and/or CIAC paid to NBU indicate transfer of ownership to the customer. All equipment installed by or for NBU shall become and remain the property of NBU. Fees to customers for special considerations are to defer costs from other NBU customers rather than the selling of services or material.

No permanent or temporary electric facilities will be installed or connected for any customer who has delinquent fees payable to NBU for any service location, unless arrangements are made with NBU.

Fees for construction of new facilities, modification of existing facilities, area lighting, and special designs are addressed elsewhere in the publication. NBU will review the applicable sections with the customer and provide an estimated cost (CIAC) based on the individual project requirements.

Costs for equipment purchased from NBU by the customer for customer installations are not included in this policy.

Any written estimate furnished by NBU for which payment has not been made is valid for a period of 90 days, after which time the estimate must be reviewed by NBU for appropriateness, and may be adjusted by NBU

NBU reserves the right to review and adjust the fees paid by customers if NBU cannot perform the work for which the fees are collected within 18 months of payment of the fees.

Qualified customers owing CIAC for single-family residential service will be allowed to defer payment of fees to a monthly billing based on following requirements:

- Total fees exceed $300.00 (a minimum initial payment of $300 is required).
- $50.00 per month minimum payment.
- Maximum of 60 months payments.
- An administrative fee of $10.00 per month is added to each monthly bill.

9. RESIDENTIAL EXTENSION POLICY

For all residential projects, from single home up to any including residential subdivisions, NBU shall contribute the associated costs of all distribution transformers and all secondary extensions originating from the distribution transformers, including temporary services.

All primary extension, both on-site and off-site to a residential project, shall be contributed to NBU through a CIAC. NBU, at its sole discretion, but at no additional assessed CIAC to the project owner, may elect to increase any on-site or off-site extension to a higher grade of construction. Applicable CIAC fees shall be as documented within the Electrical Connection Policy below, and within Appendix A.

NBU Electric Engineering is responsible for design of all extensions, including routing. Project owners may select Overhead extension or Underground Distribution extension only.

10. INSPECTIONS

10.1 INSPECTION GENERAL INFORMATION

When a customer's electrical installation requirements have been completed, it must be inspected by the AHJ to ensure compliance with the NEC, other applicable codes, and any other such local rules that may apply. NBU cannot energize new service installations or alter existing service characteristics until such inspection(s) has been made, and until formal approval notice from the AHJ has been furnished to NBU by the customer.

NBU inspects all customer installations from the point of delivery to the load side terminals of the main disconnect, including the service entrance grounding systems. The purpose of this inspection is to ensure safe working conditions for personnel and to protect NBU equipment from mechanical or electrical hazards. Such inspection in no way relieves the customer of responsibility for providing a safe electrical system. Service will not be connected to any new or existing installation that is known to be unsafe.

Meter loop inspections requested to be performed outside regular inspection hours shall be assessed a non-business hour inspection fee and are subject to inspector availability.

If a meter loop is not ready or does not conform to NBU specification, design, and code requirements, a re-inspection fee shall be assessed each additional time it is necessary to make inspections.

Inspections shall be cancelled no later than 10:00 a.m. the day of the scheduled inspection or it will be considered a failed inspection.

Inspection related fees are billable through an active NBU service account that is not delinquent. The service account holder may make authorization for direct account billings for inspection fees.

All inspection related fees not billed through an active NBU account must be paid in full before an electric meter will be installed.

A. INSPECTION FEES

First Meter Loop Inspection..... No Charge

Accelerated Inspection Fee.....$75.00

Meter Loop Re-Inspection Fee.....$100.00

Non-Business Hour Inspection Fee.....$75.00

11. STANDARDS AND DESIGN

NBU endeavors to provide electric service to its customers by the most economical route available. Alternative design requests require NBU approval and customer is responsible for any additional fees. See "Non-Standard Design".

NBU specifications and standards drawings conform to or exceed minimum requirements of all applicable codes. If any standards are in conflict, NBU standards will prevail.

It is the responsibility of the customer to understand and comply with all code requirements.

NBU is responsible for the design, construction, operation, and maintenance of electric service facilities up to and including the point of delivery. The customer is responsible for design, construction, operation, and maintenance of customer's installation beyond the point of delivery and has sole control and supervision over customer's installation, including compliance with all applicable codes and ordinances. Any customer not familiar with NBU and/or NEC requirements concerning electric service installations may review all relevant standards with the NBU personnel.

The customer assumes responsibility for the service supplied or taken and for all related damages caused by service diversion, unlawful use of service, or damage to NBU equipment.

NBU design and installation is based upon the information provided by the customer. Incomplete information or any deviations or changes by customer after the initial design may delay the establishment of service and result in additional fees.

If electrical requirements exceed 200 amps, NBU requires an electrical load analysis prepared by the customer's engineer or electrician prior to designing the electric service.

Three-phase service is available to customers with a demand of at least 50 kVA or one three-phase motor larger than 7.5 hp. Devices to convert single-phase to three-phase can be obtained for a wide range of three-phase motors, therefore availability for three-phase service for smaller motors should be discussed in advance with NBU.

NBU reserves the right to determine whether primary or secondary metering is appropriate for service needs at any requested point of delivery. NBU shall design all primary facilities.

Commercial primary and secondary extension, both on-site and off-site to a project, shall be contributed to NBU. NBU, at its sole discretion, but at no additional assessed CIAC to the project owner, may elect to increase any on-site or off-site extension to a higher grade of construction. Applicable CIAC fees shall be as documented within the Electrical Connection Policy below, and within Appendix A. NBU contributes the service transformers only.

Other applicable fees shall remain in effect.

12. GENERAL SERVICE STANDARDS

The customer shall give NBU access to the premises of the customer in order to obtain information concerning connected load, to measure or test service, to read meters, or for other purposes incidental to the supplying of electric service.

It is customer responsibility to provide adequate protection of NBU equipment located on the customer's property against damage. The customer shall be responsible for any damage or loss resulting from improper protection or neglect.

NBU will furnish and install pole-mounted or pad-mounted transformers in accordance with the voltages and maximum kVA capacities listed below, unless approved otherwise. NBU will determine the installed transformer size. The customer shall provide the necessary information to make this determination. The largest pole-mounted transformer is 100 kVA.

