



Information Bulletin: Released Requirements for Customer-Owned Primary Services at 4 kV to 35 kV, Revision 5

1.0 Items Covered

Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV, revision 5 (formerly known as the Primary Guide)

This advisory and the document listed above can be found at bchydro.com/distributionstandards.

2.0 Overview

This bulletin presents revision 5 to the *Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV*, superseding the last edition (revision 4) issued in February 2025.

Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV revision 5 contains various changes and improvements for the construction and installation of customer-owned primary services. The latest changes were made in response to input from customers, Technical Safety BC, and BC Hydro distribution designers and engineers.

The following is a list of substantive changes in the document:

| Page | Section | Change |
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| 1 | Title change | Deleted "Primary Guide" in all references. Refer to "Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV" as primary service requirements document. |

| Page | Section | Change |
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| 6 | 2 Definitions | Deleted "Approved Equipment" Revised "Authenticate" Deleted "Authorization for Connection" Deleted "Basic impulse level" Replaced "Certified or Approved" with "Approved Certification Mark for Electrical Products." Deleted "CLPU" Deleted "Consumer's Service" Revised "Current Permit" Deleted "Dead Zone in Primary Switchgear" Deleted "Isolation switch" Deleted "Primary Guide" Added "Primary service connection" Revised "Primary service vault" Revised "Professional of record (POR)" per EGBC rules Deleted "Service box" Deleted "Service connection" Deleted "Service vault" Revised "Supply authority" Replaced "Supply service" with "Supply service cables or conductors" Revised "TSBC" |
| 10 | 3.2 Utility Access | Added compliance with BC Hydro work methods. |
| 11-12 | 3.4 Point of Connection | Added reference to ES54 S0-02 and ES54 S3 standards. |
| 12 | 3.5 Revenue Metering | Replaced reference to BCEC section 6 and with references to BC Hydro revenue metering guides. |
| 13 | 3.6 Power Quality | Deleted sections 3.61 Voltage Planning Levels, 3.6.1.1 Voltage Frequency, 3.6.1.2 Steady State Voltage, and 3.6.1.3 Voltage Unbalance. Revised customer emission limits requirements for compliance with the "Electrical Service Agreement". |
| 13 | 3.7 Customer Service Entrance Equipment | Added class 2 pole requirement for customer first pole. |
| 14-15 | 3.9.1 Open Transition Standby Generation | Revised text and moved open and closed transition interlock schematics to Appendix 1. |
| 15-16 | 3.10 Maintenance and Testing | Minor text revisions regarding authority having jurisdiction and equipment maintenance tag date. |
| 17-18 | 4 References | Minor edits and removed some references. |

| Page | Section | Change |
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| 19 | 5.1.1 Customer Submissions | Streamlined requirements. |
| 19 | 5.1.2 BC Hydro Response | Revised BC Hydro information for existing feeder capacity. Revised applicable customer emission study requirements. |
| 20 | 5.2.1 Customer Submissions | Deleted previous Note 13. Deleted arc flash study requirement. Revised other requirements. Combined previous requirement sections 5.2.1.1 and 5.2.1.2 into one list. |
| 21 | 5.2.2 Electrical One Line Diagram | Revised and simplified requirements for the information submitted by POR in single line diagram. |
| 21 | 5.2.3 Protective Device Coordination Graph | Minor edits to clarify BC Hydro requirements. Renumbered Note 14 to Note 13. |
| 22 | 5.2.4 Site Plan | Revised to present BC Hydro requirements in a list format. |
| 22 | 5.2.5 Primary Service Overhead Line Design | Changed section title and rearranged paragraphs. Emphasis added onto construction of customer-owned first pole and primary revenue metering pole. |
| 23 | 5.2.6 Primary Service Declaration | Deleted requirement of POR EGBC permit to practice. |
| 23 | 5.3 Primary Service Fabrication Drawings | Minor text edits. Deleted time limit of four weeks for BC Hydro response. Renumbered Note 15 to Note 14. |
| 23-24 | 5.4 High-Voltage Commissioning Report and Authorization for Connection | Simplified and streamlined BC Hydro requirements from eleven paragraphs down to seven. Deleted transformer production report requirement. Deleted high-voltage cable and transformer commissioning test report requirement. Notes 16 and 17 renumbered to 15 and 16. |
| 24 | 5.7 Temporary Power as Primary Service | Note 18 renumbered as Note 17. |
| 25 | 6.1 Preliminary Design | Deleted section 6.1.2 Secondary Supply Voltage. Deleted section 6.1.2.1 Overhead. Deleted section 6.1.2.2 Underground. |
| 25 | 6.2 Service Transformers | Deleted previous section 6.2.1 Supply of Service Transformers. BC Hydro no longer supplies transformers to customers. |
| 25 | 6.2.1 Primary Service Transformer Connections | Simplified description of customer-owned transformer connections acceptable to BC Hydro. |

