APPROVAL OF AMENDMENTS TO BURLINGTON ELECTRIC DEPARTMENT'S OPERATING GUIDELINES

In the year Two Thousand Eleven……..
Resolved by the City Council of the City of Burlington, as follows:

That WHEREAS, Burlington Electric Department ("BED") is presently pursuing the installation of Advanced Metering Infrastructure ("AMI") within its service territory with grant funds from its share of the American Recovery and Reinvestment Act Smart Grid Investment Grant ("SGIG") and proceeds from the recently issued revenue bonds approved by Burlington voters at the Special Meeting held on June 28, 2011; and

WHEREAS, the Vermont Public Service Board has required electric utilities pursuing AMI to provide customers with the option of continuing to utilize existing meters instead of the so-called smart meters that will be installed as part of the AMI project, with the understanding that customers choosing to opt-out of the AMI project bear the additional cost of continuing to use existing meters; and

WHEREAS, BED proposes to amend its Operating Guidelines to include an opt-out provision for customers choosing to continue to use existing meters, as well as to correct certain outdated information concerning BED's electric system; and

NOW, THEREFORE, BE IT RESOLVED by the City Council that the amendments to BED's Operating Guidelines as attached hereto are hereby approved; and

BE IT FURTHER RESOLVED that BED is authorized to proceed before the PSB to obtain approval of the amendments to its Operating Guidelines and to take such other steps necessary to proceed with implementation of its AMI project.

BURLINGTON

Electric

DEPARTMENT

OPERATING GUIDELINES

Vermont Public Service Board Approval Date: 2/1/97

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BURLINGTON ELECTRIC DEPARTMENT OPERATING GUIDELINES

The Burlington Electric Department (BED) has prepared these Operating Guidelines (the Guidelines) to indicate its policies for employees, customers, contractors, vendors and others doing business with BED. The Guidelines are updated as changes become necessary and reviewed by BED employees, management, and the Burlington Board of Electric Commissioners. They are subject to the approval of the Burlington City Council before being filed with and approved by the Vermont Public Service Board (PSB).

BED, a municipally owned electric system, was established in 1905 to reduce electric power costs for street lighting and residences. BED provides safe, reliable, economical and environmentally responsible electric service to Burlington, Vermont, an area of approximately 16 square miles, and the Burlington International Airport, located in South Burlington, Vermont. BED currently has about 20,000 customers, 16,300 of which are residential customers and 3,700 are commercial/industrial customers. Residential sales account for nearly 28% of BED's total revenues while commercial and industrial sales are 71% of total revenues.~~BED currently has about 18,600 customers, 15,000 of which are residential customers and 3,600 are commercial/industrial customers. Residential sales account for nearly 26% of BED's total revenues while commercial and industrial sales are 74% of total revenues.~~

BED's distribution system has 74.4 miles of primary overhead lines and 63.5 miles of primary underground lines. There are two five megawatt (MW) 13.8/4.16 (kilovolt) KV electrical substations located at Starr Farm Road and Leddy Park Road, and one 33 MW 34.5/13.8 kV electrical substation located at the McNeil Plant Substation with distribution of energy at primary voltage of 13.8 kV and 4.16 kV. BED is connected to GMP through the 34.5 KV bus tie breaker at the McNeil Plant Substation, and to the rest of Vermont through VELCO at the East Avenue by two 50 MW and 55 MW transformers and at Queen City Substation by a 56 MW transformer. BED's distribution system is capable of serving an internal load of more than 120 MW.

~~BED's distribution system has 110 miles of overhead lines and 125 miles of underground lines. There are seven five megawatt (MW) electrical substations, and a 13.8 (kilovolt) kV switching station in the downtown area with distribution of energy at primary voltage of 13.8 kV and 4.16 kV. BED is connected to the Vermont Electric Power Company (VELCO) transmission grid by two 50 MW, 115 kV circuits and to Green Mountain Power Corporation's 34.5 kV system by a 20 MW connection. BED's distribution network is capable of serving an internal load of more than 120 MW.~~

The Burlington City Council appoints five citizens from the community to serve staggered three-year terms on the Board of Electric Commissioners (the Board). The Board is authorized by the Burlington City Charter to operate, control and direct the affairs of BED. The City Council, as the governing body of the City, has the power to take property by eminent domain and the ultimate authority to determine salaries and wages for employees' positions. The City Council has the right to veto certain acts of the Board, including the approval of rate changes, authorization of revenue bonds and notes, the adoption of a resolution to provide the security therefore, and long-term contracts.

BED owns 50% of the Joseph C. McNeil Generating Station; a 50 MW wood-chip fired generating plant, and exclusively owns a 25 MW gas turbine generator that is used primarily for emergency service.

BED welcomes comments or suggestions regarding this document. If you have comments or suggestions, or would like more information about this or any other document referred to herein, contact BED at (802) 658-0300.

BURLINGTON ELECTRIC DEPARTMENT OPERATING GUIDELINES

Guideline 1
APPLICATION FOR SERVICE

1.01 Starting an Electric Service

Customers wishing to start electric service with the Burlington Electric Department (BED) should contact the Customer & Energy Services Area either in person or by calling (802) 658-0300.

1.02 Service Upgrades and New Construction

All customers applying for the construction of a new electric service or the upgrade of an existing service shall submit a written application to BED at 585 Pine Street, Burlington VT 05401. A signed service application binds the customer to BED's Guidelines as they now exist and as amended from time to time.

Some construction materials and transformers require a six month lead time, therefore applications need to be completed as early as possible to ensure time for planning resources and equipment purchases.

For more information on new electric service, or to submit an application, contact Customer & Energy Services or Line Extension & Rights of Way at (802) 658-0300.

Guideline 2
ELECTRICAL SERVICES

2.01 Planning for Service

Applications for new service or changes to existing service shall be made with the Burlington Electric Department (BED). Application(s) shall be made as far in advance as possible of the date the electric service is required. Many construction materials and transformers may require a six-month lead time. Before plans are completed, equipment is purchased, or construction begins on facilities that are to be connected to BED's distribution system, customers or their representatives should consult BED regarding the characteristics of service available.

For commercial and industrial services, a current load data sheet indicating the service requirements for the project and a site plan shall be submitted to BED's New Service/Line Extension Area at the earliest possible time. Data shall include the size of the main disconnect, phasing, voltages, motors and connected kilowatt load. This information is essential for the design of BED distribution facilities. Equipment will not be ordered by BED without this information. All equipment using electrical energy must comply with the Energy Efficiency Guidelines of the City of Burlington. BED Energy Services Engineers can assist customers in selecting energy efficient equipment.

If commercial or industrial site plans are available in an electronic format compatible with BED's Computer Assisted Design (CAD) System, the customer shall provide BED with an electronic copy at no cost.

Residential customers shall consult BED during construction planning stages to ensure electrical service will be available when required. To help BED determine the point of connection for service, the customer will provide a site plan or sketch to BED.

Only BED personnel shall make interconnections between the customer's wiring and BED's distribution lines or equipment. BED shall determine the size and characteristics of the equipment used for interconnection. The customer shall provide the necessary space and suitable foundations, supports, housing, and wiring for BED's equipment or apparatus to be located on the premises.

