Checklist of Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV (formerly the Primary Guide) R5

The formal application shall include all documents and drawings as described in section 5.2 *Formal Application* of the latest revision of the *Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV*. This checklist is a job aid that is used to assist in ensuring the completed submission meets BC Hydro requirements.

General Submission Requirements	**Check item**
Application submitted as a single bound PDF portfolio, with an itemized cover letter to ensure direct correlation between individual deliverables and the submission requirements outlined in section 5.2. Submission authentication must be in compliance with EGBC authentication requirements.	☐
All submitted documents and engineering content are in alignment.	☐

5.2.2 Electrical One-Line Diagram Electrical one-line diagram submission requirements:	**Check item included in submission**
5.2.2.a. Be authenticated and submitted by a POR;	☐
5.2.2.b Show service entrance equipment including secondary metering, if applicable	☐
5.2.2.c Show emergency standby generator connections;	☐
5.2.2.d. Show surge arresters including ratings;	☐
5.2.2.e. Indicate available fault levels at current or future operating voltage as applicable;	☐
5.2.2.f. Show interrupting ratings of the overcurrent protection devices;	☐
5.2.2.g. Include a legend clearly indicating device symbol and functionality; and	☐
5.2.2.h. Rating (e.g. kW, kVA) of the emergency standby generator and associated transition transfer switch current rating (amp) and type (open or close) (see section 3.9 Customer-Owned Standby Generation) as required.	☐

5.2.3 Protective Device Coordination Graph Time-current characteristic curve submission requirements:	**Check item included in submission**
5.2.3.a. Be authenticated and submitted by a POR;	☐
5.2.3.b. Utilize a standard 4½ x 5 cycle log-log graph for the coordination study. Ensure that the service entrance protective device settings are compatible with, and properly coordinated to, BC Hydro's protective equipment. BC Hydro may request the customer submit complex or illegible coordination graphs on 11" x 17" sheets instead of the standard 8½" x 11" sheets. (see 10 *Primary Service Protection Requirements*);	☐
5.2.3.c. Utilize a unified time-current characteristic graph that overlays the upstream BC Hydro protection curves, the customer's relay or fuse entrance protection curves, and the transformer magnetizing inrush points/curves;	☐
5.2.3.d. Clearly indicate the time margins between BC Hydro's protection devices and the customer's entrance protection for the maximum fault level, as well as for any other fault conditions that result in the minimum allowable time margin. (see 10.1.4 *Interrupting Rating and Minimum Time Margins* for minimum allowable time margins);	☐
5.2.3.e. Clearly indicate the maximum fault levels for bolted three-phase faults (LLL) and single line-to-ground faults (LG) without cutting the curves at those points;.	☐
5.2.3.f. Use corresponding text boxes for each curve providing curve details (relay manufacturer, pickup, time dial, curve type, curve modifiers, current transformer ratio, and delay). The customer's total clearing curve shall include the relay/control response time, breaker/recloser interrupting time, and all other propagation and power-up delays.	☐

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5.2.4 Site Plan Site plan submission requirements:	**Check item included in submission**
5.2.4.a. Be authenticated and submitted by a POR;	☐
5.2.4.b. Display all aspects of the primary service installation, covering both civil and electrical components, and indicate whether equipment is overhead or underground;	☐
5.2.4.c. Clearly show the location of the building and primary service vaults, if applicable;	☐
5.2.4.d. Identify the proposed terminal pole or service cable vault (manhole), and illustrate the route of the overhead line or underground cables on private property, including within the customer building, to the connection point, if applicable;	☐
5.2.4.e. Indicate BC Hydro road access for line trucks to both the first pole and the primary revenue metering pole, if applicable;	☐
5.2.4.f. Provide a detailed design layout of primary vaults or outdoor kiosks, if applicable that includes: i. Crew access and emergency egress routes; ii. Minimum operating clearances; iii. Safety grounding provisions; and iv. Proposed layout of primary service ducts, bends, fittings, and pull boxes, where applicable.	☐ ☐ ☐ ☐

5.2.5 Primary Service Overhead Line Design The privately-owned primary service overhead line design submission requirements:	**Check item included in submission**
5.2.5.a. Be authenticated by a POR;	☐
5.2.5.b. Reference standards: Designs shall not reference or include BC Hydro standards except where required as supply authority, such as for primary revenue metering.	☐
5.2.5.c. Compliance: Design work shall comply with TSBC Information Bulletin B-E3 090312 1 *Overhead line guidelines*.	☐
5.2.5.d. First customer pole: The first customer pole shall be a new dedicated minimum class 2 free-standing pole or equivalent. The POR shall verify, through analysis compliant with CSA C22.3 No.1, that the pole remains stable both with and without BC Hydro conductors attached. The first customer pole shall be double dead-ended, fitted with crossarms, a gang-operated loadbreak service switch, surge arresters, and fused cutouts. No additional customer equipment is permitted on the pole.	☐
5.2.5.e. Revenue metering pole: The revenue metering pole shall be a new dedicated minimum class 2 pole or equivalent per BC Hydro ES43 standards. No additional customer equipment is permitted on the pole.	☐
5.2.5.f Pole mounting hardware and components on the first pole shall be certified to CSA C83 *Communication and power line hardware*.	☐
5.2.5.g. Conductor arrangement: Clearly indicate conductor separation at the crossarm, phase conductors, and neutral separation	☐
5.2.5.h. Neutral attachment: Clearly indicate the neutral conductor attachment separation to ground.	☐
5.2.5.i. Device mounting: Clearly indicate fused cutouts (or recloser) mounting details and minimum clearances between devices on the pole.	☐

5.2.6 Primary Service Declaration	**Check item included in submission**
The customer shall complete the BC Hydro form *Statement to BC Hydro Regarding Primary Voltage Service Entrance Equipment* (also known as the primary service declaration). This form shall be authenticated by a POR	☐