## **REQUEST FOR PROPOSAL**



#### **BURLINGTON ELECTRIC DEPARTMENT**

585 Pine Street Burlington, VT 05401-4891 Phone: 802-865-7456

ALL RFP'S RESPONSES ARE TO BE UPLOADED TO OUR SECURE WEB SITE USING YOUR UNIQUE LOGIN

RFP # **028-26** 

DATE:

9/26/2025

**REQUEST FOR QUOTATION** 

THIS IS AN INQUIRY,
NOT AN ORDER

PLEASE QUOTE PROMPTLY

	)ELIVERY REQUIRED BY:	QUOTATION DUE BY	REQUISITION NO:	DEPT: DIST				
QTY 1								
1	15 kV, 600 Amp, Outdoor, Deadfront, Vacuum Insulated, Padmount Switch							
	This specification covers the requirements for a padmount switch with fault interrupting capability, for use on 13800 Grounded Y/7970 volt, 60 hertz underground electrical distribution systems. The switch shall be three phase, group operated with 600 amp dead break bushings per ANSI / IEEE 386. The switch shall be suitable for use in switching load, loop, capacitor, cable charging and magnetizing currents. A single line diagram indicating the circuit configuration, number of switched ways and type of bushings required will accompany the request for quotation. Dimensions for the existing switch pad will also be included.  Bidders must complete the "15 kV, 600 Amp, Padmount Switch Data Sheet" (page 6 of this specification) and return it with their quotation.							
		CT WITH COST AND LEAD TIME.				F		

# VENDOR MUST COMPLETE THIS INFORMATION 1.SHIPMENT CAN BE MADE \_\_\_\_\_\_ DAYS FROM RECEIPT OF ORDEF 2. F.O.B. DESTINATION FREIGHT ALLOWED BURLINGTON ELECTRIC DEPT. DOCK. 3. TERMS \_\_\_\_\_\_ DISCOUNT OF \_\_\_\_\_\_ % IF PAID NET \_\_\_\_\_ DAYS 4. QUOTE VALID \_\_\_\_\_\_ DAYS SIGNED \_\_\_\_\_\_ DATE: \_\_\_\_\_\_ TITLE: \_\_\_\_\_ COMPANY: \_\_\_\_\_\_ B.E.D. RESERVES THE RIGHT TO ACCEPT OR DECLINE ANY AND ALL BIDS.

ALL BIDS BECOME THE PROPERTY OF BURLINGTON ELECTRIC DEPARTMENT

### Paul Charbonneau

Director of Purchasing & Facilities

O INQUIRE ON ABOVE QUOTE PLEASE CALL

PURCHASING DEPARTMENT DIRECT AT:
PAUL CHARBONNEAU 865-7456

email: pcharbonneau@burlingtonelectric.com

#### BURLINGTON ELECTRIC DEPARTMENT MATERIAL SPECIFICATION

#### 15 kV, 600 Amp, Outdoor, Deadfront, Vacuum Insulated, Padmount Switch

#### **SCOPE**

This specification covers the requirements for a padmount switch with fault interrupting capability, for use on 13800 Grounded Y/7970 volt, 60 hertz underground electrical distribution systems. The switch shall be three phase, group operated with 600 amp dead break bushings per ANSI / IEEE 386. The switch shall be suitable for use in switching load, loop, capacitor, cable charging and magnetizing currents.

A single line diagram indicating the circuit configuration, number of switched ways and type of bushings required will accompany the request for quotation. Dimensions for the existing switch pad will also be included.

Bidders must complete the "15 kV, 600 Amp, Padmount Switch Data Sheet" (page 6 of this specification) and return it with their quotation.

#### **INDUSTRY STANDARDS**

The switch shall meet or exceed the requirements of the latest versions of all applicable ANSI, ASTM, NFPA, IEEE and NEMA standards. In the event that this specification conflicts with these industry standards, this specification shall take precedence. Specific exceptions to this specification or to applicable industry standards shall be clearly noted with each quotation.