2.02 Customer Use of Service

Based on the customer's needs as described in the required Service Application, BED's facilities are designed to meet the customer's initial load requirements. Customers shall install only such motors, apparatus or appliances that are suitable for operation for the service supplied. The energy may not be used in a manner which causes or is likely to cause detrimental voltage fluctuations or disturbances. If a customer intends to make changes in motors, apparatus or appliances, the customer shall contact BED to determine if the existing facilities are adequate to handle an increase in load. The apparatus and equipment used by the customer should provide the highest practical commercial efficiency, power factor and proper balancing of phases, and shall comply with the Energy Efficiency Guidelines of the City of Burlington (see Guideline 12, Section 12.02, Customer Responsibility)

Guideline 2
ELECTRICAL SERVICES

2.03 Equipment Protection

The customer has the responsibility to furnish, install and maintain devices to protect their equipment against service interruptions. The customer shall install and maintain devices to protect BED's equipment and facilities against disturbance, damage and overload caused by their equipment, motors or other apparatus. The customer shall furnish and install such service and meter disconnects as BED may specify. BED may adjust and seal such switches, and the seal shall not be broken or tampered with, nor shall the adjustments or settings be altered or adjusted by anyone other than authorized BED personnel. Service entrance switches in residences over 1,000 square feet of floor area will have a minimum capacity of 150 amperes and all others shall have a minimum capacity of 100 amperes.

2.04 Metering

BED shall install, maintain and own all necessary metering equipment regardless of where it is located. Wiring, transformers, check metering or other equipment on the customer's side of the point-of-service, exclusive of BED metering equipment, shall be furnished, owned and maintained by the customer in compliance with the National Electric Code and City Wiring Code. At no time shall anyone other than authorized BED personnel remove or replace a meter (see Guideline 5, Section 5.10, Metering).

2.05 Temporary Electric Service

Temporary electric service is available to customers to supply power for a limited period of time. BED reserves the right to remove a temporary service if one year has expired or the service has been abandoned.

Standard temporary electric service consists of 100 feet of aerial three wire, 120/240 volts, single phase and is limited to 200 amperes. A standard fee shall be charged for this service (see Appendix A, Miscellaneous Service Fees).

BED will evaluate all non-standard requests for other voltages, phasing and capacities. Additional equipment, underground service and associated installation and removal costs to provide the non-standard temporary service shall be paid by the applicant. BED encourages all underground installations to be permanent in design whenever possible. Installations shall meet National Electric Safety Codes (NESC), National Electric Code (NEC) and BED's standards.

BED shall determine whether the installations meet the applicable standards. BED may refuse to energize the temporary electric service if the standards are not met.

Costs associated with providing temporary electric service, with the exception of on-going energy charges, shall be paid-in-full by the applicant before construction.

Applicants shall provide appropriate information and accurate load characteristics on BED's Temporary Service Application form.

Guideline 2
ELECTRICAL SERVICES

2.06 New Services
After completion of a service application, customers installing a new service entrance shall consult with BED for the service entrance and meter location before initiating project wiring (see Guideline 10, Electric & Magnetic Fields). The point of service attachment and the location of the meter(s) shall be approved by BED.

2.07 Relocation or Alteration of Existing Service
Whenever changes are made in existing service installations involving relocation, replacement or additions, the entire service installation should be upgraded to current standards. Customers or their representatives should contact BED before estimating costs or beginning changes to the electrical service to determine if there are special requirements or additional costs associated with the job.

2.08 Customer Costs
Information on the service construction costs paid by the customer shall be supplied by BED upon request and shall include but not be limited to labor (regular and overtime), equipment/vehicle time, parts and materials. If the customer wishes to locate equipment or service in a place other than the location recommended by BED, the customer shall bear all additional costs incurred by BED including, but not limited to, labor (regular and over time), equipment/vehicle time, parts and materials.

Only customers requesting a new low voltage service connection shall receive the first 100 feet of that connection free based on the cost of aerial service. Aerial service is calculated using the current cost of 100' of #2 aluminum triplex, connectors, and the cost of one crew for one hour, and applicable overhead charges.

2.09 Service Connections
Normally, only one service connection will be made to a building. If a customer should require a second service of a different voltage to a single piece of property with the exception of fire pump service (see Section 6.02, Fire Pump Service), installations shall be made in compliance with

National Electric Code (NEC) Article 230 and the National Electric Safety Code (NESC). No more than one service with the same voltage shall be connected to a single building.

Additional BED costs associated with a customer requested location of BED's point-of-service shall be the customer's responsibility. For safety and security purposes, under no circumstances shall a customer be able to secure both underground and aerial service to a single property, dwelling or dwelling unit.

Three-phase service is not available in all locations. BED shall be consulted before three-phase installations are designed and constructed. Failure to do so may result in additional expense or delay to the customer.

Guideline 2
ELECTRICAL SERVICES

2.10 Overhead Service Drop

The electrical contractor must leave a sufficient length of service entrance conductor for a drip loop and connection between BED's service drop and the customer's equipment.

The maximum three phase transformer capacity that BED will install on a pole is 300 KVA. The maximum for a single phase is 100 KVA. A facility requiring capacities in excess of 300 KVA or having limitations due to the number or size of the secondary cables shall be served from a pad mounted transformer. Large capacity commercial and industrial overhead services require the transformer pole, terminal pole, or structure to be situated no further than 100 feet from the weatherhead(s) on the facility being served. Due to the weight of the service conductors, a mid-span support pole may be required for distances greater than 100 feet. The customer shall provide a point of attachment on the building or facility capable of supporting the service conductors.

BED shall accept ownership and perform maintenance and replacement work of customer installed residential conduit and service conductors that meet BED's construction standards. BED will accept ownership of overhead service for properties housing a maximum of two rental units if one unit is owner-occupied.

Above ground, above structure and horizontal service drop clearances shall be in accordance with BED construction standards.

2.11 Residential Underground Service

Trenching, back-filling and conduit required for an underground service cable run shall be provided and installed by the customer. If parallel cable runs are required, each run shall be in a separate conduit. Used or spliced cable shall not be accepted. For recommended specifications, refer to BED construction standards. BED shall determine whether the installations meet the applicable standards and may refuse to energize the service if the standards are not met.

BED shall accept ownership and perform maintenance and replacement work of customer installed residential conduit and service conductors that meet BED's construction standards. BED will accept ownership of underground service for properties housing a maximum of two rental units if one unit is owner-occupied.

When a direct buried residential service requires replacement, BED will determine if the replacement service will be underground or overhead. If BED concludes that overhead service is in accordance with zoning ordinances, and is more cost effective to replace, the replacement service will be overhead. If, however, the customer requests the replacement service to be underground, the customer shall be required to pay the difference in actual cost between the overhead and underground service. This provision shall not apply to underground service installed in conduit and accepted by BED.

2.12 Commercial and Industrial Underground Services

Trenching, back-filling and conduit required for an underground service run shall be provided,

installed, owned and maintained by the customer. If parallel service runs are required, each run shall be in a separate conduit. For recommended specifications, refer to BED construction standards.

BED shall be consulted before three-phase installations are designed and constructed as three-phase service is not readily available in all locations. Failure to do so may result in additional expenses or delays to the customer.

2.13 Transformers

BED normally provides the required transformer(s) used within BED's system to supply service to its customers.

A customer may choose to supply their own transformer(s). The power and energy delivered through customer-owned transformers shall be furnished under a Primary Service (PS) tariff. Energy shall be metered at 4,160 volts or 13,800 volts at a single point of delivery.

