



SERVICE POLICY

Effective January 2016

This Policy provides information on the Idaho Falls Power (IFP) procedures for new and existing services and what will be required of a Customer desiring electric service. This Policy is based in part on current Idaho Falls City Code. It is to be used only as a guide and shall not be considered to be complete with respect to all possible service configurations or special or extenuating circumstances. Questions pertaining to this policy should be directed to the Engineering Manager, or the Distribution Superintendent at 208-612-8430 **Any deviations from this Policy must receive prior IFP approval.**

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GENERAL INFORMATION REQUIRED FOR ALL ELECTRICAL SERVICE REQUESTS

Service Fees: Consistent with Idaho Falls Ordinance 8-5-35, all fees or costs, as applicable to line extensions for Residential or Commercial individual customers or developments shall be paid in advance of any installation of electrical infrastructure. Applicable fees are published in the Fee Schedule established by City Council Resolution.

A Customer desiring electrical service must first secure a building permit from the City Building Department. However, for all three-phase projects, it is required that the Developer coordinate service plans directly with IFP prior to seeking a building permit. The customer shall provide information necessary for IFP to provide electrical service, including but not necessarily limited to: overhead or underground service, single-phase or three-phase service, the total connected load, the electric heat and air conditioning load, the required voltage, and the number and size of motors with ratings greater than ten (10) horsepower.

All commercial and industrial Customers shall provide directly to IFP the following, as applicable: A plot plan indicating the service entrance location, *proposed* transformer location (the final determination will be made by IFP), a completed transformer sizing sheet (attached to review sheet or by pdf from IFP design) all electrical requirements including as a minimum, number of phases, voltage, connected three-phase and single-phase loads. IFP's required easements for the electric lines will be included on this plot plan. In general, easements for electric service shall be twelve feet (12') in width. New utility easements less than 12' in width require prior approval from Idaho Falls Power design staff. It is the Customer's responsibility to have IFP's designated easements surveyed and dedicated to the City. IFP will also indicate the preferred transformer location. No service work, cable pulls, or connects will be made unless the site address is posted in a conspicuous place.

The Customer is solely responsible for the selection, installation and maintenance of all electrical equipment and wiring, other than the City's meters and apparatus, on the load side of the point of delivery. Additionally, all electric motor installations shall include effective protective apparatus or have adequate protective measures within the motor to accomplish equivalent protection as follows:

- (1) Overload and over-current protection for each motor by suitable thermal relays, fuses, or circuit interrupting devices automatically controlled to disconnect the motor from the line to protect it from damage caused by overheating.
- (2) Open-phase protection on all poly-phase installations to disconnect motors from the line in the event of opening of one phase.
- (3) All poly-phase motors for the operation of passenger and freight elevators, cranes, hoists, draglines and similar equipment shall have reverse phase relays, or equivalent devices, for protection in case of phase reversal.
- (4) Motors that cannot safely be subjected to full voltage at starting shall be provided with a device that ensures that, upon energization at full voltage, such motors will be disconnected from the line.

The Customer shall be responsible to install and maintain surge suppressors, auxiliary power units or other protective devices for the protection of computers, computer software and programming,

televisions, or other equipment sensitive to voltage spikes, surges, sags, transients, noise interruptions or outages.

The Customer shall install and maintain all suitable protective devices and equipment to protect themselves, life and/or property, from harm or injury from electric current because the City shall assume no duty to warn or to otherwise assist the customer in the selection of or use of electrical appliances, tools, equipment or facilities. Any building requiring over 1000 amps must contact Idaho Falls Power Engineering for approval of switchgear prior to installation.

SPECIFIC REQUIREMENTS BASED ON TYPE OF SERVICE

I. Commercial Underground Service:

The Customer shall do the following to prepare for service:

1. Determine location of loads, approximate size of loads and possible future needs. All three-phase underground installations shall be served with Y connected secondary only (*i.e.* 120/208 or 277/480).
2. Utilize previously recorded public utility easements or provide easements to the City for underground power cable, as indicated on the marked-up plot plan described above. If the indicated easement locations present problems, then the Developer is responsible to obtain permission for a different routing from IFP.
3. IFP requires all City-owned conductor to be in conduit, the customer shall provide and install all conduits as required from the IFP's designated service tap point(s) (source) through new or existing easements to the Customer's transformer pad outlined in at number I.4 below. Further, the Customer may be required to open an additional trench to place conduit from the transformer pad to an exit point from the Customer's property and to provide easements for same. Such may be necessary where the City wishes to loop feed through the Customer's property for purposes of service reliability and to supply future Customers. All PVC electric conduits shall be PVC Schedule 40. All elbows shall be PVC Schedule 40 large radius sweep (36") or as otherwise specified by IFP. No conduit run shall have more than 360 degree of bends. Maximum lengths of conduit runs shall be determined by IFP.
4. **Three-Phase Transformers.** The customer shall construct a concrete transformer pad per current IFP specifications in the location indicated on the marked-up plot plan described above. A minimum ten foot (10') clear area is required in front of the transformer pad and a minimum of two foot (2') clearance is required on the other three (3) sides of the pad. The final transformer location will be determined by IFP. IFP must be contacted for inspection of transformer form prior to the pad being poured. Pad design shall conform to Attachment #1, #1A, & #1B. The pad location shall be compacted to a minimum of ninety-five percent (95%) of maximum density prior to concrete placement. A transformer will not be installed on the pad until it has cured a minimum of seven (7) days. No more than eight (8) conduits on the secondary side of a transformer shall be installed.