#### **ELECTRICAL RATINGS**

The switch shall meet or exceed the electrical ratings shown below:

Maximum Design Voltage:15.0 kVB.I.L., Impulse Withstand:95 kVContinuous and Interrupting Current:600 AmpsSymmetrical One Second Current:16,000 Amps

Electrical ratings shown assume the use of 600 amp elbows for all connections.

#### **SWITCH CONSTRUCTION**

The enclosure shall be outdoor, weatherproof, free standing, self-supporting, and shall be constructed of minimum 11 gauge steel for all structural panels. The enclosure shall meet or exceed the latest revision of ANSI C57.12.28 "Padmount Equipment Enclosure Integrity." Included in this specification are the requirements for enclosure tamper-proofing and coating system performance. The enclosure shall also conform to or exceed the tamper resistance requirements of NEMA TR-1-20.1.

The enclosure shall be of continuously welded construction to maximize strength, minimize weight and inhibit corrosion. A structural frame and bolted sheet metal is not acceptable.

The switch shall be capable of withstanding internal failure without explosion or fire.

The switch shall have a parking stand bracket next to each bushing with the elbows parking to the outside.

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Access to the cable compartments shall be made through side opening access doors. The outer doors shall have a three point latching system and include provisions for locking with a padlock. Each door shall also have a pentahead bolt which secures it to the compartment center support member. The pentahead bolt shall only be operable with the padlock removed.

The inside surface of the switch roof shall have a coating of "no-drip" compound to prevent condensation.

The unit shall have a finish coating conforming to Munsell designation, 7.0 GY3.29/1.5 padmounted green.

The roof of the switch shall be crowned to ensure proper water drainage.

The base of the enclosure shall have a minimum one inch flange around the entire bottom to facilitate cleat clamping.

All hinges, hinge pins, parking stands and permanent lifting provisions shall be stainless steel. The actual tabs used for lifting the switch shall be removable.

The bottom panel of the switch shall be of corrosion resistant material and have a sufficient number of screened drains to allow moisture out, but prevent the entrance of animals, insects, or weeds. The floor shall be affixed to the enclosure such that it is easily removable in the shop.

The interconnecting bus work shall consist of continuous one piece copper bar with no intermediate splices. Flexible braid or cable is not acceptable.

A space heater with sheaths of high-temperature chrome steel shall be provided to maintain air circulation inside the enclosure. The space heater shall be wired to a terminal block in such a way that one, 240 volt AC external power supply can be used.

#### **Control Cabinet**

The cabinet shall have a finish coating identical to that of the switch enclosure.

Cabinet shall be mounted to the padmount enclosure. The bottom of the cabinet shall be a minimum of 18" above the bottom of the padmount enclosure.

The inside surface of the cabinet roof shall have a coating of "no-drip" compound to prevent condensation.

The control cabinet compartment door shall have provisions for a padlock.

The control cabinet shall include provisions (such as a heater) to protect equipment from freezing, condensation, and corrosion.

The control cabinet compartment shall have a 120VAC convenience outlet fused at 15A and an LED light.

The control cabinet shall have a 125VDC DC plunger door switch mounted on the door jam and wired to one of the switched way relays for an intrusion alarm.

The heater, convenience outlet, and LED light shall be wired up to one terminal block with customer supplied 120VAC. If any heaters, convenience outlets for lights are installed outside of the control cabinet,

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all wiring for power or alarms for those devices shall be wired back to a common terminal block in the control cabinet.

#### **Switch Components**

Switch shall contain four (4) switched ways, at least one (1) of which shall have fault interrupting capability.

All switched ways shall have motor operators that can be mechanically decoupled and are field replaceable.

The interrupter switches shall be rated for continuous and load interrupting capability in conformance with the requirements of ANSI C37.72.

The switch shall provide for visual verification of the switch position. The enclosure shall withstand a fault of 16,000 amps, symmetrical.