The customer shall be responsible for the costs associated with the installation, maintenance, repair and replacement of the equipment. BED shall not be responsible for customer-owned transformer equipment except as noted below:

If the customer shall at any time be unable to repair or replace their transformer(s), and the unavailability of that unit reduces, curtails, threatens or interferes with BED's ability to serve other customers or its system stability or reliability, BED may require the repair or replacement of such transformer(s) or discontinue service to the customer. If the transformer(s) is (are) permanently replaced by BED, BED shall remain the owner of the new transformer(s). The customer shall pay the costs associated with the removal of the old transformer(s) and the installation of the new transformer(s) including shipping, labor (regular and overtime), equipment time, materials and other one-time costs. The customer shall also be responsible for the costs associated with the disposal of hazardous wastes as defined by Federal and State Law.

For more information regarding Electrical Services, contact Line Extension & Right-of-Ways at (802) 658-0300.

Guideline 3
LINE EXTENSIONS

3.01 General
Upon receipt of a written service application and a signed contract by a property owner, the Burlington Electric Department (BED) shall construct or allow the customer to construct, following BED standards, the primary and/or secondary line extensions necessary to provide service. BED reserves the right to refuse a line extension request that does not comply with BED's standards and applicable safety codes. A customer applying for a line extension that requires the reconstruction of existing lines shall pay the cost of reconstruction less the accumulated depreciation of the existing line.

3.02 Letter of Ability to Serve (Act 250)
Customers requesting an Act 250 letter indicating BED's ability to serve the facility or project shall make that request in writing to BED's Right of Way/Line Extension Office. The customer shall supply documentation of load data and a site plan referencing other utility services. Any costs associated with additional Act 250 work is the customer's responsibility.

3.03 Application Fee
A fee for BED's engineering services shall be required of customers at the time a line extension is requested. The amount of the fee will be estimated for each project based on the costs associated with the staff needed to engineer the project. In return, BED shall furnish customers with a drawing and cost estimate of the requested line extension within a mutually agreed upon time. The fee will be applied to the required contribution-in-aid-of-construction provided the project is started within six (6) months of the date the approved drawing and estimate are provided. If construction begins at a date later than six (6) months or if BED engineering staff is requested to do project redesigns, the original fee will be applied towards the work already done and a new fee will be required before work continues.

3.04 Right-of-Ways and Easements
BED will not complete a line extension project until a satisfactory right-of-way or easement for the safe installation, operation and maintenance of its facilities has been provided by the customer. BED may decline a right-of-ways or easement on the grounds that it is incomplete or incorrect. A complete and correct right-of-ways or easement will include any possible environmental assessments on the property and shall also include the following wording:

> The Grantor agrees to indemnify and hold Grantee harmless from any and all claims, including cost of defense, arising from the discovery of additional and known contamination, from any releases or threatened releases of hazardous substances or hazardous waste presently or in the future covered under Federal or Vermont environmental laws that are on or in Grantor's property which is subject to the easements herein granted.

BED shall not be responsible for costs incurred by a customer who provides a false or illegally obtained right-of-way or easement.

Guideline 3
LINE EXTENSIONS

3.05 Payment for Construction

BED shall provide a written cost estimate for each requested line extension based upon the projected actual costs. Construction of a line extension will begin after BED receives payment for the estimated cost. At various times during construction and/or within (60) days after energizing the line(s), if the project is not complete, a progress billing of costs to date will be issued by BED along with an explanation and an estimate of remaining costs. Within sixty (60) days of completion, BED will issue a final billing. If the estimated cost collected exceeds the cost of the completed construction, the difference shall be refunded to the customer. If the estimated cost collected is less than the final cost of the construction, BED shall bill the customer for the difference.

Total line extension costs will be shared when more than one party requests the construction. If additional customer(s) are added to the line extension within eight years after energization, the new customer(s) shall pay the costs necessary to make the connection plus a pro-rata share of the cost of the utilized section of the original line extension in accordance with current Vermont Public Service Board (PSB) Orders and Rules.

BED shall pay line extension reimbursements to the customer who paid for or contributed to the costs.

3.06 Service Connection

Customers requesting new low voltage service connection shall receive the first 100 feet of that connection free based on the cost of aerial service. Aerial service is calculated using the current cost of 100' of #2 aluminum triplex, connectors, and the cost of one crew for one hour, and applicable overhead charges.

3.07 Ownership of Lines and Equipment

BED shall own and maintain all lines and other facilities within its system required for the construction of a line extension.

For more information regarding Line Extensions, contact Line Extension & Right-of-Ways at (802) 658-0300.

Note: Line Extension policies are currently being reviewed by the Public Service Board.

BURLINGTON ELECTRIC DEPARTMENT OPERATING GUIDELINES

Guideline 4
POLE ATTACHMENTS

4.01 Charges

Utility poles carry electric, telephone, cable television systems and other services, such as fire alarms, snow lights for street parking bans and crosswalk lights. Poles are most often installed and owned by a single utility, but some poles are jointly owned. The owner(s) of the pole(s) charge for service attachments to the poles. Charges are either agreed upon in a special contract between the parties or in compliance with the terms and conditions governing pole attachments tariffs filed with the Vermont Public Service Board (PSB) as part of the utility tariff.

4.02 Regulations

The Burlington Electric Department (BED) will operate in accordance with the Public Service Board Rule 3.700 entitled Pole Attachments and the National Electric Safety Code.

For more information or a copy of Rule 3.700 on Pole Attachments, contact the Rates & Financial Coordinator at (802) 658-0300.

Guideline 5
METERING

5.01 General

Energy supplied by the Burlington Electric Department (BED) shall be measured by electric meters specified, furnished, installed, maintained and owned by BED. Only authorized BED personnel shall handle BED's metering and associated equipment.

5.02 Location of Meter(s)

It is in the best interest of the customer and BED that a suitable outdoor location is provided to facilitate reading, maintenance and testing of the meter(s). A BED representative shall designate the appropriate meter location(s). BED will not furnish service through meters not under its exclusive control.

For an indoor meter installation to be allowed, the following criteria must be met:

1) the location must be dry and clean; and,
2) it must be accessible to BED meter personnel at all reasonable hours for maintenance, testing, reading and trouble shooting. If access is limited, a key shall be provided to BED. If the need for indoor metering should cease, the meter(s) shall be relocated outdoors. Responsibility for the cost of relocation shall be based on whoever made the request and the reasons for the relocation.

BED may change the location of its meter(s) at any time at its expense to a location mutually acceptable to BED and the property owner.

5.03 Joint Metering

BED supports the idea that electricity users who are billed directly for their consumption will use energy more efficiently and are more satisfied customers. As individual customers, they are responsible for their potential impact on the electrical system and associated energy and capacity costs. An electric meter for each customer resolves a number of issues that can be involved when a multi-unit building is served by only one meter.

In all new buildings or structures, BED will provide each customer and/or individual unit with a separate meter and bill.

Previously, multiple occupancy buildings were permitted to be constructed under a Master Meter arrangement whereby, regardless of the number of units, one meter was installed to register the combined consumption of all units. Should any of these established structures be renovated, each unit shall receive an individual meter.

Any common area or facility used by two or more tenants, which is not wired to an individual meter to allow each tenant control of their electrical usage, will be billed to the landlord under a separate meter called a house meter. Branch circuits in dwelling units shall supply only to loads within that dwelling unit or loads associated with that dwelling unit. Branch circuits required for the purpose of lighting, central alarm, signal, communications, or other needs for public or common areas of a two-

family or multi-family dwelling shall not be supplied from equipment that supplies an individual dwelling unit. Violations of this section may result in service billing placed in the owner's name and referral to the City Inspection Services.

BED may request installation of a separate service and meter for a garage, barn or adjacent building, and will bill the appropriate rate. BED, however, will not install a second or multiple meters for a single customer in one dwelling unit, rental space or business.