NBU will normally furnish and install transformers and primary pull boxes for permanent electric service at no charge to the customer. A customer may, with NBU approval, purchase the transformer(s) required.

12.1 AVAILABLE SERVICE TYPES

Service Size			Maximum Capacity/Type	Available on Service Rates
120/240 V	Single-phase	3-wire	100 kVA Overhead 250 kVA Pad-mounted	RE, SGS, LGS
208 Y/120 V	Three-phase	4-wire	225 kVA Overhead 500 kVA Pad-mounted	SGS, LGS
480 Y/277 V	Three-phase	4-wire	225 kVA Overhead 2500 kVA Pad-mounted**	SGS, LGS, VLP-D*
480 V	Three-phase	3-wire	2500 kVA Pad-mounted**	
7200/12470V	Three-phase	4-wire		LGS, VLP-D*

*Provided only by contract approved by the NBU Board of Trustees.

** Larger services subject to approval by NBU.

12.2 METERING

Only one point of delivery is allowed per primary or secondary meter.

A. LOCATION OF EQUIPMENT

LOCATED OUTDOORS

Unless approved otherwise by NBU, all meter installations will be outdoors, on a vertical wall or other substantial support where the view from the ground is unobstructed. Meters shall be readily accessible to NBU at all times so they may be read, inspected, removed or tested with a minimum of disruption of service to the customer.

In underground residential subdivisions where transformers are located in the front lot platted utility easement, the residential meter must be located within 80 feet of the platted utility easement. Where the distance from the utility easement is greater than 80 feet, other provisions for metering or service design will be required.

The electric meter on a single-family residence shall be located on the exterior of the structure on the side closest to NBU's equipment (pole, pad-mounted transformer, or service enclosure).

Meters shall not be located behind a fence or other barrier unless special considerations are met. The meter location shall be clear of any discharge fans, vents, or drains from a roof gutter or air conditioner, and shall be free from vibration.

Meters shall not be located where they will interfere with traffic, adjacent to sidewalks or driveways, or where they will obstruct the opening of doors or windows. When the equipment is exposed to vehicular traffic, NBU may require that the metering equipment be protected by concrete filled 4-inch steel pipes firmly installed in the ground.

Meter sockets shall be securely attached to an approved permanent structure and aligned so that the meter is both level and plumb. Some installations may require the meter to be located on a pole (for overhead service) or on a stand (for underground service) as determined by NBU. Attachment to temporary structures, except for temporary service, or structures subject to early deterioration is prohibited.

Install meter socket with the centerline height between 5 and 6 feet, as measured from grade 30 inches in front of the meter. NBU must approve exceptions. Pedestal mounted equipment may have a minimum height of 36 inches.

Where ordinance requires meters to be located above base flood elevation, the customer is responsible for providing access to the meter for maintenance and reading by NBU personnel. The customer shall pay for costs incurred by NBU for providing special service to meet the customer's flood insurance requirements.

LOCATED INDOORS **(For existing installations prior to May 2018 only)**

When meters are located in a meter room, the room shall have adequate lighting and contain only meters and associated equipment. The centerline of the meters shall be 5 feet 6 inches above the floor, but when necessary because of grouping may be a maximum of 72 inches and a minimum of 22 inches. When meters are located behind a locked door the customer must provide a lock box, permanently installed near the meter room door with a door key inside. NBU will place its padlock on the lock box.

When the customer-owned main breaker or disconnect will reside within a building or otherwise enclosed electrical room, NBU's point of delivery for the associated electric service will be either at a service drop termination weatherhead or at the secondary terminals of a distribution transformer. NBU will neither own nor maintain a proposed secondary service inside a customer premise facility.

B. IDENTIFICATION OF METERS

Where more than one meter is installed, or the meter is not within the boundaries of the premise served, each meter socket shall be clearly and permanently marked by the person installing it to plainly show location served (e.g. the apartment number and/or address) by the meter. It shall be the responsibility of the customer/contractor to ensure the accuracy of the markings with respect to the apartment and/or address. The customer shall demonstrate and NBU shall witness verification of the accuracy of these markings. Such verification shall be assessed as a CIAC, per meter, as listed within Appendix A.

Where more than one meter is installed, as on multi-family dwellings, or shopping centers, the meters are to be grouped at a point accessible at all times to customers and NBU employees.

C. EQUIPMENT INSTALLED BY NBU

NBU installs metering instruments to measure the electric service used by the customer. Usually, only one watt-hour meter per customer is needed.

Self-contained meters are used on services up to 320 amperes and when the voltage to ground is 277 volts or less. Current transformers (CT) are used if the service is greater than 320 amperes or if the voltage to ground is greater than 277 volts. Potential transformers are used when the voltage to ground exceeds 277 volts.

A cabinet for the metering current transformer will be required if the service is greater than 320 amperes and more than one customer is served from the service transformer(s). If only one customer is served from the transformer(s), the metering current transformers may be installed by NBU on a pole or in the pad-mounted transformer.

NBU is responsible for the maintenance, repair, and replacement of all metering equipment installed by NBU.

D. EQUIPMENT INSTALLED AND OWNED BY THE CUSTOMER

All residential 200 Amp single-phase meter sockets (meter enclosures) are provided by NBU and installed by the customer.

In some cases, the customer might prefer prefabricated, combination socket and disconnect assemblies for multiple occupancy buildings (e.g. apartment or condominium buildings, shopping centers, etc.) or pedestal mounted equipment for mobile home parks. It shall be the customer's responsibility to obtain authorization from NBU to use this equipment for a particular installation before committing to its use.

Meter socket enclosures and CT cabinets shall not be used as raceways for other conductors.

E. ORDER OF EQUIPMENT

The location of metering equipment is designated by NBU. Where permitted by Code, the meter will usually precede all service equipment. Customer-owned step-down transformers shall be installed on the load side of the meter.

Any enclosures (troughs) required on the supply (NBU) side of the meter shall be lockable by NBU to prevent unauthorized opening.