Single-Phase Transformers. Transformer pads shall be provided by IFP but shall be installed by the Contractor/Developer in conformance with Attachment #2. The pad location shall be compacted to a minimum of 95% of maximum density prior to placement. The top of the transformer pad shall be installed a minimum of six inches (6") above final grade. A minimum ten foot (10') clear area is required in front of the transformer pad and a minimum of two foot (2') clearance is required on the other three (3) sides of the pad. The transformer location will be determined by IFP.

High Voltage Switch Cabinets Bases and Secondary Pedestals. High voltage switch cabinet bases and secondary pedestals shall be provided by IFP but shall be installed by the Contractor/Developer in conformance with Attachment #3. The top of the base transformer pad shall be installed a minimum of six inches (6") above final grade. A minimum ten foot (10') clear area is required in front of the high voltage switch cabinet bases and a minimum of two foot (2') clearance is required on the other three (3) sides of the base. The location of the bases and pedestals will be determined by IFP.

5. **Trench and Conduit:**

To save all parties a tremendous amount of time, energy, and money, please contact the applicable IFP Design staff as noted on the approval drawings or through the main engineering office (208-612-8430) prior to starting any trench and conduit work. .

- a. Trench for primary conductor shall have a minimum depth of forty-eight inches (48") and maximum depth of sixty inches (60") below final grade. Minimum trench width shall be twenty-four (24") unless otherwise noted. Before final backfill, IFP shall be notified when the conduit is in place. IFP will inspect all conduit installations before backfilling for proper depth and installation. Failure to obtain an inspection prior to backfill may result in the re-excavation of the trench.

IFP will specify the conduit size. Contact applicable IFP staff upon completion of pulling a mandrel through the conduit to prove the conduit. Any additional or future costs due to broken, damaged, obstructed or poorly assembled conduits will be paid by the Customer.

- b. Minimum primary conduit depth can be reduced to eighteen inches (18") of cover below final grade through basalt or other rock upon prior approval of IFP. Rigid galvanized steel (RGS) conduit shall be provided and installed by the Customer where trench depth is less than forty-eight inches (48"). IFP will specify the conduit size.
- c. IFP will provide the pole and all primary conductors, if crossing existing streets with overhead primary conductor to a pole located near the new service. The Customer shall provide and install the first length *i.e.* ten feet (10') of RGS conduit up the pole above the RGS elbow. All elbows at the base of the pole shall be large radius three foot (3') RGS steel. All conduits installed on IFP poles will be on approximately eight inches (8") standoffs. If an underground road crossing is made, the Customer will provide all conduit

and will bore conduit beneath the roadway or provide a trench in which to install conduit. The use of high density polyethylene (HDPE) continuous conduit shall be used at select road crossing locations with prior approval from IFP. Conduit shall be Perma-Guard/UL and fittings shall be Arco Shur-Lock II or an approved equal approved by IFP. IFP will inspect all conduit installations before backfilling for proper depth and installation. Trenches across existing roadways must also be approved by the City Public Works Division.

- d. Sand bedding is required, a minimum of six inches (6") sand bedding to be required above and below the conduit. An IFP staff may determine that the native soil is suitable for bedding material. Additionally, bury/caution tape shall be buried two feet (2') above the top of conduit. IFP will inspect all conduit installations before backfilling for proper depth and installation. Prior to cable installation, trenches must be backfilled and pads must be in place.
 - e. In all cases the Customer shall be responsible for backfill and compaction of cable trenches and repair of street crossings. Per city standards, all electrical trenches shall be compacted to a minimum of ninety-five percent (95%) of maximum density to prevent settlement.
 - f. A minimum of one foot (1') clearance shall be maintained between primary high voltage cable and all other utilities and service voltage cables, except at crossings where a separation should exist to allow future repairs of either utility approximately two inches (2") minimum.
 - g. All conduit, including bell ends, shall be supplied and installed by the Developer/Contractor. Bell ends shall be installed at transformers, secondary pedestals, switch cabinets, and light pole locations. Attachment #10 contains installation guidelines. Conduits must be capped and labeled to identify routing.
6. The Customer provides, installs and retains ownership of all commercial secondary service conductors and conduits from building (or load) to transformer (or source). When Customer can be met from an existing power pole, the Customer shall install all secondary cable to the pole and shall provide sufficient secondary cable to reach from the pole top connection point to the Customer's meter base or other point of connection. The Customer shall provide and install the first length (*i.e.* ten feet (10')) RGS conduit up the pole above the RGS elbow. All conduits installed on IFP poles will be on approximately eight inches (8") standoffs. Since the secondary trench and cable are the Customer's responsibility, no easements will be required by the City. All future maintenance, locating, and repair of secondary shall be the Customer's responsibility.
7. Customer shall provide and install necessary meter bases, current transformer (CT) boxes, and install IFP provided CTs in CT boxes. See Commercial Metering Requirements below.

Following such installations, IFP will install meter, meter wiring, etc.; place a transformer on the concrete pad; pull primary cable through Customer installed conduit; and connect primary cables to the primary terminals of the pad-mounted transformer. IFP makes up secondary connections in the transformer and provides connectors for standard cable up to and including 500 kcm. If greater than 500 kcm cable is to be used, the Customer provides connectors and/or other special facilities.