Construction that deviates from the above requirements shall be sufficient cause to refuse connection to BED's system.

5.04 Metering Applications below 600 Volts

For metering applications below 600 volts, the following criteria must be met:

1) on services of 200 amperes or below, single or multi-phase, the customer shall supply and install a self-contained meter socket(s) meeting the requirements of BED Standard Number I-5 Meter Socket Specifications; and,
2) on services over 200 amperes, single or multi-phase, the customer shall supply and install a suitable current transformer cabinet(s) and 1 1/4" conduit between the cabinet and the meter socket.

BED shall provide, and the customer shall install, the meter channel and current transformers. The current transformers shall be installed as directed by BED. All wiring to the secondary terminals of the current transformers and the meter socket will be done by BED personnel. Under no condition shall the customer make or change any connection to the current transformers or meter socket.

5.05 Metering Applications above 600 Volts

If customers elect to take service at primary voltage, the following criteria must be met:

1) BED shall determine the primary metering location and will supply and install all instrument transformers, and wiring to these devices;
2) the meter channel and conduit shall be supplied and installed by BED. Where customer-owned switch gear is involved, the customer shall supply BED with the manufacturer's name and address along with the ampere and voltage rating of the switch gear.
3) BED shall specify the size and type of the instrument transformers and whenever possible shall order and arrange to ship these devices to the switch gear manufacturer for factory installation.

Guideline 5
METERING

5.06 Optional Metering
Other metering requirements such as time-of-use or power factor measurement will be individually examined and determined by BED.

Residential customers on Rate RS and RT may choose to have BED provide a meter that does not use wireless communications. These customers shall notify BED of this opt-out choice by telephone. Customers who opt-out shall pay an additional service charge per month (see Appendix A, Miscellaneous Service Fees Tariff) for each meter that has opted-out. BED shall not be required to make any bill adjustments to the customer's bill for those customers electing to reconsider their opt-out decision.

5.07 Meter Testing
At a customer's request, BED will conduct one free meter test within a 12 month period to ensure a meter is reading accurately. However, a customer is responsible for charges associated with more than one meter test, conducted at the customers' sole request, in a 12 month period. Meters shall be sealed after each test. No seal shall be broken without BED's authorization.

5.08 Meter Failure
If a meter fails to register accurately, the customer shall be charged or credited for each appropriate billing element at the average daily rate of use (energy, demand and power factor) registered by the meter when in working order (with allowances for seasonal variation). BED will disclose to and discuss with the customer the basis for the charge or credit and will notify the customer that he or she may call the Consumer Affairs Division of the Department of Public Service at 1-800-622-4496 if he or she seeks assistance from an independent party. In cases in which BED uses estimated consumption, the burden will be on BED to show that the estimate is reasonable.

5.09 Check Metering
A customer may, at their expense, install, maintain and operate check metering equipment, provided such equipment does not interfere with BED equipment. No electric energy shall be metered by a customer for resale to others.

5.10 Meter Protection
Meters installed in isolated locations or in areas where accidental or malicious damage may occur shall be located within a BED approved enclosure which is furnished, installed and maintained by the customer.

Meters and points-of-access to unmetered wiring in a building shall be sealed by BED. Cabinets, switch boxes and fittings used inside a building and containing unmetered wires shall be sealed before service will be supplied.

The breaking of seals by unauthorized persons or tampering with meters or any switches or wires in connection with the meter wiring is prohibited by Vermont law (13 VSA § § 3782, 3784 & 2528). If it is necessary to break the seal to change or repair equipment, the customer shall contact Metering

Guideline 5
METERING

Services to have authorized BED personnel remove, repair or replace the meter. When the job is completed, BED shall inspect the socket and replace the seal.

5.11 Service Switches

One or more service switches or circuit breakers shall be furnished and installed by the customer as part of the permanent wiring for each service entrance. The service switch shall be externally operable and the capacity shall comply with National Electric Safety Code requirements.

5.12 Meter Connection Location

In a building served by one meter, the meter connection device (meter socket) shall be installed on the source side of the circuit breaker or entrance switch.

In a building served by two to six meters from a single set of service conductors, the service conductors may be run to separate meter connection devices located on the source side of the circuit breakers or entrance switches.

All metering installations shall meet BED Standards and National Electric Safety Code and the National Electric Code. These standards are available at BED's Right of Way & Line Extension office.

For more information on metering, contact Metering Services at (802) 658-0300.

Guideline 6
AUXILIARY SERVICES

6.01 Back-up Service

Back-up service is normally utility supplied high voltage service and is constructed to replace the customer's service should the regular service fail. The customer must notify the Burlington Electric Department (BED) when back-up service is in use.

Customers requesting back-up service, approved by BED, shall pay costs associated with installation, maintenance and upgrades. The customer shall supply switching or interrupting devices required by BED. This service is separately metered and billed under the appropriate tariff or contract rate.

A sign shall be placed at the service entrance equipment indicating type and location of on-site optional back-up power sources.

6.02 Fire Pump Service

Fire pump service is generally a secondary or low voltage service that supplies power to a sprinkler system in a building. Fire pump service shall be permitted as an additional service entrance designed to provide service only to a fire prevention system. So the fire prevention system is less likely to be interrupted during a fire, its source of power shall be separate from the transformer supplying the main building service and separately metered.

A sign shall be placed at the service entrance equipment indicating type and location of on-site option fire pump service.

A BED service application is required for customers requesting fire pump service. Once approved by BED, the customer shall pay costs associated with installation, maintenance and upgrades, and shall supply switching or interrupting devices required by BED. This service is billed under the appropriate tariff or contract rate.

6.03 Emergency Service

Customer-owned emergency, on-site generation is considered a system to maintain critical circuitry, such as elevators, exit lighting, ventilation, panic controls, fire detection systems, etc.

All customer-owned emergency generation systems shall be configured as to make it impossible to connect to BED's system. Before installation, the customer shall notify BED of the size and characteristics of such equipment and obtain approval for the method of connection to their internal system.

6.04 Standby Service

Standby service is electrical service provided by BED for customers normally using a cogeneration or self generation system. Customers requesting standby service, approved by BED, shall pay costs associated with installation, maintenance and upgrades and shall supply switching or interrupting devices required by BED. Separate metering shall be installed, and service shall be billed under the appropriate tariff or contract rate.

Guideline 6
AUXILIARY SERVICES

The customer should notify BED when standby service is in use.

6.05 Co-generation

Installations are generally limited to industrial or commercial facilities where unique combinations of energy and thermal requirements exist. The viability of cogeneration at any specific site depends on the energy use and cost characteristics of that site. A customer conducting a cogeneration feasibility study should contact BED for assistance in the evaluation process.

Co-generators and small power producers requesting interconnection to BED's system must receive BED approval before design and installation of equipment. Precautions must be taken to maintain adequate levels of safety for employees and quality of service to customers and BED's system. There is a need to coordinate the generators fault contribution with the utility's fault clearing procedures. Contracts for interconnection shall be considered on an individual basis. Customers wishing to sell electric energy shall consult with BED for further contract information.

For more information on Auxiliary Service, contact Customer & Energy Services at (802) 658-0300.

Guideline 7
RATES

7.01 Filed Rates

The Burlington Electric Department (BED) offers a variety of rates to its customers based on their usage and load characteristics. If a customer qualifies for more than one rate as outlined in BED's Tariff Sheets (see Appendix B, Tariff Sheets), the customer may choose the rate under which they will be charged. BED shall assist the customer in making their choice; however, the final decision must be made by the customer. No more than one change of rates may be made in any 12-month period. Bills shall not be retroactively adjusted as a result of a customer's request to change to a different rate.