| Page | Section | Change |
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| 25 | 6.2.2 Service Neutral Connections | Revised BC Hydro requirement for service neutral to be terminated at the ground bus in the utility service entrance compartment. |
| 26 | 6.2.4 Maximum Connected Transformer Size and Limitations | Clarified requirements for mitigating high transformer inrush current and cold load pickup for large customer transformers. . |
| 27 | 7.1 BC Hydro Scope of Supply for Overhead Service Connections | Note 20 renumbered to Note 18. Note 21 renumbered to Note 19. Note 22 renumbered to Note 20. |
| 27-28 | 7.2 Customer Scope of Supply for Overhead Service Connections | Deleted previous Note 23. Note 24 renumbered to Note 21. Minor edits to variance requirement from TSBC for reclosers. Surge arrester requirements moved to Section 8. |
| 28 | 7.3 BC Hydro Scope of Supply for Underground Service Connections | Note 25 renumbered to Note 22. |
| 29 | 7.4 Customer Scope of Supply for Indoor Primary Service Vaults | Customer surge arrester requirements moved to Section 8. |
| 30 | 7.5 Customer Scope of Supply for Outdoor Primary Service Kiosks | Customer surge arrester requirements moved to Section 8. Deleted previous Note 26. |
| 30 | 7.6 Customer Scope of Supply for Primary Revenue Metering Kiosks | Customer surge arrester requirements moved to Section 8. |
| 31 | 8.1 Primary Service Construction General | Note 27 renumbered to Note 23. Surge arrester requirements moved from all other sections to section 8.1. |
| 32 | 8.1.1.2 Cable Terminations | Note 28 renumbered to Note 24. |
| 32-33 | 8.2 Service Ducts | Note 29 renumbered to Note 25. Note 30 renumbered to Note 26 |
| 33 | 8.2.2 Drainage | Note 31 renumbered to Note 27. |
| 34 | 8.2.3 Primary Service Ducts | Note 32 renumbered to Note 28. |

| Page | Section | Change |
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| 35 | 8.3.1 Vault Location and Access | Revised note BC Hydro may accept primary service vault design with a raised staircase as the only means of egress. |
| 35 | 8.3.2 Equipment Layout | Deleted paragraph on means of egress and previous Note 33. |
| 35-36 | 8.3.3 Cable Pull Pit | Revised cover plate requirements and deleted aluminium checker plate as only option. |
| 37 | 8.4.1 Outdoor Pull Boxes | Note 34 renumbered to Note 29. |
| 37 | 8.5 Equipment Identification and Safety Decals | Deleted sections 8.5.1, 8.5.1.1, 8.5.1.2, 8.5.1.3, 8.5.2, 8.5.2.1 and 8.5.2.2 describing BC Hydro decals. |
| 38 | 9.1 Primary Services Switchboard Construction General | Note 35 renumbered to Note 30. Note 36 renumbered to Note 31 |
| 41 | 9.1.8 Live-Front Switchgear | Note 37 renumbered to Note 32. Deleted reference to BC Hydro Safety Practice Regulation Rule for limits of approach. |
| 42 | 9.1.9 Dead-Front Switchgear | Deleted certification label and relaying transformers requirements from list. |
| 43 | 9.1.10 Unacceptable Equipment | Note 38 renumbered to Note 33. |
| 43 | 9.2 Service Entrance Compartment Single Radial Supply | Note 39 renumbered as Note 34. |
| 44 | 9.3.1 Existing Dual Radial Building Services | Added new section heading 9.3.1 under 9.3 Service Entrance Compartment Dual Radial Supply (Legacy Reference). Content unchanged. Note 40 renumbered to Note 35. |
| 44-45 | 9.3.2 Existing Dual Radial Service Upgrade | New section explaining BC Hydro requirements for dual radial supply upgrade and BC Hydro acceptance of 3-way customer-owned primary service switchgear, including new Figure 9-1. |
| 46 | 10.1.2 Voltage | Note 41 renumbered to Note 36. |
| 46-48 | 10.1.4 Interrupting Rating and Minimum Time Margins | Revised and expanded Table 10-2 stating acceptable time margins. Revised and edited table notes to align with Table 10-2 and revised coordination graphs in Appendix 1. |

| Page | Section | Change |
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| 49 | 10.2.2 Relays | Note 42 renumbered to Note 37. Note 43 renumbered to Note 38 |
| 56-60 | Appendix 1 List of Primary Service Requirements Standards | Moved previous Figures 3-1 and 3-2 to become Figures A1-1 and A1-2. Revised PG D1-01. Added new PG D1-02 and PG D1-03 sample protection curves. |
| 68 | Appendix 2 Reference Documents | Removed the following: <ul style="list-style-type: none"> • BC Hydro form Statement to BC Hydro Regarding Primary Voltage Service Entrance Equipment • BC Hydro Electric Service Agreement • BC Hydro Checklist of Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV. |

3.0 Action

The effective date for *Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV* revision 5 is 2026-06-01. New applications for primary service connections after 2026-06-01 shall meet the BC Hydro requirements contained in revision 5. New applications prior to 2026-06-01 may choose to comply with revision 5.

Approved projects and projects pending design and construction of new customer-owned primary service installations already in progress may comply with the requirements of *Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV* revision 4.

4.0 Contact

Customer and Customer Representatives

Please direct questions and concerns to your local BC Hydro representative.

BC Hydro Employees and Contractors

Please direct questions and concerns related to *Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV* revision 5 to the author of the document or to distribution.standards@bchydro.com.

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