A main disconnect switch is required on the supply (NBU) side of meters where more than six disconnects are needed. In these locations, NBU does not recommend use of breakers as a main disconnect. Replacement fuses are more accessible than replacement breakers after normal business hours.

F. CT METERING

CT metering is applicable at service sizes of 400 amps or greater, single-phase or three-phase. CT metering shall be approved by NBU. CT metering shall be located as close to the distribution transformer as is feasible. Where a distribution transformer is dedicated to one customer only, the point of CT metering shall be at the transformer. Where a distribution transformer serves multiple customers, the point of CT metering shall be a transocket served from a dedicated secondary run from the distribution transformer.

CT meter installation, including meter base: $925.00

CT meter installation, Trans-socket: $1,125.00

12.3 GROUNDING

The grounding of electric installations is essential for the safety of those using the electric service, personnel maintaining the service, and is a safeguard for the customer's equipment. A permanent and effective ground shall always be provided for all service entrance equipment. The neutral conductor shall also be grounded.

The customer shall furnish bare or insulated copper wire in his service entrance as a bond between the equipment ground and NBU's common neutral system. This conductor shall be appropriately sized but in no case shall it be less than #6 AWG.

Neutral conductors shall be continuous from the weatherhead to the service disconnect. Strip the insulation away from the neutral conductor and connect at the neutral lug of the meter base. Do not cut the neutral. Mark the neutral at both ends by using white tape.

To assure maximum safety, it is necessary that the customer provide an adequate and permanent ground connection attached to a driven ground rod and to the neutral terminal of the meter socket.

Ground rods shall be 5/8 inch diameter by 8 foot length, copper-clad type. They shall be driven 2 inches below final ground grade.

All service grounding from the meter socket or main disconnect to the ground rod shall be a minimum #6 copper of a continuous length, enclosed in 1/2 inch sunlight resistant PVC and continuing 2 inches below final ground grade.

Installation of the above is subject to inspection and approval by NBU.

12.4 BONDING

Bonding shall be provided where necessary to ensure electrical continuity and the capacity to safely conduct any fault current likely to be imposed.

Non-current carrying metal parts of equipment shall be effectively bonded together, including but not limited to raceways, service enclosures, meter enclosures, etc.

Bonding to other systems shall not be done on or within a metering enclosure unless a means of bonding, intended for intersystem bonding, is furnished as part of a listed joint-use metering enclosure. (i.e. Telephone, CATV, etc.)

13. OVERHEAD SERVICE STANDARDS

13.1 GENERAL SERVICE STANDARDS

Customer facilities shall not be installed on the same pole with primary (7200 volts or above) facilities. This is for protection of the customer, electricians, and public, and for ease of maintenance.

Service poles are required and installed for various reasons as deemed necessary by NBU. There is a fee for installation of these poles. Long secondary runs, angles in route direction, or road crossings create this need. This should be considered when the meter location is determined.

NBU shall install the pole when pole-mounted meter loops are required, except for poles installed in TxDOT or UPRR controlled rights-of-way. The location of the meter pole is decided and agreed upon between NBU and customer. There is a fee for installation of these poles. The customer is responsible for constructing meter loop on the pole. Non-standard pole types may be required and are estimated according to "Non-Standard Design". All poles remain the sole property of NBU. NBU cannot install poles for uses other than that required by NBU.

Texas Department of Transportation (TxDOT) and Union Pacific Railroad (UPRR) are allowed to install and own service poles within their controlled rights-of-way. Minimum pole requirement is class 6 strength, 30 foot height, with a burial depth of 2 feet plus 10% of structure height. Backfill shall be compacted.

Under no circumstances will NBU attach its service drop to an intermediate structure installed by the customer between NBU's distribution lines and the customer's point of delivery.

Service drops shall be free of possible contact with trees. Customer must initially trim all trees necessary to provide the required clearance and allow NBU to trim trees in the future as needed. If it is necessary to trim or remove trees belonging to other property owners, in order to provide service, the customer requesting the service must obtain permission for NBU to do this.

Conductors shall not cross over or through a building or structure unless it is necessary to provide service to that building or structure, and approved by NBU. Where conductors providing service to a building cross a portion of the roof, the clearance above the roof shall not be less than 18 inches. If conductor crosses more than 4 linear feet of roof, increase the clearance to 36 inches. If conductors cross more than 6 linear feet of roof, the clearance must be greater than 8 feet. Measurements are to apply along the entire conductor path.

The customer shall mark all privately owned underground facilities, and maintain such markings throughout all project activities.

A. CLEARANCES

TYPE OF TERRAIN	MINIMUM CLEARANCE
Spaces or walkways subject to pedestrians only	12′-6"
Public walkways/sidewalks	17′
Residential Driveways	17′
Commercial Driveways & Parking Lots	18′
Public Streets, Roads, Highways and Alleys	22′
Railroads	27′
Waterways	Determined by NBU

The NESC, Section 232, allows reduction of this height where it is not possible to meet these values. NBU must determine if it is possible to reduce these clearances.

B. SERVICE MAST CONSTRUCTION

That portion of the mast above the uppermost conduit support (roof line) shall be continuous in length without couplings.

Service masts over 48 inches may require guying. Contact NBU before constructing masts more than 48 inches above the roof line.

Service masts shall not extend more than 6 feet above any sloped roof. Measure this height from the point where the conduit exits the enclosed portion of the roof to the top of the weatherhead.

Only power service-drop conductors are permitted to be attached to a service mast. (NEC 230-28).

The customer shall provide a solid point of attachment for supporting the overhead service drop. A 5/8 inch eyebolt securely fastened to a structure capable of supporting 300 pounds is required.

The point of attachment shall never have less than 12 feet 6 inches of clearance, and not more than 30 feet of clearance above final ground grade unless approved by NBU.

The point of attachment shall be located high enough to provide the required vertical clearance of NBU's service drop cable between NBU's pole and the point of attachment.

If the attachment point height cannot be obtained from the ground directly above the meter box, then the customer shall provide an attachment point by installing a properly secured mast, according to specifications.

Drip loops shall never have less than 10 feet 6 inches of clearance above final grade.

Weatherheads shall be located high enough to provide the required vertical clearance of NBU's service drop cable between NBU's pole and the weatherhead. The bottom of weatherhead shall not have less than 12 feet of clearance above final grade.