Finally, IFP connects the primary cable to its power system at the designated tap point after all requirements are met.

II. Commercial Overhead Service:

Customer shall do the following to prepare for service:

1. Determine location of service entrance, approximate size of loads and possible future needs.
2. Provide a meter base, standard power riser, weather head, and/or suitably anchored attachment point to allow connection to IFP's designated service tap point. Install IFP provided CTs.
3. Provide necessary easements to connect the Customer to IFP's designated tap point. Easements are required for primary only, except in rare cases where an easement for overhead secondary may be necessary if it crosses the property of others.

IFP will then provide metering equipment and aerial overhead conductor. Customer will install IFP provided CTs. Note that no Customer owned equipment will be permitted on IFP's poles.

III. Residential Service:

A. Underground

1. New underground residential electric systems shall be installed in front lot locations and shall be determined by IFP.
2. **Secondary.** In residential underground areas, the Customer (whether through the Developer, builder or individually) is required to open and close a thirty inch (30") deep trench, and install two and one-half inches (2½") schedule 40 PVC conduit to the meter base thirty-six (36") PVC radius elbows shall be used from IFP's designated pad-mounted transformer or service pedestal to the service point. At the building foundations, an appropriate smaller radius elbow as approved by IFP may be required to maintain conduit cover. Minimum conduit depth can be reduced to eighteen inches (18") of cover below final grade through lava upon approval of IFP, but RGS conduit must be provided and installed by the Customer where trench depth is less than thirty inches (30"). IFP will specify the conduit size. Conduit will have a maximum of 360 degree of bends per run. Conduit shall only be bent with approved methods (i.e. blanket warmer or rigid conduit bender, **NO TORCHES.**) Where the service is fed from an overhead transformer, the Customer will install conduit to the pole where the transformer is mounted. The Customer will install a 2 ½" rigid galvanized, three foot radius elbow and one ten foot length of 2 ½" rigid galvanized steel conduit up the pole. The Customer will provide enough conductor to make connection to the transformer and coil it at the top of the end of the riser. Schedule 40 PVC is acceptable only if mounted within the framed wall. If surface

mounted on the house, the riser to the meter base and adjacent elbow shall be RGS. IFP will inspect all conduit installations before backfilling for proper depth and installation. Meter base shall be framed and braced before the power cable will be pulled into the base. After IFP inspects conduit, an authorization for backfill sticker will be placed on conduit or meter base. All trenches will be compacted to a minimum of ninety-five percent (95%) of maximum density to prevent settlement. It shall be the homeowner's responsibility to maintain integrity of secondary conduit at their expense.

3. **Service Entrance and Meter Base.** The meter shall be located within five feet (5') of the nearest front corner of the house to the existing transformer or pedestal. Conduit is to have a maximum of 360 degree of bends. Service shall conform with Attachment #4. Meter location requirements herein are to be used only as a guide and shall not be considered complete with respect to all possible service configurations or special extenuating circumstances. Any deviation of meter placement must have prior approval from IFP. The centerline of the meter should be five feet six inches (5'6") above the finished grade or walkway. If structural details prevent this, the centerline height shall be not less than five feet (5') or more than six feet (6').
4. **Primary.** Primary conduit and trench requirements are the same as for commercial service. At times, a primary extension may be required, in which case the Customer will open and close a forty-eight inches (48") deep trench below final grade and install conduit. Minimum trench width shall be twenty-four inches (24") unless otherwise noted. In general, easements for electric service shall be twelve feet (12') in width. It is the Customer's responsibility to have the designated easements surveyed and dedicated to the City. IFP will also indicate the preferred transformer and service pedestal locations. A horizontal and/or vertical separation is required between electrical facilities and/or other utilities.

Exception: On residential extensions, IFP will provide transformer pads and service pedestals following IFP provision of such pads and pedestal and, before transformer pad or service pedestal is installed, the Customer/Contractor shall install one ten foot (10') length of two and one-half inches (2½") schedule 40 PVC secondary conduit with three feet (3') sweep and schedule 40 PVC riser if required from each transformer and/or pedestal on approximately a 45 degree angle into each lot to be served with electrical service.

5. **Power Cables.** IFP will provide and install the necessary primary and secondary cable in the Customer provided conduit to connect the Customer's service point to the City's pad-mounted transformer or pedestal. The Customer is required to establish a final grade compacted to a minimum of ninety-five percent (95%) of maximum density at each transformer and service pedestal on location large enough for placement of IFP's transformer pad and/or pedestal. *See Attachments #2 and #3.* The Customer should coordinate work with IFP. The Customer's service entrance equipment must be in place and approved by the electrical inspector before final hookup. Installed conduit shall be inspected by IFP to ensure proper conduit depth and installation. Cable will not be installed until the trench has been backfilled.
6. **High Voltage Transformers and Switch Cabinets.** The high voltage equipment shall not be enclosed in any manner which will restrict the dissipation of heat. A ten foot (10') minimum

clearance and access must be maintained in front of the cabinet door. A two foot (2') clearance should be maintained on all other sides of the equipment. Fences or landscaping installed within this clearance will be removed at the Owner's expense should servicing be required. *See Attachments 2 and 3.*

B. Overhead

1. The same procedures and requirements set out at II. NEW COMMERCIAL OVERHEAD SERVICE Section are applicable to NEW RESIDENTIAL SERVICE: Overhead.
2. Additionally, overhead service wire length has a maximum length of one hundred twenty-five feet (125').