All BED rates are subject to change and must be approved by BED's Board of Electric Commissioners, the Burlington City Council and the Vermont Public Service Board.

7.02 Special Contracts

BED may also require a written contract with special guarantees from customers whose load characteristics require BED to make unusual investments in facilities or have unique service requirements. Special contracts must be approved by BED's Board of Electric Commissioners, the Burlington City Council and the Vermont Public Service Board.

For more information, contact the Rates & Financial Coordinator at (802) 658-0300.

Guideline 8
FEES

8.01 Purpose

The Burlington Electric Department (BED) charges fees for a variety of services such as initiating electric service, processing returned checks or installing temporary electrical service (see Appendix A, Fees). The fees cover costs that are in addition to the cost of providing electricity. Rather than recover the costs of these services from all customers through rates, BED has implemented fees to recover the costs from customers who use the services. These fees are reviewed and revised periodically upon approval by BED's Board of Electric Commissioners, the Burlington City Council and the Vermont Public Service Board.

For more information, contact Customer & Energy Services at (802) 658-0300.

Guideline 9
DEPOSITS

9.01 Policy

The Burlington Electric Department (BED) normally does not collect deposits from customers for electrical service. If, however, a customer has been through bankruptcy proceedings within the past seven years, where a balance for electrical service has been forgiven by BED, then a deposit may be required.

All deposits shall be collected, calculated and refunded in accordance with the Vermont Public Service Board Rule 3.200: "Ratepayer Deposits for Gas, Electric, Water, Telephone, and Cable Television Service."

For more information regarding deposits or a copy of the Vermont Public Service Board's rules on deposits, contact Customer & Energy Services at (802) 658-0300.

Guideline 10
BILLING AND COLLECTION

10.01 Regular Billings

Meters are read and customers are billed at regular intervals. Bills for electric service are due and payable upon presentation. Balances not paid within thirty days are considered delinquent and subject to disconnection. Payments shall be applied first to previous balances and then to current charges.

10.02 Optional Payment Plans

The Burlington Electric Department (BED) offers a Budget Payment Plan to minimize fluctuations in a customer's bills due to seasonal patterns of consumption. The Budget Payment Plan, however, does not limit total electrical costs. If the monthly budget payment does not cover the total cost of energy consumption at the end of the contract, the customer is responsible for payment of the difference. If the monthly budget payment exceeds the total cost of energy consumption at the end of the contract, the customer will be reimbursed the difference. A customer may elect to participate in this plan at any time of the year.

If a customer terminates the Budget Payment Plan before the termination date, any charges not paid will be billed and due upon presentation. Any unpaid balance will be subject to disconnection procedures outlined in the Vermont Public Service Board Rule 3.300. If there is a credit balance, the customer may request a refund check for the amount equal to the credit balance or allow the credit to stay on the account and be applied to future charges.

All optional payment plans shall be consistent with the Vermont Public Service Board's Rule 3.302(D) "Budget Billing Plans."

For more information regarding billing or optional payment plans, contact Customer & Energy Services at (802) 658-0300.

BURLINGTON ELECTRIC DEPARTMENT OPERATING GUIDELINES

Guideline 11
DISCONNECTION, TERMINATION & RECONNECTION OF SERVICE

11.01 Disconnection

The Burlington Electric Department (BED) may, without incurring liability for failure to do so, disconnect service without notice to a customer if the disconnection or interruption of service is necessary for health or safety reasons to the customer or general public.

BED may disconnect service to a customer when there is evidence of unauthorized use of its service, tampering or interference with BED's property. Service may also be disconnected at the request of the customer.

BED may disconnect service to a customer for non-payment of an electric bill, if payment of the bill is delinquent and notice of disconnection has been provided to the customer.

11.02 Termination of Service

The customer shall give BED a 24-hour notice of termination excluding weekends and holidays. Upon notice of termination, BED is allowed up to three business days (72 hours) to complete the final reading of the meter. The bill for service up to the date of the final meter reading will be labeled **"Final Bill"** and is due and payable upon presentation and, if not paid within 30 days, will be considered delinquent. BED may take collection actions on any final bill that is 45 days past due.

11.03 Reconnection

If service to a customer has been disconnected, BED shall reconnect the service within 24 hours upon the customer's request when the cause for disconnection has been resolved, when agreement has been reached between BED and the customer regarding the dispute which leads to the disconnection or when directed to do so by the Vermont of Public Service (PSB). Such reconnection is subject to a fee (see Appendix A, Fees).

All disconnections for non-payment and reconnection of service shall be consistent with the PSB's Rule 3.300 "Disconnection of Residential Gas, Electric, Telephone and Water Service."

For more information regarding disconnection/termination or reconnection of service or a copy of the PSB's rule on disconnection, contact Customer & Energy Services at (802) 658-0300.

Guideline 12
CUSTOMER RESPONSIBILITY

12.01 Suitable Equipment
The customers' electrical service equipment shall be suitable for connection and operation with the service supplied by the Burlington Electric Department (BED). Questions of suitability shall be determined by BED.

12.02 Compliance
Before BED will energize a new service, the customer shall have written evidence of compliance with all applicable federal, state and local ordinances, codes and laws and BED's Guidelines.

12.03 Metering
The meter and its associated electrical equipment located in or on the customer's property is the property of BED. However, the customer shall exercise reasonable diligence to protect such property from damage, theft or tampering. Only authorized BED personnel shall have access to and handle BED equipment located in or on customer property.

12.04 Emergency Generation
Customer-owned emergency generation equipment shall be configured to make it impossible to connect with BED's service. The customer shall notify BED in writing of the equipment's size and characteristics. BED retains the right to inspect such equipment.

12.05 Load Changes
The customer shall give advance notice to BED of proposed changes to their load or energy consumption to avoid overloading their service. The customer shall be liable for costs associated with damage to meters and other BED equipment caused by changed conditions or installations if notification is not given to BED.

12.06 Payment of Electric Bill
The customer, which includes any person(s) listed on the electric bill, is responsible for full payment of charges billed for current and previous electric service with BED. Charges incurred for prior service(s) shall be billed under the current account as a delinquency and may be subject to disconnection. Failure to receive a monthly bill does not relieve the customer of responsibility for the charges incurred during that billing period. If a customer receives a bill that appears out of the ordinary, it is the customer's responsibility to notify BED so that the bill may be reviewed for accuracy.

12.07 Life Support Systems
BED strongly encourages all customers to notify the Risk Management Area at 658-0300 of health or life support system(s) dependent on electric service. In the event of a power outage, BED will attempt to contact the customer to give an estimated length of the outage.

BED strongly advises that all such systems have adequate back-up. BED requests notification of the removal of such devices. Notification should include the name and address of the customer, the hours of back-up energy, and the type of life support equipment in use or removed.

Guideline 12
CUSTOMER RESPONSIBILITY

12.08 Liability

The customer is liable for damages to BED's property and equipment caused by failure to comply with the Guidelines. BED is not responsible for damage caused by acts of others that are not in compliance with the Guidelines.

Nothing in the Guidelines relieves a customer of any duty or obligation they might have, at common law, by statute or otherwise regarding BED and its equipment or service.

For more information on customer responsibilities, contact Customer & Energy Services at (802) 658-0300.

