

This Legal Acknowledgement Form shall be governed by the laws of the Province of British Columbia and the applicable federal laws of Canada. In the event of conflicts or inconsistencies, if any, between or among this Legal Acknowledgement Form and the terms and conditions of the Standard, the provisions set out in this Legal Acknowledgement Form take precedence.

#### Disclaimer

The Standard, and all information and referenced standards therein, is provided as a public service by the British Columbia Hydro and Power Authority ("BC Hydro"). Material contained within it carries no guarantee of any kind, express or implied.

Neither BC Hydro nor the Standard designer, recommender, or acceptor, are accountable for the manner in which the Standard is used, or in the way its content is applied. Persons using the Standard, including retained engineers and contractors, are responsible and assume full responsibility and liability for its application, including but not limited to ensuring that the application of its content is appropriate, and that its application does not compromise operability, safety, reliability or maintainability.

The Standards have been prepared for or by BC Hydro to meet specific purposes of BC Hydro. No person shall use or rely upon the Standard, in whole or in part, in any manner, except:

- a) for the purpose of providing services to BC Hydro;
- b) for the purpose of connecting equipment to BC Hydro equipment;
- c) with the prior written consent of BC Hydro, or
- d) as required by law.

#### Limitation of Liability

BC Hydro, its servants or agents, shall not be liable to any person for injury, loss or damage arising out of the use of or reliance upon this Standard, in whole or in part, except for those situations where the person uses the Standards to provide services to BC Hydro to the extent damages are not due to the fault of the person using the Standard, including but not limited to that person's misapplication of the Standard, negligence, or misconduct.

Any person using these Standards hereby agrees to release and indemnify BC Hydro, its servants or agents, from any injury, loss, damage or claim arising or alleged to be arising from use of or reliance upon the Standards, in whole or in part, except for those situations where the person directly uses the Standards to provide services to BC Hydro to the extent damages are not due to the fault of the person using the Standard, including but not limited to that person's misapplication of the Standard, negligence, or misconduct.

#### Copyright

BC Hydro holds all title and rights, including the copyright, in or to the Standard. Copying all or any part of this Standard is permitted provided copies are used in accordance with this Legal Acknowledgement Form, credit is given to BC Hydro, and copies of the Standard or parts thereof are not sold for profit. The Standard may be stored in any type of electronic retrieval system provided BC Hydro is clearly indicated as the source and provided no profit accrues from such storage.

BC Hydro notes that the Standard may be revised from time to time and recommends that any person using the Standard in accordance with this Legal Acknowledgement Form confirm it is using the most recent version. BC Hydro is not liable for reliance on past versions of the Standard that may be stored electronically.

REVISIONS: UPDATED LEGAL ACKNOWLEDGEMENT FORM. FD MAR '16

|                                                                                                                  |                                                                                                                  |                                                                                                              |                                                                                                           |                                                                                                      |  |                |
|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--|----------------|
| DESIGNED<br><br>J. AGNOLIN                                                                                       | RECOMMENDED<br><br>F. DENNERT | ACCEPTED<br><br>G. REIMER | ENGINEER OF RECORD<br> | NOTICE FROM THE<br>EXECUTIVE VICE PRESIDENT<br>TRANSMISSION AND DISTRIBUTION<br>AND CUSTOMER SERVICE |  |                |
| DISTRIBUTION<br>STANDARDS<br> |                                                                                                                  | ISSUED: MAR 2016<br>REPLACES: MAY 2004<br>ORIGINALLY<br>ISSUED: NOV 1980                                     |                                                                                                           |                                                                                                      |  | PAGE 1<br>OF 2 |

## Scope

This manual is one of a series containing standards for construction of the BC Hydro electrical distribution plant within the service area of BC Hydro. A new distribution plant shall be designed, constructed, owned, operated, maintained and repaired to these standards.

## Purpose of Standards

BC Hydro objectives require standardization to:

- a) Ensure uniform safety requirements comply with BC statutes and regulations.
- b) Provide uniform system reliability.
- c) Provide uniform operating practices.
- d) Permit economic bulk purchasing of materials.
- e) Achieve optimum life cycle cost of plant construction.
- f) Effect efficient quality assurance.