IV. **Muli Family Units Service: Condos and Apartments:**

A. Underground

1. Conduits used to service the building will be determined by IFP. The same procedures and requirements set out in III.RESIDENTIAL SERVICE are applicable to multi-family units, condos, and apartments. Secondary conductor(s) will be terminated at one (1) point Customer's premises (*i.e.* main breaker, disconnect or similar tap point). IFP's conductor(s) shall not be used as a bus in gutters, etc.
2. The same procedures and requirements set out in I COMMERCIAL UNDERGROUND SERVICE are applicable to all new three-phase residential loads.

B. Overhead

1. The same procedures and requirements set out in II COMMERCIAL OVERHEAD SERVICE are applicable to multi-family units, condos, and apartments, overhead. **a**

V. **Construction and Temporary Service:** There will be no hook-up labor and material charges for a construction service for a permanent facility. IFP will charge a fee for the installation and removal of power for a temporary facility to existing infrastructure (*e.g.* within thirty feet (30') of underground or one hundred twenty-five feet (125') from overhead tap point). This fee will be established by Resolution of the City Council and shall be paid at the City Building Department at the time of building permit application. Due to varied field conditions, the Customer will need to coordinate a site visit with IFP staff (208-612-8430) to determine installation requirements. If providing the service requires pole installation or transformer placement, an additional one-time fee shall be paid to IFP prior to the installation of the temporary service. Temporary Service request forms with current associated fees are available at the Building Department.

Examples of temporary facilities include a construction trailer or Christmas tree lot, which would require a line extension and/or transformer. Temporary power service shall be limited to one (1) year of continuous service.

The Customer must provide service pole and meter base, and have it approved by the City's electrical inspector. The service pole cannot be more than one hundred twenty-five feet (125') from the designated IFP tap point. The Service Pole shall be tall enough to allow for appropriate traffic clearance and be strong enough to support the service conductors.

VI. Customer requested changes to existing services:

Any customer may request a change to an existing service, including upgrades, expansion, extension or relocation, shall pay in advance the costs in labor and materials to effect the change.

The Customer shall be responsible for costs incurred by IFP for the repair of any of its facilities damaged by the Customer or a third party working on behalf of the Customer. IFP will provide information and services in advance of maintenance or construction activities (such as dropping and reconnecting overhead service lines for tree trimming) at no charge, if scheduled during regular business hours.

VII. Illumination: Public Rights-of-Way

It shall be the Customer's/Developer's responsibility to provide illumination (street lights), along or within the public rights-of-way contained within a new development. All new light pole foundations and lighting conduits shall be constructed by the contractor in accordance with current City of Idaho Falls standard drawings and specifications. IFP will furnish to the Contractor for installation a bolt hole template, anchor bolts, nuts, washers, grounding butt plate, and ground wire. IFP will install poles and luminaires with the cost of materials paid by the Developer prior to installation.

Illumination: Security Lighting

IFP can provide security lighting for private property for a fixed monthly charge for each luminaire, based upon the type of luminaire and wattage. The rates are published in the fee ordinance. These lights can only be affixed to City owned poles with the cost of installation paid by the Owner / Customer. The City retains ownership of all facilities and equipment. For more information contact IFP Energy Services at 208-612-8430.

VIII. Required Conductor Clearances

Attachment #11 and #12 establish required clearances of overhead power lines to driveways, parking lots, alleys, areas of farm and construction equipment, pedestrian traffic, vehicular traffic, railroads, and water ways. Contact IFP for clearances not addressed in this Policy.

GENERAL METERING REQUIREMENTS

I. **SCOPE.** These general metering requirements cover only the common meter installations. Infrequent or special applications, which usually require the approval of IFP, are not included. Wiring diagrams and other meter information may be obtained from the IFP Metering Department. All meters are owned by IFP.

II. **LOCATION OF METERS.** The following requirements apply to the location of meters.

A meter shall not be located where it will be subjected to shock, vibration, or other damage.

Protection from ice, snow, rain or other damage shall be provided by the Contractor/Customer for metering equipment, when location so demands.

Meters shall be installed only in sockets which are plumb in all directions and securely fastened to the structure.

Commercial meters and metering equipment shall be installed at an outside location which will be kept readily accessible at all times for reading, inspecting, and testing. The meter SHALL NOT be contained inside a cabinet or utility closet.

All residential meters shall be installed at an outside location which will be readily accessible at all times for reading, inspecting and testing. Meters shall be front yard accessible.

Meters shall not be located where they might be damaged or become inaccessible by the movement or storage of materials or supplies.

The centerline of the meter should be five foot six inches (5'6") above the finished grade or walkway. If structural details prevent this, the center line height shall be not less than five feet (5') or more than six feet (6') in height. *See Attachment #5.*

In multiple meter installations such as apartment buildings or shopping centers, meters may be mounted in horizontal rows with the allowable maximum and minimum height from ground or walkway to the center line of the meter being six foot six inches (6'6") and four feet (4'), respectively.

In apartment or multiple-use buildings, meters shall not be installed above the first-story level or in the basement.

Meters shall NOT be mounted on IFP owned poles or padmount transformers.