Guideline 13
BED RESPONSIBILITY

13.01 Service
The Burlington Electric Department (BED) shall strive to provide quality, uniform, reliable electric service to its customers. Delivery of service shall be through a diverse mix of resources, over a well designed and maintained transmission and distribution system. BED will promote the responsible and efficient use of energy with utmost consideration for environmental quality.

13.02 BED System
BED shall be responsible for operating and maintaining the network of transmission and distribution lines within BED's service territory that are interconnected to permit multiple power supply delivery to BED customers. All equipment between generating and substation facilities and customer metering is owned, operated and maintained by BED.

13.03 Interruption of Service
BED does not guarantee continuous uninterrupted service. Direct or indirect liability for loss or damage to persons or property due to interruption or variation in service is not the responsibility of BED. An interruption or variation of service may include, but is not limited to, accident, labor strikes, fuel supply shortages and acts of nature.

Although BED strives to provide advance notice of an interruption required to improve, maintain or repair its system, BED may from time to time interrupt service without notice in order to perform emergency repairs or improvements to the system or to comply with an order or request from a federal, state or municipal body.

13.04 Losses, Damages or Injury
BED shall not be responsible for any losses, damages, or injury resulting from:

a) the customer's wiring or appliances if faulty, improperly grounded/connected, used or inappropriately sized for the customer's service;
b) the customer's intentional or unintentional overloading of the service provided;
c) the customer's non-compliance with the Guidelines;
d) tampering with or alteration of BED's meters, lines, transformers or other equipment, whether or not located on the customer's premises; and,
e) any other cause not resulting from the sole negligence of BED.

13.05 Life Support Systems
BED recognizes some customers may rely on life support equipment connected to electric service supplied by BED, as outlined in Guideline 12, Customer Responsibility, Section 12.07. BED strongly encourages these customers to report this condition to BED's Risk Management Area at 658-0300. BED shall not be responsible for any life or health threatening incidents these customers may incur due to variation of electric service. Therefore, BED urges customers to have adequate back-up. In the event of a power outage, BED will try to contact the customer to give an estimated length of the outage.

Guideline 13
BED RESPONSIBILITY

For more information on BED Responsibility, contact Customer & Energy Services at (802) 658-0300.

Guideline 14
ENERGY EFFICIENCY SERVICES

14.01 Goals

The Burlington Electric Department (BED) offers a range of energy efficiency programs for all of its customers. BED's goal is to help customers attain cost-effective and efficient use of energy. These programs offer an environmentally sound energy option by reducing BED's need to acquire new sources of electric power for the future.

For more information about energy efficiency programs, contact Customer & Energy Services at (802) 658-0300.

Guideline 15
ENERGY RESOURCE MANAGEMENT

15.01 Planning

The Burlington Electric Department (BED) plans for the future energy needs of its customers through an Integrated Resource Plan (IRP). The IRP presents a strategy and implementation plan for providing customers with the most cost-effective energy possible, while considering various criteria including, but not limited to: reliability, power quality, risk, environmental impact and cost. BED encourages and provides opportunities for public input into the IRP process.

Although the IRP is an ongoing process, a formal plan is developed at least every three years and must be approved by the Burlington Board of Electric Commissioners and the Vermont Public Service Board (PSB).

For more information, contact Resource Planning at (802) 658-0300.

Guideline 16
ENERGY DIVERSION

16.01 Liability

Energy diversion is any attempt to unlawfully and intentionally prevent or interfere with accurate registration of energy supplied by the Burlington Electric Department (BED) to its customers. The diversion of electrical energy by any method or device is a serious act against BED and its customers, as it results in higher operating expenses for BED and increased electric rates to its customers. Vermont law (13 VSA §§3782, 3784 & 2528) provides penalties for diversion and tampering with electric lines and energy metering.

Where there is proof of meter tampering or theft of electrical energy, such responsible person(s) shall be liable for the estimated energy diverted and may be subject to prosecution.

For more information regarding Energy Diversion, contact Customer & Energy Services at (802) 658-0300.

Guideline 17
DIG SAFE

17.01 Contact
Before digging or excavating on public or private property, the Underground Utility Damage Prevention System, 30 VSA §§7001-7008 requires everyone to contact the DIG SAFE program at:

1-888-344-7233
Dig Safe
111 S. Bedford St.
Burlington, MA 01803

Dig Safe is a Public Utility Underground Utility Damage Prevention System which operates in Vermont, New Hampshire, Maine, Rhode Island and Massachusetts. A call to Dig Safe notifies the appropriate utilities to mark their underground lines.

17.02 Hours
Dig Safe operates during regular business hours, excluding holidays and weekends, and is available for emergency calls 24 hours a day, 7 days a week.

17.03 Excavation Activities Defined
The Utility Underground Utility Damage Prevention System defines excavation activities as,

> ...activities involving the removal of earth, rock or other materials in the ground, disturbing the subsurface of the earth, or the demolition of any structure, by the discharge of explosives or the use of powered or mechanized equipment, including but not limited to digging, trenching, blasting, boring, drilling, hammering, post driving, wrecking, razing or tunneling, within an underground utility easement (which includes private property), or the area of a public right-of-way in which an underground utility facility is located. Excavation activities shall not include the tilling of the soil for agricultural purposes or activities relating to routine public highway maintenance.

17.04 Responsibility
The excavator is responsible for knowing and understanding the Underground Utility Damage Prevention System. Any person, company or utility that violates this law is liable for damages and subject to fines and penalties.

For more information or a complete copy of this law, contact Distribution at (802) 658-0300.

BURLINGTON ELECTRIC DEPARTMENT OPERATING GUIDELINES

Guideline 18
STRAY VOLTAGE

18.01 Potential Effects
The Burlington Electric Department (BED) recognizes the existence of an electrical phenomenon, commonly called "stray voltage" which potentially affects livestock on farms. While the effects of stray voltage are not universally agreed upon, the Milk Quality Enhancement Program (MQEP) of the Vermont Department of Agriculture, Food and Markets has found that when more than .5 volts of neutral-to-earth voltage is detected in a barn, improvement in animal behavior and milk production is often noted after it is removed.

18.02 Categories
Stray voltage is commonly divided into two categories based on the source of the voltage. On-farm stray voltage originates on the farm having the problem and is considered to be under the farmer's control. Off-farm stray voltage originates from a source not under the farmer's control.

18.03 BED Action
To minimize Off-farm stray voltage, BED will do the following:

1) Give priority to stray voltage complaints on farms;
2) Develop standardized procedures for testing primary neutral-to-earth potential, secondary neutral-to-earth potential, bulk tank or other piece of equipment bonded to the secondary neutral potential, to earth, and voltage between primary and secondary neutrals after isolation. Neutral isolation devices, rated for the purpose, will be installed, at BED's expense, when neutral-to-earth voltages of .5 volts or greater are detected. If less than .5 volts are found, BED may, at its discretion, install an isolation device or monitor the voltage with a recorder for a sufficient period of time to ensure the voltage does not reach the .5 volt threshold.
3) Cooperate with telephone and cable television utilities to ensure that they do not inadvertently circumvent measures previously made to mediate stray voltage.
4) Monitor neutral-to-earth voltages at regular intervals to ensure the continued effectiveness of the neutral isolation device.

18.04 Follow Up
BED shall stay educated and informed on stray voltage issues and support its customers in achieving the same goal. Hopefully, over time, this new potential exposure will be better understood and monitored.

BED's Stray Voltage Policy will be evaluated on a regular basis and is subject to change.

For more information regarding this service policy, contact Engineering at (802) 658-0300.