600 amp bushings, meeting the latest version of ANSI/IEEE 386 shall be provided for all switch side terminations.

Sufficient depth must be provided in the cable compartments to accommodate 200 amp load break elbows connected to the 600 amp bushings via reducing bushings.

#### **Switch Dimension**

The switch shall be constructed to fit on the existing footprint of the switch it replaces and shall provide clearance for existing cabling entering the switchgear by way of the existing conduit paths (see attached pad dimensions). The existing switch dimensions are 104" by 88"

Bids for switches deviating from the above dimension are acceptable and will be reviewed by a member of Burlington Electric Department engineering team.

#### **Control Cabinet**

Each switched way shall have SEL distribution protection relay (e.g. SEL-351/A or SEL-751/A). This includes switches without fault interrupting capability. Relays will be used for voltage / current monitoring that will be the source of supervisory metering data (kV, A, MW, MVAR, pf). Relays shall be configured such to have capability to simultaneously communicate to SEL Ethernet Security Gateway and Ruggedcom Utility Grade Ethernet Switch.

Each switched way shall have three-phase current transformers with shorting terminal blocks outside of the vacuum compartment.

Each switched way shall have individual Local / Remote permissive control independent from other switched ways.

Voltage monitoring shall be provided for all three phases.

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Each relay shall have a set of FT-1 test switches associated with it. At minimum, all current input, voltage inputs, and trip outputs will have test switches.

SEL Ethernet Security Gateway shall be included (Part# 3620XHC0XXX0). It shall have capability to connect to all of the relays. All necessary cabling for connecting all the relays to the security gateway shall be included.

Ruggedcom Utility Grade Ethernet switch shall be included (Part# RS900G-24-P-2SC10-XX)

Batteries for backup control power shall be either SLA1116 12VDC or SLA1156 12VDC. Alternative battery options will be considered.

#### Labeling

The switch shall have a stainless steel nameplate in the switch side compartment which is permanently stamped, embossed or engraved with the following information:

- Name of manufacturer.
- Type of load break switch (Number of ways, number of switched ways).
- Catalog number.
- Model number.
- Serial number.
- Date of manufacture.
- Maximum voltage.
- BIL (kV).
- Amps, continuous.
- Amps, load interrupting.
- KA Asymmetrical, momentary and fault close.
- Weight, in pounds.

The following labels will be provided as a minimum.

- Danger labels (in all compartments).
- Schematic diagram (in all compartments).
- Each bushing shall have a phase identification tag ("A", "B" or "C").
- Other warnings and instructional labels, as necessary.
- Each control wire shall have labels at each end specifying the terminal block that end lands on.

#### **SWITCH OPERATION**

The switch shall be operable from the control cabinet without the need to enter deadfront compartment of the switch.

The switch shall be operable manually, in case of failure of the control cabinet equipment.

One operating mechanism will be provided per gang switch. The operating mechanism must operate all three phases simultaneously and must be tease proof and provide for quick-make, quick-break operation in

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either switching direction regardless of the speed of the operator. Position indicators shall clearly identify the "open" and "closed" positions of the contacts. The operating mechanism shall be padlockable in either position. The operating mechanism must be capable of delivering sufficient torque to assure load interrupting, fault closing and momentary ratings.

#### **QUALITY ASSURANCE**

One hundred percent (100%) production testing shall include a contact resistance test and an AC one minute withstand test.

Certified test reports shall be furnished to demonstrate accurate compliance with <u>all</u> required production tests.

#### **MISCELLANEOUS**

Any exceptions taken to the specification shall be clearly indicated on the quotation.

An outline drawing of the switch shall be submitted with the quotation.

The manufacturer shall provide warranty information on the switch with the quotation.

Approval drawings shall be submitted prior to the fabrication of the switch. The submittal shall include all dimensions, weights, information on the switch and all associated equipment, changes from specifications and any accessories. The vendor shall allow two (2) weeks for approval drawing review by BED.