## Responsibility

The Distribution Standards Department prepares these standards and verifies that specified plant and procedures will perform adequately under all normally expected conditions encountered throughout the province of British Columbia. These standards are approved by Professional Engineers. It is the responsibility of BC Hydro Managers to ensure that the standards are followed unless abnormal conditions are encountered that require variations. These variations should be kept to a minimum and their performance shall be the responsibility of the Professional of Record in charge of the project, who will record and seal the variation based on satisfactory qualifications and experience to do so. As per the latest revision of the BC Hydro Distribution Owner's Engineer Guide, these variations must be accepted by BC Hydro's Owner's Engineer.

## Use of Stock Materials

The electrical distribution plant covered by these standards is built using stock materials approved by a Professional Engineer as required by law. The use of non-stock materials for special and unusual situations must be approved by Distribution Standards or the BC Hydro Engineer responsible for the project.

## Revisions to Manual

These standards are revised from time to time to improve the safety, performance, workability, cost effectiveness or appearance of the plant. The existing plant built to previous standards need not be updated unless so specifically advised by BC Hydro. When maintenance or other work, such as voltage conversion or conductor change is being done, updating plant to current standards is encouraged.

## Mailing Addresses

The manual has been issued to a corporation or firm rather than to an individual. The corporation or firm is responsible for the safekeeping of the manual, and for keeping it current. Changes of address or in number of copies required must be reported promptly.

Suggestions for changes in the manual, or required changes of address may be made on the pre-addressed comment sheet included in the Manual and with each issue of revision.

REVISIONS: UPDATED LEGAL ACKNOWLEDGEMENT FORM. FD MAR '16

|                                       |                                                                                                                  |                                                                                                              |                                                                                                                                                                         |                                                                                                      |                           |        |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------|--------|
| DESIGNED<br>J. AGNOLIN                | RECOMMENDED<br><br>F. DENNERT | ACCEPTED<br><br>S. REIMER | ENGINEER OF RECORD<br><br>F. U. DENNERT<br>PROFESSIONAL ENGINEER<br>BRITISH COLUMBIA | NOTICE FROM THE<br>EXECUTIVE VICE PRESIDENT<br>TRANSMISSION AND DISTRIBUTION<br>AND CUSTOMER SERVICE |                           |        |
| DISTRIBUTION<br>STANDARDS<br>BC Hydro |                                                                                                                  | ISSUED: MAR 2016<br>REPLACES: MAY 2004<br>ORIGINALLY<br>ISSUED: NOV 1980                                     |                                                                                                                                                                         | PAGE 2<br>OF 2                                                                                       | ES43/53/54/55/65 A1-01.02 | R<br>4 |



## Information Bulletin:

### Limited Release of Single-Phase Secondary 320A 120/240V Services with Self-Contained Metering

#### 1.0 Items Covered

- |                |                                                                                               |
|----------------|-----------------------------------------------------------------------------------------------|
| ES53 S1-01 R12 | Secondary Services Single-Phase up to 600 A 120/240 V Wiring and Revenue Metering Connections |
| ES54 S1-02     | Secondary Single-Phase Services 320 A Self-Contained Meter Installation                       |

This advisory and the standards listed above can be found at [bchydro.com/distributionstandards](https://bchydro.com/distributionstandards)

#### 2.0 Overview

BC Hydro has released a new 320 A 120/240 V service option for overhead and underground services. The 320 A service provides additional capacity using a self-contained revenue meter. Due to supply chain challenges, 320 A services have been released to the Southern Interior service area only (see Section 3.0).

##### Underground Services

In addition to existing underground requirements, two new standards have been released specific to 320 A services:

- a. ES54 S1-02 is a new standard for connection of single-phase 120/240 V 320 A underground services; and
- b. ES53 S1-01 R12 is a copy of the recently issued revision 11 but with the watermark removed from the 320 A wiring schematics page.

##### Overhead Services

Follow existing overhead service requirements on [bchydro.com](https://bchydro.com).

##### Acceptable Meter Bases

Only 320 A meter sockets manufactured by ABB and Hydel are acceptable for 320 A service connections.

### 3.0 Supply Chain and Geographic Considerations

BC Hydro has successfully completed several trial 320 A service connections throughout the province over the past year. However, the suppliers of 320 A revenue meters are experiencing challenges with material availability. BC Hydro can therefore not ensure adequate supply of 320 A meters for rollout to the entire province.