BURLINGTON ELECTRIC DEPARTMENT OPERATING GUIDELINES

Guideline 19
ELECTRIC AND MAGNETIC FIELDS

19.01 Introduction

Electric and magnetic fields (EMF) are caused by electric charges. Electric charges commonly exist in power lines, appliances and house wiring. Electric fields are related to voltage while magnetic fields are produced by current. In their everyday lives, everyone is regularly exposed to EMFs. EMF research has been ongoing for over 20 years. BED monitors research efforts to identify the biological effects of power frequency electric and magnetic fields and their possible health implications. Research on EMF covers a wide range of subjects such as reproduction, cancer and behavior. Studies have included people with and without work related EMF exposures. Many scientific panels and government agencies have reviewed EMF research during the past 20 years to assess whether EMF exposure leads to adverse human health effects.

Certain studies have suggested a link between EMF and health risks. However, at this time, these studies also indicate that there is no scientific basis to conclude that EMF exposure from appliances or power lines or other sources causes adverse health effects. Electric utilities and public agencies have promoted on-going research to address the questions raised by these studies.

19.02 BED Action

Any potential risk to public health related to electric service is viewed by the Burlington Electric Department (BED) as a concern that will be addressed. To this end, BED is performing the following activities:

1) Monitoring EMF research and regulatory developments;
2) Providing basic as well as technical EMF information to customers and employees; and,
3) Informing utility customers and employees of significant EMF research developments.

When contractors apply for service, BED personnel will work with the contractor to determine the best location of service as it relates to EMFs. BED personnel will answer questions or concerns a customer may have about the design and construction of a service as it relates to EMFs. While safety and other required features remain priorities in the design and construction of any electrical service, minimizing EMF exposure is an issue BED is concerned about.

In addition, BED will, upon request by a customer, provide free EMF testing. Under this program BED will measure the magnetic fields present in residential, commercial or industrial customers' buildings. A BED representative will measure magnetic field strengths using the appropriate measuring device. Upon completion of the test, a copy of the readings will be provided to the customer. BED does not warrant the accuracy of the readings or offer any interpretation on the significance of the test results. In addition, other informational material (i.e., Carnegie Mellon, research reports, etc.) will be left with the customer. BED is committed to providing safe, reliable and environmentally sound electric service for its customers and a safe work environment for its employees.

Guideline 19
ELECTRIC AND MAGNETIC FIELDS

19.03 Follow-up

BED shall stay educated and informed on EMF issues and support its customers in achieving the same goal. Hopefully, over time, this new potential exposure will be better understood and monitored.

BED shall continue to be responsive to the concerns of its customers and employees with regard to this issue and will be prepared to respond to operational changes that may be warranted in the future.

For more information regarding Electric and Magnetic Fields, contact Customer & Energy Services at (802) 658-0300.

BURLINGTON ELECTRIC DEPARTMENT OPERATING GUIDELINES

DEFINITIONS

Ability to Serve: A letter indicating that BED can provide the electrical service requested by an applicant in an Act 250 proceeding.

Act 250: Vermont's land use law.

Alternating Current: Electric current that periodically reverses the direction of its flow, as opposed to direct current, which always flows in the same direction.

Ampere: The unit of measurement of electric current representing the flow of electrons in a conductor past a given point in one second, similar to the measurement of cubic feet of water flowing per second.

Approved Drawing: A final detailed drawing approved by BED and provided to a line extension applicant showing a proposed line extension.

Back-up Service: Utility supplied high voltage service that is constructed to replace the customer's service should the regular service fail.

Budget Payment Plan: An optional plan that allows BED customers to pay a pre-determined amount on their bill for twelve (12) consecutive months.

Burlington Board of Electric Commissioners: The five person policy-making body appointed by the Burlington City Council to oversee the operation of BED.

Burlington City Charter: The document, approved by the voters, which governs the framework and operation of the City of Burlington.

Burlington City Council: A fourteen person legislative body elected by the voters of Burlington.

Burlington Electric Department (BED): A ratepayer owned municipal electric utility, serving customers within the political boundaries of the City of Burlington and the Burlington International Airport.

Burlington Electric Department (BED) Standards: Procedures that describe the desired method and results for electrical work unique to BED's system.

Circuit Breaker: A device for protection and interruption of electrical current in a circuit.

Class of Service: The category into which a customer is placed for billing purposes, based on a customer's usage and premise characteristics.

Conduit: Pipe or tube used to protect electric wires or cables, generally underground.

Contribution-in-aid-of-Construction: The amount a customer is required to pay BED in advance

before construction of a line extension.

Current Transformer: An instrument transformer, intended for measuring or control purposes, and designed to have its primary winding connected in series with a conductor carrying large alternating currents.

Delinquent Electric Bill: An electric bill that is not paid within thirty (30) days of mailing.

Demand: The amount of electricity a consumer uses a over a period of time, such as 15 minutes.

Direct Current: Electric current that consistently flows in the same direction as opposed to alternating currents that periodically reverses its direction of flow.

Disconnect: To intentionally terminate electrical service to a customer.

Drip Loop: The extra wire on the conductors of a service entrance allowing formation of a short, semi-circular loop to prevent moisture from entering service equipment.

Electric Bill: The document sent to each customer detailing the cost of providing electric service and usage to that particular customer.

Electric Meter: A device that measures and records periodic electrical energy consumption.

Electrical and Magnetic Fields (EMFs): A phenomenon caused by electric charges, with electric fields related to voltage and magnetic fields produced by current.

Energy Charge: The portion of a customer's electric bill that is based on the kilowatt hours used during the billing period.

Emergency Service: Customer owned emergency, on-site generation is considered a system to maintain critical circuitry, such as elevators, exit lighting, ventilation, panic controls, fire detection systems, etc.

Final Bill: The last bill generated for a BED customer after that customer leaves a BED service location.

Fire Pump Service: A secondary or low voltage service that supplies power to motors driving a sprinkler system in a building.

Generation: The process of producing electricity.

High Voltage Lines: Although voltage will increase from the customer level to the level of transmission for safety purposes, all electrical lines carrying above 600 volts are considered high voltage lines.

DEFINITIONS

Interconnection: The physical connection of a customer's generation to the utility's system.

Kilowatt: A unit of electrical work equal to 1,000 watts comparable to ten 100-watt light bulbs.

Kilowatt Hour: A basic unit of measuring electricity consumption, equal to the use of ten 100-watt bulbs during one hour.

Line Extension: Construction necessary to provide or upgrade electrical service to an area or customer.

Load Data: Information that refers to the size, phase, voltage, and expected consumption of both energy and demand for a particular electrical service.

Load Management: Efforts of a utility and its customers to shift electrical usage away from period of high demand to lower costs.

Megawatt: One thousand kilowatts.

Megawatt Hour: One thousand kilowatts used during one hour.

Meter Channel: The enclosure that houses the electric service conductors and provides the mechanism for connection of the service to the electric meter.

Meter Socket: The opening where the electric meter sets flush and connects with the electric service conductors.

National Electric Safety Code: Safety procedures governing all electrical work done on the BED system and other electric systems nationwide.

Off-Peak Rates: Special rates for electricity supplied during periods of low demand that reflect the lower cost of electricity for such periods.

On-Peak Rates: Special rates for electricity supplied during periods of high demand that reflect the higher cost of electricity for such periods.

Potential Transformer: A small capacity instrument transformer used to reduce voltage to supply electrical equipment. The primary winding is connected in parallel with the circuit whose voltage is to be measured or controlled.

Power Factor: The ratio of real power measured in kilowatts (kW) to apparent power measured in kilovoltampere (kVa) for any given load and time. Generally expressed as a percentage.