One hard copy and one electronic copy of instructions and checklists for the inspection, installation, operation, and maintenance of the padmounted switch shall be provided with the switch.

Elbows and bushing well inserts will be provided by the user.

#### **SHIPMENT**

The switch shall be shipped FOB destination.

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# **BURLINGTON ELECTRIC DEPARTMENT** 15 kV, 600 Amp, Padmount Switch Data Sheet

Vendor:	Quotation Date:						
Switch manufacturer:	Type of switch:	Way, Switched					
Catalog number:	Model number:						
Interrupting medium:	Insulating medium:						
Weight, in pounds:							
Dimensions (	(In inches)						
Length: Width:	Height:						
Electrical Ratings							
One Minute AC Withstand:		kV					
Open Gap B.I.L. Flashover Withstand:		kV					
Load Interrupting and Loop Switching:		Amps					
Asymmetrical Momentary and 3 Operation Fault Close:		Amps					
Symmetrical One Second Current:		Amps					
Operations - 600 A Load Interrupting Endurance:		Operations					
Mechanical Life - Operations:		Operations					
Maximum Switch Operating (Open / close) Time:  (Total time to operate a switch equipped with an eoperator to operate + the total time for the switch to		Seconds or Cycles ime for the electrical					
Exceptions to specifications:							

Material Specification

15 kV, 600 Amp, Padmount Switch

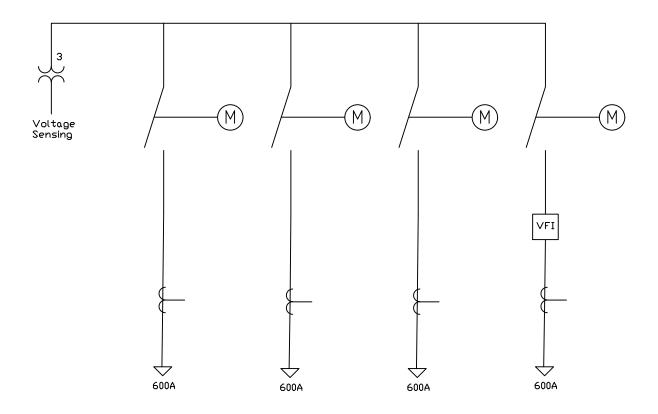
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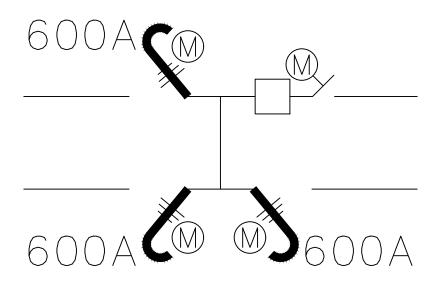
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#### **TERMS and CONDITIONS**