Attach meter loops on poles such that the weatherhead is within 24 inches of the top of the pole.

Conductor shall have minimum 90°C rated insulation and shall have minimum 3 feet excess length out of the weatherhead.

Identify neutral conductors with white tape at both ends.

Installation is subject to inspection and approval by NBU.

C. OVERHEAD CONSTRUCTION FEES

Amounts due as CIAC from customers who require extensions or modifications of distribution facilities are calculated in accordance with the following fee schedule. NBU shall estimate any installation requiring conductor larger than 1/0 aluminum wire according to "Non-Standard Design".

CONDUCTOR FEES

Single-Phase Primary ..... $13.00 per linear foot

Single-Phase Secondary ..... $6.00 per linear foot

Three-Phase Primary, Medium ..... $27.25 per linear foot

Three-Phase Primary, Bulk ..... $50.00 per linear foot

Three-Phase Secondary ..... $6.25 per linear foot

POLE FEES

Wood Service Pole (30 foot) ..... $550.00 per unit

13.2 FRONT-LOT CONSTRUCTION

Overhead construction shall be front-lot only for all individual lot residential subdivisions. For multi-family services, rear-lot or middle-lot overhead construction may be considered with specific and advanced approval of NBU. Unobstructed vehicular and personal access to infrastructure, both initially and permanently, would be required.

14. UNDERGROUND SERVICE STANDARDS

14.1 GENERAL SERVICE STANDARDS

Underground secondary service can be provided from both overhead and underground primary facilities. All loads more than 100 kVA single-phase and 225 kVA three-phase must be served from pad-mounted transformers.

In certain geographical areas designated by NBU, electrical service is only available from an underground distribution system. When this is the case, underground distribution service utilizing pad-mounted transformers and pad-mounted manual switching equipment are the standard method of service.

Outside the designated areas this service is not standard and must be approved by NBU and the appropriate CIAC will be paid by the customer. Coordination with NBU early in the design stages of construction is required for this type of service.

Prior to the installation of the underground conductors by NBU, the final grade levels of the building sites shall be established by the owner. The construction shall be coordinated with the installation of underground electrical facilities to permit unimpeded access of NBU equipment to the installation sites; to allow installation of underground facilities at proper depth and before streets, curbs or other obstructions are installed, and to eliminate dig-ins to the underground electrical facilities after installation. Should established lots or final grade levels change after installation of underground electrical facilities has begun, or if installation of electrical facilities is required by the owner before final grades are established, and either of these conditions results in additional expenses to NBU, payment for these additional expenses shall be made to NBU by the owner.

Work site grading and landscaping must be at final grade or within 6 inches of final grade before installation of underground facilities.

All single-phase or three-phase underground line segments providing service to more than three pad-mounted transformers shall be built with an integral loop feed.

A. NBU RESPONSIBILITY

NBU shall provide and install all risers placed on NBU poles, wire, and cable at such cost to the customer as is specified herein.

NBU shall provide and install:

- Transformers
- Primary Pull Boxes
- Risers
- Primary Conductors
- Service Lateral Conductors

B. CUSTOMER RESPONSIBILITY

The customer shall mark and/or expose any underground obstacles.

The customer will furnish and install trench and service conduit for all services. NBU will provide service conductor cables and make all connections. The customer's service installation shall fully comply with all requirements of the NEC and those of NBU.

Install conduits in accordance with NBU specification EU-910. Trench route must be approved by NBU. Specified conduit depths shall be the minimum as measured from final grade. Special consideration is given to conduits installed in rock. Contact NBU regarding each of these installations. NBU will assume ownership of conduit and trench only after NBU has successfully installed conductors.

The customer shall furnish and install a pull string, whose length is at least 10 feet longer than the conduit run.

The customer shall supply and install plastic identification tape, red or yellow in color and with black lettering reading, "CAUTION: BURIED ELECTRIC CABLE BELOW", placed in the cable trench between 12 and 18 inches above electric conduit and below any communication cable or conduit.

The customer shall obtain and install all meter troughs and secondary pedestals or enclosures for permanent underground service according to NBU specifications as illustrated herein.

At the discretion of NBU, concrete encasement or special backfill may be required for any conduit at any depth carrying a primary and/or secondary line extension to ensure the longevity and integrity of the circuit and the safety of customers and personnel. Concrete encasement so required shall be furnished and installed by the customer. All concrete encasement must meet NBU specifications.

At the discretion of NBU, NBU may require additional conduit and enclosures for future communication systems.

All exposed conduit to be GRC, IMC, sunlight resistant Schedule 40 PVC, or rigid aluminum only per the following specifications. For installations subject to possible physical damage, substitute Schedule 80 PVC (per NEC). All PVC will meet NEMA PC-2 for electrical use.

NBU determines secondary conduit size according to the following minimum guidelines.

Single-phase, up to 200 amp	2"
Single-phase, over 200 amp	3"
Three-phase	3"
CT service	1 ¼"
Street light conduit	1 ¼"

Additional secondary conduit may be required for larger loads.

Secondary conduit sweeps shall have an 18-inch minimum radius.

All PVC service conduit elbows shall be preformed.

NBU determines all primary conduit sizes according to specific requirements. Primary sweeps shall have a 36 inch minimum radius.

For longer conduit runs containing three or more bends, the customer shall consult with NBU for the conduit size, and for the radius bend to use.

The customer will install the meter socket and the wiring from the meter socket to the service entrance equipment.

Service line conduit/conductor shall enter the meter socket through the bottom outermost knockout, further away from the main disconnect. Do not utilize the bottom center knockout of the socket. Load conductors shall exit the opposite side of the meter socket from the line conduit/conductors.

NBU shall inspect all conduits and its installations. NBU shall install conductors only after the conduit installation is approved.

14.2 UNDERGROUND CONSTRUCTION FEES

Fees listed below are the fees for conductor. This length is not ground distance. It includes riser cable and other conductors installed by NBU. NBU shall estimate any installation requiring larger than 1/0 aluminum wire.