Primary Voltage: High voltages used in transmission and distribution systems. BED's system has

DEFINITIONS

13,800 volts and 4,160 volts.

Rates: The cost of energy, demand or services that BED charges its customers.

Resource Mix: The combination of various sources of electric power that allows a utility to serve its customers needs.

Right-of-Way Easement: A right acquired by BED to use land belonging to another for the construction, operation, and maintenance of electric facilities.

Seals: Locking devices with various identifying marks and colors which secure electric meters.

Secondary Voltage: Lower level voltage, generally below 600 volts, going from primary voltage through a transformer directly to a customer.

Service Conductors/Drops: Cables designed and carefully selected to carry electricity from the source to the customer. They may be overhead or underground and are usually made of copper or aluminum strands and covered with insulation for protection.

Single Phase: Voltage generated by rotating a single coil in a magnetic field. Single phase voltages are normally used in residential applications.

Site Plan: A detailed drawing of a parcel of land indicating relevant elevations, buildings, and utilities.

Stand-by Service: Electrical service provided by BED for customers generally using a co-generation or self generation system.

Stray Voltage: An electrical phenomenon that may affect livestock on farms when voltage "strays" from the electrical line to another area.

Switch Gear: Metal enclosed equipment normally consisting of interrupter switches and fuses plus control and sensing devices, which allows for connections between various transmission lines.

Termination: Discontinuation of electrical service to a BED customer at the customer's request.

Three Phase: Voltage generated by rotating three coils in a magnetic field. Three phase voltages are normally used in commercial applications.

Time-Of-Use: Metering and billing option available to all classes of customers. A special meter measures on- and off-peak consumption and demand to which rates are applied.

Transformer: Equipment vital to the transmission and distribution of electrical energy and designed to increase or decrease voltage.

DEFINITIONS

Transmission: The delivery of electricity over lines from a generation source to a distribution point.

Vermont Department of Public Service: The agency of state government which functions as the public advocate in proceedings before the Public Service Board.

Vermont Public Service Board: The three-person, quasi-judicial body, appointed by the governor of Vermont, which approves rates and generally oversees the public electric utilities in Vermont.

Volt: The unit of electromotive force or electric pressure through a conductor or circuit, similar to water pressure measured in pounds per square inch.

BURLINGTON ELECTRIC DEPARTMENT OPERATING GUIDELINES

Appendix A
MISCELLANEOUS SERVICE FEES TARIFF

Initial Service Fee:	$ 30.00
Initial Service Fee - Minimum Call:	$ 195.00
Temporary Service:	$ 535.00
Returned Checks:	$ 10.00
Reconnection:	$ 20.00
Reconnection - Minimum Call:	$ 195.00
Meter Removal/Replacement For Siding:	$ 95.00
Collection:	$ 20.00
Customer Assistance Call:	$ 28.00
Minimum Call - Customer Assistance:	$ 195.00
Advanced Meter Opt-Out Fee:	$ 7.50/month

Explanation of Miscellaneous Services

INITIAL SERVICE

The Initial Service Fee will be charged to a customer whenever the electric service is put in that customer's name at a service location.

To clarify, this does mean that a current tenant moving from one service location in the city to another will pay this fee every time they move. Landlords who have electric service placed in their name between tenants will pay this Initial Service Fee regardless of the number of days that the service is in their name.

Minimum Call - Initial Service

A Minimum Call Fee will be charged whenever BED personnel are called in to work during non-working hours for the purpose of responding to a customer request for Initial Service.

When a customer requests initiation of electric service, when BED personnel are not on duty, the customer will be informed of the Minimum Call Fee. This charge must be accepted and agreed upon by the party responsible for payment prior to calling in personnel to respond to the customer's

request.

TEMPORARY SERVICE

The Temporary Service Fee, normally for construction purposes, will be charged when temporary service of single phase, 240 volt, 100 amp characteristics or less is installed at a site.

For all other temporary services, charges will be based on estimated cost.

RETURNED CHECKS

The Returned Check Fee will be charged each time a check is not honored by the bank.

RECONNECTION

A Reconnection Fee will be charged to restore service to a customer who has been disconnected for non-payment of electric services.

Minimum Call - Reconnection

A Minimum Call Fee will be charged whenever BED personnel are called in to work during non-working hours for the purpose of responding to a customer request for Reconnection.

When a customer requests reconnection of electric service, when BED personnel are not on duty, the customer will be informed of the Minimum Call Fee. This charge must be accepted and agreed upon by the party responsible for payment prior to calling in personnel to respond to the customer's request.

METER REMOVAL/REPLACEMENT FOR SIDING

A Meter Removal and Replacement for Siding Fee will be charged for the removal and replacement of up to two meters at a service location for the purpose of installing siding materials on a building.

Three or more meters at a service location must be done by the property owner's certified electrician.

COLLECTION

The Collection Fee will be charged when BED personnel collects funds at a customer's service location.

Appendix A
MISCELLANEOUS SERVICE FEES TARIFF

Typically, BED personnel do not visit customer service locations for collection purposes; however during the course of the disconnection process often funds are collected. Instead of a Disconnection Fee, customers will be charged a Collection Fee.

CUSTOMER ASSISTANCE CALL

A Customer Assistance Call Fee will be charged whenever BED personnel are requested to visit a customer's service location and the problem is determined to be the customer's responsibility.

Minimum Call - Customer Assistance

If the problem is determined to be the customer's responsibility, a Minimum Call Fee will be charged whenever BED personnel are called in to work during non-working hours for the purpose of responding to a customer request for Customer Assistance.

When a customer requests customer assistance regarding their electric service, when BED personnel are not on duty, the customer will be informed of the Minimum Call Fee. This charge must be accepted and agreed upon by the party responsible for payment prior to calling in personnel to respond to the customer's request.

ADVANCED METER OPT-OUT

Residential customers on Rates RS and RT may choose to have BED provide a meter that does not use wireless communications. These customers shall notify BED of this opt-out choice by telephone. Customers who opt-out shall pay an additional service charge per month for each meter that has opted-out. BED shall not be required to make any bill adjustments to the customer's bill for those customers electing to reconsider their opt-out decision.

BURLINGTON ELECTRIC DEPARTMENT
Analysis of Opt-Out Costs

Residential customers		16,308	
Estimated Opt-Out percent		1.5%	
Opt-Out Customers		245	

Ongoing Monthly Meter Reading Charge

A) Manual Meter Reading

Meter reading hourly rate (incl. benefits & vehicle)		$ 37.65	
Estimated travel time between readings (Hrs)		0.178	
Average Cost Per Opt-Out Meter Reading		$ 6.69	per month

B) Manual Disconnect/Reconnect

Number of trips per year		3,004	
Number of Residential customers		16,308	
Percentage meter visits		18%	
Estimated Opt-Out customers		45	
Field trip to visit meter:			
Trip out (Hrs)	0.33		
On-site work (Hrs)	0.25		
Trip back (Hrs)	0.33		
	0.92		
Installer hourly rate (incl. benefits & vehicle)	$ 51.61		
Cost of a visit to meter		$ 47.31	
Total cost of Opt-Out visits		$ 2,131.59	
Opt-Out customers		245	
Annual cost of meter visits		$ 8.71	
Monthly Manual Disconnect/Reconnect		$ 0.73	per month

C) Lost AMI Benefits

Business Case Annual Benefit Lost (per Opt-Out)	$	-	
Monthly Lost AMI Benefit	$	-	per month
Monthly Meter Reading Charge	$	7.41	per month