BC Hydro will start with a limited rollout of 320 A services in the Southern Interior service area. The highlighted areas shown in Figure 1 represent regional design office coverage areas that constitute the Southern Interior service area. BC Hydro will review the initial rollout and supply chain situation and will expand the rollout to additional service areas when supply is available to meet the expected demand.

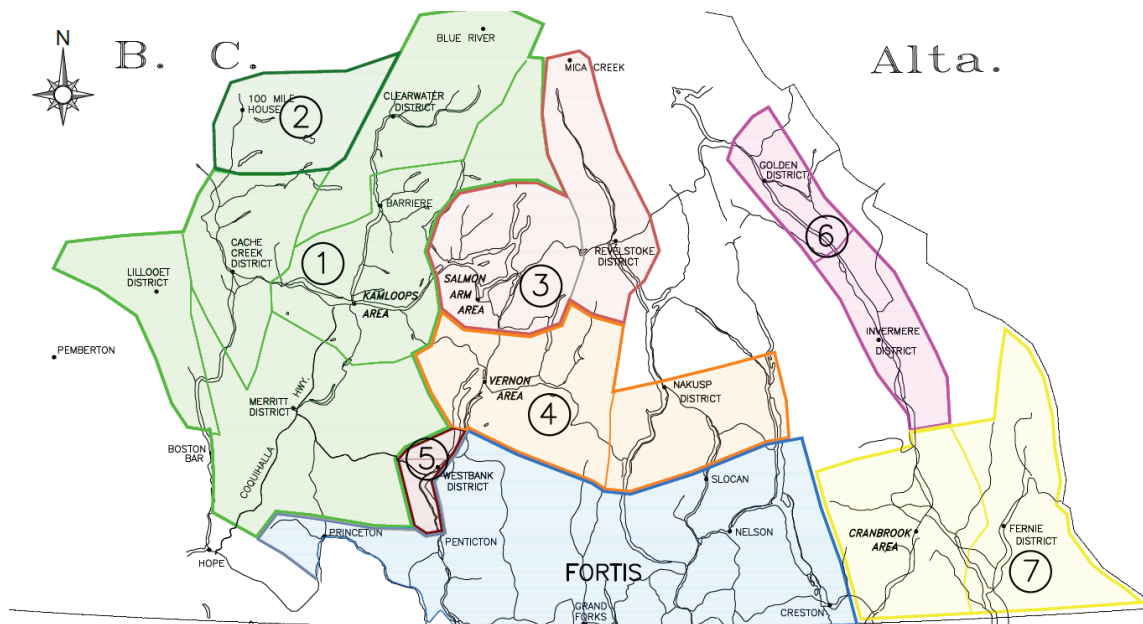


Figure 1 – Southern Interior service area

### 4.0 Action

Customers may apply for 320 A services starting February 1, 2024 for the limited rollout in the Southern Interior service area as shown above.

#### Customers and Customer Representatives

Customers and customer representatives, including electricians, project managers, consultants, and contractors, should familiarize themselves with the new ES54 S1-02, the revised ES53 S1-01, and the revised *Requirements for Secondary Voltage Revenue Metering (750 V and less)*. Please direct any questions or concerns to your local BC Hydro representative.

#### BC Hydro Employees and Contractors

BC Hydro employees and contractors should familiarize themselves with the new ES54 S1-02, the revised ES53 S1-01, and the revised *Requirements for Secondary Voltage Revenue Metering (750 V and less)*.

## 5.0 Contact

### Customers and Customer Representatives

Please direct any questions or concerns to your local BC Hydro representative.

### BC Hydro Employees and Contractors

Please direct any questions or concerns related to the standards to [distributionstandards@bchydro.com](mailto:distributionstandards@bchydro.com).

## 6.0 Approval

| Recommended                                                                       |            | Reviewed                                                                          |            | Approved                                                                           |            |
|-----------------------------------------------------------------------------------|------------|-----------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------|------------|
|  |            |  |            |  |            |
| M. Kelvin                                                                         |            | M. Stevens                                                                        |            | H. Giesbrecht                                                                      |            |
| Date:                                                                             | 2023-11-17 | Date:                                                                             | 2023-11-17 | Date:                                                                              | 2023-11-17 |