A. CONDUCTOR FEES

Single-Phase Primary ..... ***$5.00 per linear foot***

Single-Phase Secondary ..... ***$8.50 per linear foot***

Three-Phase Primary, Medium ..... ***$16.00 per linear foot***

Three-Phase Primary, Bulk ..... ***$75.00 per linear foot***

Three-Phase Secondary ..... ***$9.00 per linear foot***

B. RISER FEES

Single-Phase Primary Riser ..... ***$1,025.00 per unit***

Three-Phase Primary Riser ..... ***$2,350.00 per unit***

Secondary Riser (2"-3") ..... ***$775.00 per unit***

Secondary Riser (4") ..... ***$1,025.00 per unit***

14.3 UNDERGROUND ADJACENT TO RIGHT-OF-WAY

All Underground Distribution (UD) conversion or extension requests, located adjacent to and fronting a publicly owned Right-Of-Way, shall be property line to property line.

In addition, as an integral part of the UD service request, any adjacent Right-Of-Way whether publicly owned such as a roadway or privately owned such as a gas transmission line, railroad line, or waterway, shall be crossed with UD as well. NBU shall contribute the electrical cost associated with any adjacent ROW crossing, however the associated civil work shall be contributed to NBU and constructed by the project as an integral part of the service request. Any and all ROW owner requirements for crossing their respective ROW shall be followed.

15. STREET LIGHTING

NBU may provide general lighting along the right-of-way of dedicated streets consistent with the certified service area of NBU. Installation within incorporated areas shall be in accordance with requirements and regulation of the AHJ.

NBU shall determine the location of street light fixtures, generally located at street intersections, cul-de-sacs, and at intervals not less than 300 feet. Street lighting is required along Residential and Mixed-Use Residential/Commercial Right-Of-Ways, fronting individually subdivided lots.

NBU may adjust the pole spacing, pole height, lamp wattage, or arm length depending on service conditions, street width and other design factors.

15.1 STANDARD INSTALLATION

NBU shall provide all necessary materials and labor for installation in overhead distribution areas.

The standard street lighting service is comprised of 150-watt high-pressure sodium equivalent Light Emitting Diode (LED) fixture mounted on a wood or metal pole.

In areas with underground distribution services, the customer is responsible for installation of all necessary conduits, including pole riser, in accordance with NBU specification EU-420.

A. STANDARD INSTALLATION FEES

The customer requesting street lighting service shall pay to NBU a CIAC according to the following fee schedule:

Installation of fixture only on existing NBU distribution pole

..... $760.00 per fixture

15.2 ALUMINUM LIGHT STANDARD INSTALLATION

At customer's request and with NBU approval, NBU will install street lighting on aluminum light standards. NBU shall provide and install:

150-watt high-pressure sodium equivalent LED fixture mounted on an aluminum light standard.

This style is available only in areas with underground distribution service. Customer is responsible for installation of all necessary conduits and foundations in accordance with NBU specification EU-410.

A. ALUMINUM LIGHT STANDARD INSTALLATION FEES

The customer requesting street lighting service shall pay to NBU a CIAC.

.....$2,560.00 per pole/fixture

15.3 ANTIQUE STYLE ORNAMENTAL STREET LIGHTS

At customer's request and with NBU approval, NBU will install antique style ornamental standards. The specific style shall be based on available NBU inventory and will be provided to customer upon request. Spacing intervals shall be determined by NBU, but shall not be less than 150 feet. NBU shall provide and install:

150-watt high-pressure sodium equivalent LED decorative fixture, mounted on an antique style ornamental standard.

This style is available only in areas with underground distribution service. Customer is responsible for installation of all necessary conduits and foundations in accordance with NBU specification EU-410.

A. ORNAMENTAL LIGHT INSTALLATION FEES

The customer requesting a standard ornamental street lighting service shall pay to NBU a CIAC.

.....$3,760.00 per pole/fixture

15.4 PRIVATE RIGHT-OF-WAY SUBDIVISIONS

For privately owned Right-Of-Way subdivisions within the City of New Braunfels, street lighting service shall be at the discretion of the property developer. If requested, NBU will provide street lighting service. NBU's standards shall then apply. For privately owned Right-Of-Way subdivisions within the City of Schertz, City of Schertz requirements shall apply.

16. AREA LIGHTING

NBU offers exterior lighting on private property as a service to our customers. The lighting systems provide automatic dusk-to-dawn operation. Area lighting is furnished with a 150-watt high-pressure sodium equivalent LED fixture. This service can be discontinued at any time at customer's request. Private lighting shall only be offered for residential customers and where NBU owns, operates, and maintains an existing utility pole present and available for lighting installation. No new utility poles shall be installed solely for private lighting service.

16.1 AREA LIGHTING RATE

See "Area Lighting (AL) Rate" in the City of New Braunfels Code of Ordinances.

16.2 INSTALLATION FEE

Installation/connection on existing NBU distribution pole with up to 100 feet of service wire .....$760.00 each fixture

Excess Wire over 100 feet.....$1.00/ft.

16.3 MAINTENANCE/REPAIR

NBU shall maintain the light for normal operation. Area lighting may not be available to customers at locations where persistent damage to the Area light occurs.

17. TEMPORARY STREET BANNERS

The City of New Braunfels, in accordance with the City of New Braunfels Ordinance Section 106-17, has developed procedures for installation of Temporary Street Banners. New Braunfels Utilities (NBU) may install Temporary Street Banners supporting economic development, encouraging civic pride, and providing information or announcements about local community services, activities, programs, and events. Please refer to such standard.

In addition, NBU requires the following:

17.1 INSURANCE

Current comprehensive liability policy naming City of New Braunfels and New Braunfels Utilities as the insured, specifying coverage of a minimum of $1,000,000 per occurrence and $2,000,000 in aggregate must be on file with NBU 30 days prior to the scheduled banner hang date.

17.2 BANNER CONSTRUCTION

Banners shall be made of 3/16-inch to 1/2-inch nylon mesh with approximately 50% perforation. Banners cannot be made of solid sheet type material. A maximum area of 864 square inches is allowed of a solid non-breathable backing material for event date. Banners shall have 2-inch safety clips on the top spaced every 18 - 24 inches. Banners shall have a minimum 10 feet of nylon rope on each corner. Banners shall be 36 feet in length by 4 feet in height. Banners must be in good condition to be installed. Any damage detected by NBU personnel that jeopardizes the integrity of the banner will result in it not being installed. The owner is responsible for any needed repairs or changes to the banner. Each banner must have a permanently affixed tag that indicates the organization and the event/date of the event.