III. **THREE-PHASE / SINGLE PHASE METER AND BASE.** All single-phase and three-phase meters shall be socket type. All new 200 amp residential or upgraded underground meter bases will be: Cooper's B-line UG204F or UG204 or Millbank's UF4015-KO or U015-O. IFP can accept an equivalent with prior approval.

IV. **DETERMINING SELF-CONTAINED OR CT METERING.** Use Table 1 to determine if the service should be metered with a self-contained or CT meter. The selection should be based on the actual connected kW.

**TABLE 1.
SELF-CONTAINED VERSUS CT METERING**

SINGLE PHASE – 120/240 VOLT	
MAIN SWITCH AMPACITY	METER TYPE
0 TO 400 AMPS 401 AMPS & ABOVE	SELF-CONTAINED CT SECONDARY

Use Table 2 to determine if the service should be metered with a self-contained or CT meter. The selection should be based on the actual connected kW.

**TABLE 2.
SELF-CONTAINED VERSUS CT METERING**

POLYPHASE		
METER VOLTAGE	SELF-CONTAINED METER MAXIMUM LOAD	CT METER MINIMUM LOAD
120/208 V - NETWORK 120/240 V	200 AMPERES 200 AMPERES	201 AMPERES & ABOVE

120/208 V	200 AMPERES	201 AMPERES & ABOVE
240/480 V	200 AMPERES	201 AMPERES & ABOVE
277/480 V	200 AMPERES	201 AMPERES & ABOVE

V. **GROUNDING.** Meter bases or enclosures, conduit and meter frames attached to building shall be grounded to a service ground by the Contractor. Where self-contained meter bases are used, the neutral conductor shall be connected to the ground terminal in the base.

VI. **REMOVAL OF METERS.** Only authorized IFP personnel shall be allowed to remove meters from meter bases or the Customer's premises. When socket-type meters are removed, the socket must have a cover plate securely fastened and sealed in place.

VII. **METER IDENTIFICATION AT COMMERCIAL OR MULTIPLE METER INSTALLATIONS.** Prior to actual meter installation, the Customer or Contractor must provide the IFP Meter Department with a plan or diagram indicating which meter socket serves which unit. The Customer or Contractor shall mark the meter sockets with the applicable unit address by some permanent means (not hand written with a Sharpie) at a location on or near meter base.

VIII. **GENERAL.** The Customer or Contractor must furnish meter bases and enclosures for all installations. All meter bases and enclosures will be installed by the Contractor and incorporated into the Customer's wiring. Meter bases must be listed and meet current City of Idaho Falls specifications and all applicable codes. Combination socket and disconnecting devices are approved for use, provided the base meets all other specifications and is wired on the line-side of the Customer's disconnecting device. Corrosion inhibitor shall be used on all connections to aluminum conductors. Protection from ice and other damage shall be provided by the Contractor/Customer for metering equipment, when location so demands. The Customer shall be responsible for the cost of repair for damage to the metering equipment occur due to lack of protection.

By-pass meter bases shall be in compliance with the Meter base section of this Policy. IFP will not provide new three-phase, three-wire self-contained service without a grounded neutral system.

IX. **MASTER METERING.** IFP's retail rates are intended for application to individual Customers or units of service and, except as specifically excepted hereinafter, master metering is prohibited. Master metered mobile home parks, multi-occupant residential buildings, commercial buildings and shopping centers connected prior to July 1, 2010, may continue to receive master metered service.

Mobile Home Parks built before July 1, 2010, whose space for tenants have been sub-metered by the park Owners, need not be individually metered by IFP. Mobile home park tenants will be charged the same rate for electric service as though they were directly metered and billed by IFP.

Multi-occupant residential buildings, commercial buildings and shopping centers may be master metered if the electric heating, ventilation, air conditioning or water heating systems are centrally located and cannot be controlled by the individual tenants.

A master-metered Customer may install sub-metering for individual spaces at the Customer's own expense. Any master metering system must be maintained by the building Owner and installed by licensed electricians. Master metered Customers may also utilize a reasonable allocation procedure to determine a tenant's usage for the purpose of reimbursing the master metered Customer. Such a procedure shall constitute an allocation and not a resale. The Customer shall indemnify IFP for any and all liabilities, actions or claims for injury, loss or damage to persons or property arising from the allocation of service by the Customer.

IFP will not sell or otherwise provide meters or associated equipment required for sub-metering, nor test and maintain Customer owned meters.

SPECIFIC RESIDENTIAL METERING REQUIREMENTS

- I. **SINGLE PHASE METERS.** All single-phase Customers with a main switch ampacity up to and including 400 amperes will be metered with a self-contained meter 320 amp meter base will be used on all loads from 200 to 400 amperes. Meter base of suitable ampacity will be used on all loads up to and including 200 amperes.

All new 200 amp residential or upgraded underground meter bases will be: Cooper's B-line UG204F or UG204 or Millbank's UF4015-KO or UF4015-O. IFP can accept an equivalent with prior approval.