- 1. These Terms and Conditions, together with the purchase order and/or contract issued by the Burlington Electric Department's (B.E.D.) Purchasing Office, constitute the entire agreement between B.E.D. and the supplier/contractor. Any modification to said agreement shall be submitted in writing by the party seeking said modification, to the other party. Said modification shall be agreed upon in writing by both parties in order for it to be enforceable. Absent said written modification, this form and said purchase order shall exclusively control the terms of the agreement between the parties.
- 2. Except as herein provided, no purchases ordered by unauthorized individuals shall be enforceable against B.E.D. Only individuals expressly designated as those vested with the authority to purchase on behalf of B.E.D. shall be considered persons possessing binding purchasing authority. Agreements entered into with unauthorized individuals shall be void and B.E.D. shall not be liable for any such unauthorized agreements.
- 3. Sellers, suppliers and contractors shall not assign, delegate, transfer, convey, sublet, or otherwise dispose of their rights, titles, interests or obligations under this contract, or their power to execute such contract to any other person, firm or corporation, without the previous written consent of B.E.D.'s Purchasing Office.
- 4. The parties to this agreement hereby agree that this contract is subject to the laws of the State of Vermont. The parties to this agreement further agree that Vermont's version of the Uniform Commercial Code, found in Title 9A of Vermont Statutes Annotated, shall apply.
- 5. B.E.D. may return any materials which are defective, unsatisfactory, or of inferior quality or workmanship, or fail to meet specifications or other requirements of this order.
- 6. B.E.D. reserves the right to cancel this order if goods are not shipped as directed. B.E.D. reserves the right to terminate its obligations under this order or any part hereof if any delivery/awarded service is not made in the time provided or, if no time is specified, within a reasonable time or if the material that is delivered/service provided is not as specified.
- 7. Seller shall ship in accordance with any instructions from B.E.D. and the requirements of common carriers to secure the lowest transportation costs. No shipments are to be made C.O.D., nor shall any such shipments be accepted. When goods or materials are shipped F.O.B. point of shipment, all freight charges are to be PREPAID by the Seller and added to the invoice total. An original copy of paid express or freight bill shall be attached to the invoice.
- 8. Seller shall furnish a packing slip with all shipments showing the purchase order number, seller name, catalog numbers, quantities (including back orders) and a full description of materials shipped.
- 9. Contractor shall furnish current Certificate of Insurance as outlined by B.E.D.'s Insurance Requirement Contractor's Order, a copy of which will be provided by B.E.D.'s Purchasing Office to the Seller. Such evidence of insurance shall be received at B.E.D. before the commencement of work, or Purchase Order and/or Contract is awarded, whichever is sooner, and such insurance shall be maintained throughout the duration of awarded contract. Seller shall be liable for any and/or all damages/claims (including but not limited to bodily/personal injury, property damage, loss of income, business interruption, or wrongful death), while performing or as a result of work assigned/related to the awarded contract.
- 10. The contractor shall be responsible for ensuring that all utilities are properly located, marked and identified through utilization of, and compliance with, the requirements of the "Dig Safe" program (30 V.S.A. §7001 et seq. and Vermont P.S.B. Rule 3.800). Contractor is responsible for working around existing utilities and agrees to indemnify and hold B.E.D. harmless for any damages to such utilities except for such damages whose sole proximate cause is due to negligence by B.E.D.
- 11. Seller shall follow all B.E.D. Safety Rules, a copy of which shall be provided, as well as follow good utility practices on details not covered in specification documents with preference given to B.E.D. Standard practices if suitable. Seller is responsible for following all applicable EPA/VOSHA/OSHA/NESC and NEC rules and regulations.
- 12. When the contract is awarded to provide services, the cost of service shall be a fixed fee or a time and material basis with a Not To Exceed amount. Expenses shall be billed at cost unless otherwise specified on the awarded contract. Seller shall furnish an invoice detailing Purchase Order number, scope of work, mileage and other expenses. If the contract is awarded on a time and material basis, the invoice shall also include dates worked, name of personnel, number of labor hours worked (traveled if chargeable), rate per hour and total labor, equipment rental hours and rates and materials. Seller shall be responsible to obtain all necessary permits and copies shall be furnished with each invoice. Seller shall also furnish documentation of all reimbursable expenses with each invoice.
- 13. Unless otherwise specified, payments shall be made on partial deliveries accepted by B.E.D. when the amount due on such deliveries so warrants. Progressive billing for services rendered shall be accepted unless fixed fee is quoted. Where there is a question of non-performance involved, payment in whole or part against which to charge back any adjustment required, shall be withheld. In the event cash discount is involved, the withholding of payment as provided herein shall not deprive B.E.D. from taking such discount.
- 14. In accordance with city regulations, invoices for completed purchase orders must be received by B.E.D.'s Accounts Payable by the 27th of each month to assure payment by approximately the 15th of the following month. Invoices received after that date shall be carried forward to the following month.
- 15. **All invoices shall be mailed to the ATTENTION of B.E.D.'s Accounts Payable**. Inquiries regarding the status of unpaid invoices shall likewise be directed to B.E.D.'s Accounts Payable.

Rev. 9/9/2010