17.3 DESIGNATED LOCATIONS

- South Seguin Avenue near Jahn Street
- Landa Street near Paradise Alley
- West San Antonio Street near Hackberry Avenue
- East San Antonio Street near Liberty Avenue

17.4 INSTALLATION FEES

A $60.00 charge will be assessed for each NBU installed Temporary Street Banners. Charges include the installation and removal of one banner from one location. Reservation fees are due upon receipt of the signed agreement and proof of liability insurance. Refund may be issued if cancellation occurs 14 days prior to scheduled installation date.

17.5 RIGHT OF REFUSAL

The City of New Braunfels and NBU reserve the right to refuse installation of any banner that the City of New Braunfels and/or NBU deem unsafe. The City of New Braunfels may be contacted at 830-221-4052 to discuss the appropriateness of potential wording on banners.

18. PRIMARY METERING STANDARDS

18.1 GENERAL STANDARDS

Primary metering is defined as a service where NBU meters the service at the primary voltage. Primary voltage installations use both current and voltage instrument transformers regardless of the load current. Installation of primary metering is solely at the discretion of NBU.

NBU is capable of supplying primary service directly to the customer through NBU metering equipment. Available voltage is 7.2/12.47 kV, 4-wire, grounded Y, or upon special application 138 kV 3-wire, delta.

NBU furnishes, installs, and maintains all service entrance facilities at the point of service including cabinets to house metering CT's and PT's. The customer shall make application to NBU for the proposed primary service and obtain approval of the location, equipment, and design before starting installation of the service entrance. Detailed shop drawings will be required for underground service terminations and metering sections in switchgear.

The customer will incur all costs for clearing the route, including tree removal, building and/or foundation or rubble removal and any other obstacles encountered. The customer shall provide the necessary easements, at no expense to NBU, for the installation and maintenance of the primary service. No permanent buildings or trees shall be placed in the easement area.

Customers requiring service at 7200 volts and above must provide an NBU approved disconnecting means and proper overload and short-circuit protection at the point of delivery.

For any demand loads at or above 4 MW, NBU shall require installation of a three-phase pole or padmounted breaker, installed at customer cost but owned, operated, and maintained by NBU.

For any demand loads at or above 6 MW, NBU reserves the right to construct an additional service feeder originating at the nearest NBU Substation. The cost of such a feeder extension shall be at customer expense.

18.2 PRIMARY METERING EQUIPMENT FEES

Customer shall pay to NBU a CIAC for the installation of the primary PT/CT metering equipment.

.....$13,875.00 per unit

19. SECOND FEEDER SERVICE POLICY

19.1 AVAILABILITY

Second feeder service is available upon request of any customer served under the New Braunfels Utilities' (NBU) LGS, VLP or TSR rates, provided NBU agrees that such service can be feasibly and economically provided by NBU.

Second feeder service is the reservation of capacity on a second feeder in order to provide redundant feeder capacity and provide the capability to automatically transfer the customer's total load from a primary feeder to an alternate second feeder. Automatic transfer of load performed by NBU owned equipment will result in typical switching time of 60 seconds.

The reservation of capacity may entail the construction of a second distribution line or enhancement to an existing distribution line from a NBU substation in order to serve the customer's facility, including the installation of automatic switch gear that allows service from the main feeder serving the customer to be switched to the second feeder in case of an outage of the main feeder.

19.2 TERMS AND CONDITIONS

If second feeder service is requested by the customer, the customer is obligated to pay the costs of an engineering study prior to the commencement of the study, if one is necessary to determine whether service from a second feeder can be provided by NBU, regardless of whether such second feeder service is actually provided. If the construction or installation of new facilities is necessary to provide second feeder service, the customer's payment for the engineering study will be included with the anticipated revenue credit and both will be applied against the costs of such construction or installation, including the cost of the engineering study.

If the reservation of capacity requires the construction of a second distribution feeder or enhancement of an existing distribution line, NBU and the customer will share in the cost. NBU will estimate the cost to construct and/or enhance NBU owned facilities from the substation to the customer's property. The customer will reimburse NBU the estimated cost to construct and/or enhance the distribution facilities less an estimated revenue credit equal to the sum of 48 monthly second feeder charge plus any engineering study costs paid by the customer in advance of the study. The customer will reimburse any cost to construct and/or enhance NBU owned facilities necessary for a second feeder service, including any automatic transfer switching equipment that resides on the customer's property.

NBU and the customer must enter into a written agreement identifying: (i) the quantity of the requested second feeder capacity reservation, measured in kW, to be provided by NBU through its distribution system; (ii) the equipment to be provided by NBU; and (iii) the term of the agreement. The agreement will remain in effect while automatic switching capability is in operation. NBU reserves the right to remove or disable any automatic switching capability equipment upon termination of the agreement.

NBU reserves the right to interrupt second feeder service for maintenance activities or when necessary for operational or emergency reasons.

Where appropriate, the customer will be required to maintain appropriate load balancing as determined by the NBU.

NBU's terms and conditions, where not inconsistent with any specific provisions hereof, are a part of this policy.

19.3 MONTHLY SECOND FEEDER CHARGE

The monthly second feeder charge shall be the amount specified in the City of New Braunfels Code of Ordinances, Section 130, Utilities, rate class entitled SFS.

Notwithstanding the foregoing, if the customer's actual billing demand, as defined by the applicable rate in the City of New Braunfels Code of Ordinances, Section 130, Utilities, exceeds the second feeder service reservation, such reservation will be re-set at the actual billing demand for that month and for subsequent months through the term of the agreement unless superseded by a higher actual billing demand. To the extent the construction or installation of new facilities is required in order to provide the second feeder service at the re-set second feeder capacity reservation level, such construction or installation costs shall be subject to reimbursement by the customer.