SPECIFIC COMMERCIAL METERING REQUIREMENTS

- I. **THREE-PHASE METERS.** All three-phase Customers with a main switch ampacity up to and including 200 amperes will be metered with a self-contained meter. All loads in excess of 200 amperes will be CT metered.
- II. **SEQUENCE.** All meters or instrument transformers must be ahead of the Customer's disconnecting switch in sequence. Where multiple meter installations are required and a main switch is used, meters may be installed behind the main switch and ahead of the Customer's disconnect; no unmetered circuits will be connected to the main switch. Entrance wiring must be so arranged that metered circuits do not enter conduits, raceways or enclosures containing unmetered circuits except on IFP-owned pole meter loops. Use Table 1, SELF-CONTAINED VERSUS CT METERING, to determine if the service should be metered with a self-contained or current transformer meter. The determination should be based on the actual connected kW.
- III. **CURRENT TRANSFORMER (CT) INSTALLATIONS.** CT installations shall not be more than 50' from the meter base, connected by a minimum one inch (1") conduit for metering conductors only.

Underground metering conduit buried twenty-four inch (24”) deep. Schedule 40 PVC with RGS above ground into meter base, [fragment]. CTs must be contained within a CT can.

See Attachment #7A (Free Standing CT Meter) if no building wall is available for mounting.

Enclosures for CTs shall be furnished and installed by the Customer. All enclosures shall be at least eleven inches (11”) deep and of such size as to permit ready installation of current transformers on the size of wire used. Table 2, enclosures for CTs will be used as a guide for the minimum nominal size of metal cabinet to be used. All enclosures and meter bases shall have provisions for installing security seals and shall be installed at an accessible location on outside of building. IFP will not allow any Customer equipment to be installed on, or holes drilled, in transformer. Enclosures for CTs will be used on both underground and overhead in instrument metered installations. Top of CT enclosure not to exceed six feet (6’) above finished grade. Bottom of CT enclosure shall not be less than two feet (2’) above finished grade. All CTs shall be solidly mounted. Buss type (bolted to buss bar) CT's are allowed. Any variances to the above shall be determined by IFP.

CT meter bases located within six feet (6’) of the padmount transformer shall be grounded and bonded to transformer to prevent touch potential.

**TABLE 2.
ENCLOSURE FOR CURRENT TRANSFORMERS (CTs)**

SERVICE ENTRANCE CONDUCTOR AMPACITY	MINIMUM TRANSFORMER CABINET SIZE (W X H X D)
401 & ABOVE - 1Ø	24" X 24" X 11"
400 & BELOW - 3Ø	24" X 48" X 11"
401 - 800	36" X 48" X 11" (HINGED DOOR TYPE)
801 - 1000	36" X 48" X 14" (HINGED DOOR TYPE)
OVER 1000	NOTIFY IFP

IV. **INSTALLATION OF COMMERCIAL METERS.** All meters, self-contained meters, voltage, and current leads, used with instrument transformers, shall be installed by IFP Meter Department personnel.

METER BASES

I. **SCOPE.** These specifications cover all self-contained meter bases and transformer-rated meter bases. Protection from ice, snow, rain or other damage shall be provided by the Contractor-Customer for metering equipment, when location so demands. All commercial meter bases shall be of the lever bypass type on all permanent structures

II. **SINGLE-PHASE METER BASES.** Residential and commercial service installations over 200 amp, up to 400 amp, (320 amp meter base) single-phase, shall have factory installed lever-type bypass facilities. All

single-phase self-contained commercial service installations shall have factory installed lever or USERC link bypass. Single phase meter bases over 400 ampere shall be CT instrument metered using six (6) point socket type meter base with drilled and tapped mounting plate for test switch provisions (Circle AW catalog #12-146 or equivalent).

- III. **THREE-PHASE METER BASES 200 AMPERE AND BELOW.** Self-contained meter base installations on three-phase service shall be a seven (7) point terminal socket type meter base and shall have factory installed lever type bypass facilities.
- IV. **THREE-PHASE METER BASES OVER 200 AMPERE.** Three-phase meter bases over 200 ampere shall be a CT instrument metered installation using thirteen (13) terminal socket type meter base with drilled and tapped mounting plate for test switch provisions. (Milbank UC3433-XL, or equivalent).
- V. **NETWORK METERING 200 AMPERES AND BELOW.** Self-contained meter base installations shall be a five (5) terminal socket type meter base with fifth terminal installed left center in meter base (9 o'clock position).
- VI. **CURRENT AND POTENTIAL LEADS.** The Contractor shall furnish and install all meter bases and the RGS conduit (1" minimum) to the meter base for current and potential leads. IFP will furnish instrument transformers as needed. The Contractor shall provide the necessary enclosure and install the CTs (CTs will be made available by IFP Meter Department). All CTs will be solidly mounted in CT enclosures.
- VII. **WORKING SPACE AROUND ELECTRICAL METERING EQUIPMENT.** Sufficient access and working space shall be provided around all metering equipment to permit ready and safe operation, maintenance and testing of such equipment, with a minimum of three feet (3') front working space, minimum of 6 feet 6 inches (6'6") head room and a minimum of three feet (3') wide plus permitting 180 degree opening of equipment doors or hinged panels.

CUSTOMER GENERATING EQUIPMENT INTERCONNECTION REQUIREMENTS
/ NET METERING

All new electric generation equipment that a Customer desires to connect to the IFP distribution system shall be approved by IFP prior to connection to the power system and require a signed agreement adhering to the following terms and conditions. Customer must file a Net Metering and Small Generation Interconnection Agreement Application available at the City Building Department or Idaho Falls Power.