Additionally, if a customer's second feeder capacity reservation requirement decreases over time or due to changes in business requirements below the customer's original second feeder capacity reservation, NBU will adjust the second feeder capacity reservation to the customer. The customer must provide the NBU a written request to have the second feeder capacity reservation lowered below the original contracted second feeder capacity reservation. The new second feeder capacity reservation will be based upon the actual billing demand of the latest month, beginning with the next month after such request, provided that the customer has been receiving second feeder service for a minimum period of five (5) years. For requests to decrease the second feeder capacity reservation prior to the end of the initial five year term of second feeder service, the NBU will charge the customer the highest actual billing demand for eleven (11) additional months, or until the end of the initial five year term, whichever occurs first. NBU will review the equipment necessary to supply second feeder service at the lower second feeder capacity reservation. The customer agrees to reimburse NBU for any costs incurred to appropriately alter the second feeder switchgear and equipment to provide second feeder service at the lower second feeder capacity reservation.

However, once the customer's second feeder capacity reservation has been adjusted to the lower, requested level in accordance with the preceding paragraph, the customer agrees not to exceed the capacity level. It the customer's actual billing demand exceeds the customer's new second feeder capacity reservation, the customer agrees to pay the difference between the actual billing demand and the new second feeder capacity reservation multiplied by the monthly second feeder charge as defined above, for the period of time since the customer's new second feeder capacity reservation has been in effect, up to 24 months. Additionally, such reservation will be re-set at the actual billing demand, in accordance with the provisions above. To the extent, the construction or installation of new facilities required in order to provide second feeder service at the re-set second feeder capacity reservation level, such construction or installation costs shall be subject to reimbursement by the customer.

19.4 METERING

NBU's existing metering equipment for electric delivery service to the customer will remain in place in order to continue to bill the customer's actual usage. If necessary, NBU will install metering equipment for second feeder service for the purpose of metering and billing actual deliveries on the second feeder.

19.5 TERM OF SERVICE

Second feeder service is provided under this provision for a period of at least five (5) years.

20. CUSTOMER-OWNED GENERATION

20.1 NON-PARALLEL OPERATION

In some cases, the customer may wish to provide an emergency generator to supply a portion or all of his electric service in the event of a power failure. In such cases, an approved double throw switch, either manually or automatically operated, must be provided in the service entrance equipment of the customer. This switch shall break the initial position before making the next position (open transition). This switch is necessary to prevent a dangerous back feed of energy into NBU lines and equipment that might create a hazard to equipment and personnel and could seriously damage the customer's wiring and generator. NBU shall not be responsible for customer equipment damage caused by a failure of customer equipment to maintain non-parallel operation.

In addition, no collar control device may be installed between a meter socket and NBU's meter. Such a device installation is considered meter tampering.

20.2 DISTRIBUTED ENERGY RESOURCES

DER of 24 kW residential service or 999 kW commercial service may be connected for parallel operation with the electrical system of New Braunfels Utilities (NBU), with advance NBU approval. Interconnections will only be considered for permanent electric customers whose load profiles are expected to normally exceed DER capacity of the installation.

Larger DER interconnections 1 MW and above may also be considered, however additional approval up to and including registration by ERCOT may be necessary. Any applicable ERCOT fees shall be paid by the customer requesting such DER.

NBU assigns PV system ratings at Normal Operating Conditions (NOC) 800 Watts per Square Meter, which typically matches the irradiance of a Southward facing system. This number may be changed from time to time.

* Due to new legislation in effect 9.01.2021, NBU will no longer limit residential customers to 24 kW system sizes for systems submitted after 9.01.2021. Due to NBU's kWh compensation system it is still not advised for residential customers to size systems above consumption of the residence.

A. INTERCONNECTION REQUIREMENTS

Customer shall comply with all the latest applicable National Electric Code (NEC) requirements [NEC Articles 690 and 705], building codes, and shall obtain all City of New Braunfels, State, and Federal electrical permit(s) for the equipment installation.

DER service shall be limited to no more than 50% maximum kW capacity on any series element serving the DER. As an example, total DER served by a 50kVA padmounted transformer shall not exceed 25kW. DER capacity is to be used on a first come first serve basis. As an additional example, total DER served by one distribution feeder shall not exceed 5MW. DER shall also be limited to where a substation Power Transformer does not backfeed the transmission grid, at any time including off-peak. Should a DER service request necessitate upgraded NBU infrastructure, the customer will be responsible for all costs associated with the design, equipment, and installation of the additional infrastructure.

Customer shall provide space for metering equipment. For all DER services 320 Amp or less, two meter bases are required. One meter shall register all consumption usage. The second meter shall register all generation usage. Under no circumstance may load-side electrical cross-connections be made between the consumption usage meter and the generation usage meter. Such a connection is considered an Unapproved DER Interconnection.

Customer's over-current device at the service panel shall be marked to indicate power source and connection to NBU's distribution system.

NBU requires a visible, lockable, labeled AC disconnect ("VLLD") for interconnection. The AC disconnect must have a visual break (with external handle) that is appropriate to the voltage level, be accessible to utility personnel, and is capable of being locked in the open position. NBU personnel or company-authorized agents will operate the VLLD as needed to ensure the DER system is removed for operation and cannot backfeed or inadvertently energize company facilities during emergency switching or other conditions. NBU requires the VLLD be located on an exterior wall and within ten feet of the NBU meter(s). For commercial installations only, if the VLLD is more than ten feet from the NBU meter(s), then NBU requires a site directory placard (indicating the location of the VLLD) be placed on the customer's equipment beside the NBU meter(s) or on the NBU meter base(s) showing the location of the VLLD. For more information, follow the NBU Placard Guideline within the NBU Procedures Manual.

NBU shall not be responsible for any restart failure of the DER system, which may occur from operation of the VLDD.

The Customer shall assume the full responsibility for all maintenance of the generation and protective equipment and keeping of records for such maintenance. These records shall be available to NBU for inspection upon request and reasonable notice. Failure to maintain such records may necessitate the customer engaging a licensed electrician to provide the documentation to NBU. In addition and in the absence of system documentation, NBU also reserves the right to assume a system size to be up to 265 Watts per panel.