1. Facility:

- a. Purchase of Energy: CUSTOMER-GENERATOR intends to construct an electrical generating facility at CUSTOMER-GENERATOR's premises. CUSTOMER-GENERATOR agrees to sell and IFP agrees to issue a credit for all electrical energy generated at the Facility in excess of CUSTOMER-GENERATOR on-site load, all in accordance with the terms and conditions of the Agreement.

b. Facility Fuel Type and Size Limitations: Customer's Facility shall have a maximum output peak generating capacity of no more than 15 kilowatts (kW) for residential and 25 (kW) for commercial. Larger capacity systems will be allowed based upon the customer's historic usage. System sizing in this case shall not exceed the average of the previous 12 months usage. The system shall generate electricity using one of the following fuel or equipment types: wind, solar, biomass, geothermal, hydro or fuel cell. (note: type and size allowed may vary based on city building department restrictions.)

c. Facility Description: The Facility shall be designed, constructed and operated in a manner such that it will interconnect and operate in parallel with IFP's electric supply system, all in a safe and efficient manner without disruption, impairment, damage or loss of operational efficiency to IFP's electric supply system, as determined by IFP. The operation of the Facility is intended primarily to offset part or all of CUSTOMER-GENERATOR's electrical requirements presently supplied by IFP. CUSTOMER-GENERATOR shall be responsible for the design, installation and operation of the Facility and shall obtain and maintain all required permits and approvals. The Agreement is applicable only to the Facility described in the Agreement. Any modifications to the Facility, including installation of replacement Facility or parts, other than for routine maintenance, shall only be made following the prior written approval of IFP.

2. Term:

The agreement shall commence on the date established in the agreement and shall terminate at the expiration of sixty (60) days following the delivery of a notice by either party expressing such party's desire to terminate the agreement..

3. Net Energy:

"Net energy" is the difference between electrical energy consumed by the CUSTOMER-GENERATOR from IFP's electrical supply system and the electrical energy generated by the CUSTOMER-GENERATOR and fed back into the IFP electrical supply system.

4. Measurement of Net Energy:

Metering equipment shall be installed by IFP (solely at CUSTOMER-GENERATOR's expense) to measure the flow of electrical energy and to collect electric generating system information for research purposes.

5. Price and Payment Methodology:

a. Where Consumption Exceeds Generation: If electricity supplied by Idaho Falls Power during the billing period exceeds the electricity generated by the Customer during the billing period, the Customer:

- i. Shall be billed for the applicable non-energy charges for the billing period under the Customer's appropriate retail rate classification, in accordance with normal metering practices, and City Ordinances and policies and,

- ii Shall be billed for the net electricity supplied by Idaho Falls Power at the Customer's appropriate retail rate, in accordance with normal metering practices and City ordinances, resolutions and policies.
- b. Where Generation Exceeds Consumption: If the electricity generated by the Customer exceeds the electricity supplied by Idaho Falls Power during the billing period the Customer:
 - i Shall be billed for the applicable non-energy charges for the billing period under the Customer's appropriate rate classification, and
 - ii Shall be financially credited for energy delivered to Idaho Falls Power during the billing period for the net energy received into Idaho Falls Power's electrical supply system at Idaho Falls Power's wholesale power price or other rate at such time as might be enacted through City ordinance, resolution or policy.

6. Installation Standards and Code Compliance:

- a. CUSTOMER-GENERATOR shall provide the electrical interconnection on the CUSTOMER-GENERATOR side of the meter between the Facility and Idaho Falls Power's system. Solely the CUSTOMER-GENERATOR'S expense, Idaho Falls Power shall make reasonable modifications to Idaho Falls Power's system necessary to accommodate the Facility. The cost for such modifications shall be Idaho Falls Power's actual cost, with an estimate of such costs due and payable in advance of installation. The net metering Facility shall include solely at the CUSTOMER-GENERATOR'S expense, all equipment necessary to meet applicable safety, power quality, and interconnection requirements. These requirements are, or may include, Idaho Falls Power's policies, the National Electrical Code, National Electrical Safety Code, the Institute of Electrical and Electronic Engineers (e.g. IEEE 1547), Nationally Recognized Testing Laboratories (e.g. UL 1741) and utility best practices. Idaho Falls Power Engineering staff must approve each design drawing prior to construction. The drawings must comport to generally accepted engineering design practices and be submitted with the application. This review will be completed within 30 days of application. Upon completion of construction, the City Electrical Inspector and Meter Technician shall give final inspection and approval for the Facility to commence operation. On or within sixty days prior to each three year anniversary of this agreement the Customer shall provide additional certification by an independent qualified and licensed person or entity that the Facility remains in compliance with all applicable electrical and safety codes. Failure to file certification will result in disconnection of the generator (in accordance with item #8), suspension of the agreement and termination of any credit for energy delivered to Idaho Falls Power. When the certification is filed and the facility is found to be in compliance, the agreement will be reinstated from that date forward. There will be no true up of energy during the noncompliance period.

- b. CUSTOMER-GENERATOR shall make an application to and receive approval from IFP before installing an interconnected Facility on CUSTOMER-GENERATOR property. Application forms for a Net Metering Facility are available at the City of Idaho Falls Building Department. The completed application and Facility system design drawing should be returned to the address listed on the application. The City of Idaho Falls Building Department will also require a building permit and electrical permit along with an additional copy of the system design for review. Review by the City of Idaho Falls Building Department and IFP will occur simultaneously. IFP may withhold approval, if for any reason the requested interconnection would result in a negative monetary or physical impact on the City electrical system.

7. Operational Standards:

CUSTOMER-GENERATOR shall furnish, install, operate and maintain in good order and repair, without cost to IFP, all equipment required for the safe operation of the Facility operating in parallel with the IFP's electrical supply system. This shall include, but is not limited to, equipment necessary to (1) establish and maintain automatic synchronism with IFP's electric supply system, (2) automatically disconnect the Facility from IFP's electrical supply system in the event of overload or outage on IFP's electrical supply system, and (3) automatically disconnect if energy storage is utilized with the Facility (batteries), CUSTOMER-GENERATOR system must instantaneously isolate from, and not back feed onto, IFP's electrical system in the event of an overload or power system disruption. The CUSTOMER GENERATOR Facility shall not cause any adverse effects upon the quality or reliability of service provided to IFP's other customers. IFP reserves the right to require CUSTOMER-GENERATOR Facility modifications to comport with Idaho Falls electrical system change in needs or requirements or to negate any adverse impact the interconnected Facility has on other customers. The Facility shall not cause any adverse effects upon the quality or reliability of service provided to IFP's other customers. The CUSTOMER-GENERATOR shall operate its Facility in accordance with applicable rules and regulations. Any such changes would be effectuated at the three (3) year anniversary of the Agreement certification.

8. Disconnection:

CUSTOMER-GENERATOR shall furnish and install on CUSTOMER-GENERATOR side of the meter, a disconnecting device capable of fully disconnecting and isolating the Facility from IFP's electrical supply system. The disconnecting device shall be located adjacent to IFP's bi-directional metering equipment and shall be of the visible break type in a metal enclosure that can be secured by an IFP-owned padlock or other security device. The disconnecting device shall be accessible to IFP's personnel at all times and shall conform to National Electric Code standards. IFP shall have the right to disconnect, with or without notice, the Facility from IFP's electric supply system when necessary, in IPF's sole judgment, in order to maintain safe and reliable electrical operating conditions or to protect IFP's system from damage, disruption, interference, or to preserve system reliability or protect IFP's system from damage, disruption, interference, or to preserve system reliability or protect from other harm. Also, IFP shall have the right to disconnect, with or without notice, the Facility if, in IFP's sole judgment, the operation of the Facility at any time adversely affects the operation of IFP's electrical system or the quality and reliability of IFP's electrical service to other customers. The Facility shall remain disconnected until such time as IFP is satisfied, in its sole judgment that conditions justifying the disconnection have ended or have been corrected.

9. Maintenance:

Except for bi-directional metering equipment owned and maintained by IFP, all equipment on CUSTOMER-GENERATOR's side of the delivery point, including the required disconnecting switch, shall be provided and maintained in satisfactory operating condition by CUSTOMER-GENERATOR at his, her or its sole expense and shall remain the property and responsibility of the CUSTOMER-GENERATOR. IFP shall bear no liability for CUSTOMER-GENERATOR's equipment or for the consequences of its operation.

10. Renewable Energy Credits:

The CUSTOMER-GENERATOR will release to IFP all renewable-energy credits (RECs), solar renewable-energy credits (S-RECs) or other renewable attributes as appropriate based on actual on-site electric generation from the Facility, during the term of this Agreement.

11. Indemnity & Liability:

CUSTOMER-GENERATOR shall defend, hold harmless, and indemnify IFP and its directors, Mayor, Council members, officers, employees, and agents against and from any and all loss, liability, damage, claim, cost, charge, demand, or expense (including any direct, indirect or consequential loss, liability, damage, claim, cost charge, demand, or expense, including attorney's fees) for injury or death to persons and damage to property arising out of or in connection with (a) the engineering, design, construction, maintenance, repair, operation, supervision, inspection, testing, protection or ownership of the Facilities, or (b) the making of replacements, additions, improvements or reconstruction of the Facilities. This indemnity shall apply, notwithstanding the active or passive contributory negligence of IFP, provided, however, IPF shall not be indemnified hereunder for its loss, liability, damage, claim, cost, charge, demand, or expense resulting from its percentage of negligence or comparative fault.

12. Governing Law:

- a. The provisions of this Agreement shall be governed by and interpreted in accordance with the laws of the state of Idaho.
- b. The delivery of electric service to CUSTOMER-GENERATOR's Facility shall be subject to all terms, conditions and provisions set forth in the City of Idaho Falls Electrical Ordinances, as the same presently exists or as may be amended hereafter. In the event of any conflict between the terms and conditions of this Agreement, then and in such event the Electrical Ordinances shall prevail.

13. Venue, Jurisdiction and Litigation Expenses.

It is agreed that this Agreement shall be construed under and governed by the laws of the State of Idaho. In the event of litigation concerning it, it is agreed that proper venue shall be the District Court of the Seventh Judicial District of the State of Idaho, in and for the County of Bonneville.

If a suit or action is instituted in connection with any controversy arising out of this Agreement, the prevailing party shall be entitled to recover, in addition to costs, such sums as the court may adjudge reasonable as attorney's fees, whether in initial litigation or upon appeal.

14. Severability:

Should any provision of this Agreement be or become void, illegal, or unenforceable, the validity or enforceability of the other provisions of this Agreement shall not be affected and shall continue in force. The parties agree, however, use their best endeavors to agree on the replacement of the void, illegal, or unenforceable provision(s) with legally enforceable clauses which correspond as closely as possible to the sense and purpose of the affected provisions and this Agreement as a whole.