Customer's power production control system shall comply with NEC Articles 690 and 705; and applicable and current Institute of Electrical and Electronics Engineers (IEEE) Standards 929, and/or the latest version of IEEE 1547, for parallel operation with NBU; in particular the:

Power output control system shall automatically disconnect from NBU power source upon loss of NBU voltage and not reconnect until NBU's voltage has been restored for at least 5 minutes continuously.

Power output control system shall automatically initiate a disconnect from the NBU source within 6 cycles if customer's voltage falls below 60 Volts rms to ground (nominal 120 V rms base) on any phase.

Power output control system shall automatically initiate a disconnect from the NBU system within 2 seconds if the voltage rises above 132 Volts rms phase to ground or falls below 104 Volts rms phase to ground (nominal 120 V rms base) on any phase.

Customer shall pay all costs associated with the design, installation, operation, and maintenance of the generation equipment on the customer's side of the meter(s).

Customer shall not commence parallel operation of the generation equipment until inspection and written approval of the interconnection facilities has been provided by NBU. Such approval shall not be unreasonably withheld. NBU shall have the right to have representatives present at the initial testing of the customer's protective apparatus, and shall retain the right to periodically inspect the facility to ensure that appropriate safety standards continue to be met.

Once in operation, customer shall make no changes or modifications in the equipment, wiring, or the mode of operation without the prior approval of NBU.

DER equipment shall be in compliance with Underwriters Laboratories (UL) 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Systems; UL 1703, Standard for Safety: Flat-Plate Photovoltaic Modules and Panels; and IEEE 1262-1995, Recommended Practice for Qualification of Photovoltaic (PV) Modules; and the DER system shall be installed in compliance with IEEE Standard 929-2000, Recommended Practice for Utility Interface of Photovoltaic Systems, as well as the latest version of IEEE Standard 1547.

B. SAFETY

All Safety and operating procedures for joint use equipment shall be in compliance with the Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.269, the National Electrical Code (NEC), Washington Administrative Code (WAC) rules, the Washington Industrial Safety and Health Administration (WISHA) standard, NBU standards, and equipment manufacturer's safety and operating manuals.

NBU reserves the right to require certain and defined utility control over installed customer owned DC to AC inverters, at any time. For existing installations, written notice would be provided by NBU detailing the required changes and/or control integration to be made. Existing installations would be grandfathered "as is" for a period of 10 years from notice.

C. DISCONNECTION OF DER

It shall be the customer's responsibility to inform NBU 30 days in advance of a disconnection of DER. NBU shall not be responsible for refunding any rate ordinance based fees due to a failure to notify NBU.

D. UNAPPROVED DER INTERCONNECTION

Upon detection by NBU, any unapproved DER interconnection to the NBU distribution system is subject to immediate disconnection. Unapproved DER interconnections pose a safety risk to NBU crews and to the owners of such systems.

Unapproved DER Interconnection Fee $500.00

E. INSPECTION FEES

Inspections shall occur during initial installation, and at a frequency of once per year thereafter. In addition, any failed DER system inspection, requiring corrections with a second inspection being necessary, shall require re-inspection fee(s) as follows. Inspection shall be performed by NBU, or by an NBU authorized representative.

DER System Inspection Fee (Yearly).....$100.00

DER System Re-Inspection Fee (Per Inspection, As Required) $100.00

21. APPENDIX A (Comprehensive Fee Schedule)

This section summarizes all applicable fees listed throughout the Electrical Connection Policy. In the event of any discrepancy, fees listed here shall supersede.

Any and all fees listed within this Electrical Connection Policy may automatically adjust by the Consumer Price Index (CPI) upon a yearly basis. CPI based increases shall not require NBU Board of Trustees approval.

Fee Description	*Policy Section*	*Unit*	*Unit Fee*
After Hours Connection	§3.1	Per Unit	$150.00
D&R, less than 2 hours	§3.2	Per Unit	$75.00
Accelerated Inspection	§10.1.A	Per Unit	$75.00
Meter Loop Re-Inspection	§10.1.A	Per Unit	$100.00
Non-Business Hour Inspection	§10.1.A	Per Unit	$75.00
CT Metering, Standard	§12.2.F	Per Unit	$925.00
CT Metering, Transocket	§12.2.F	Per Unit	$1,125.00
Single-Phase Primary (OH)	§13.1.C	Per Foot	$13.00
Single-Phase Secondary (OH)	§13.1.C	Per Foot	$6.00
Three-Phase Primary, Medium (OH)	§13.1.C	Per Foot	$27.25
Three-Phase Primary, Bulk (OH)	§13.1.C	Per Foot	$50.00
Three-Phase Secondary (OH)	§13.1.C	Per Foot	$6.25
Wood Service Pole	§13.1.C	Per Unit	$550.00
Single-Phase Primary (UD)	§14.2.A	Per Foot	$5.00
Single-Phase Secondary (UD)	§14.2.A	Per Foot	$8.50
Three-Phase Primary, Medium (UD)	§14.2.A	Per Foot	$16.00
Three-Phase Primary, Bulk (UD)	§14.2.A	Per Foot	$75.00
Three-Phase Secondary (UD)	§14.2.A	Per Foot	$9.00
Single-Phase Primary Riser	§14.2.B	Per Unit	$1,025.00
Three-Phase Primary Riser	§14.2.B	Per Unit	$2,350.00
Secondary Riser (2”-3”)	§14.2.B	Per Unit	$775.00
Secondary Riser (4”)	§14.2.B	Per Unit	$1,025.00
Public Light, Existing Pole	§15.1.A	Per Unit	$760.00
Aluminum Light, Standalone	§15.2.A	Per Unit	$2,560.00
Antique Light. Standalone	§15.3.A	Per Unit	$3,760.00

Area Lighting	§16.2	Per Unit	$760.00
Area Lighting (Excess Wire)	§16.2	Per Foot	$1.00
Banner Installation	§17.4	Per Unit	$60.00
Primary Metering	§18.2	Per Unit	$13,875.00
Unapproved DER Interconnection	§20.2D	Per Unit	$500.00
DER Inspection	§20.2E	Per Unit	$100.00
DER Re-Inspection	§20.2E	Per Unit	$100.00