DERCP Sample Single Line Diagram

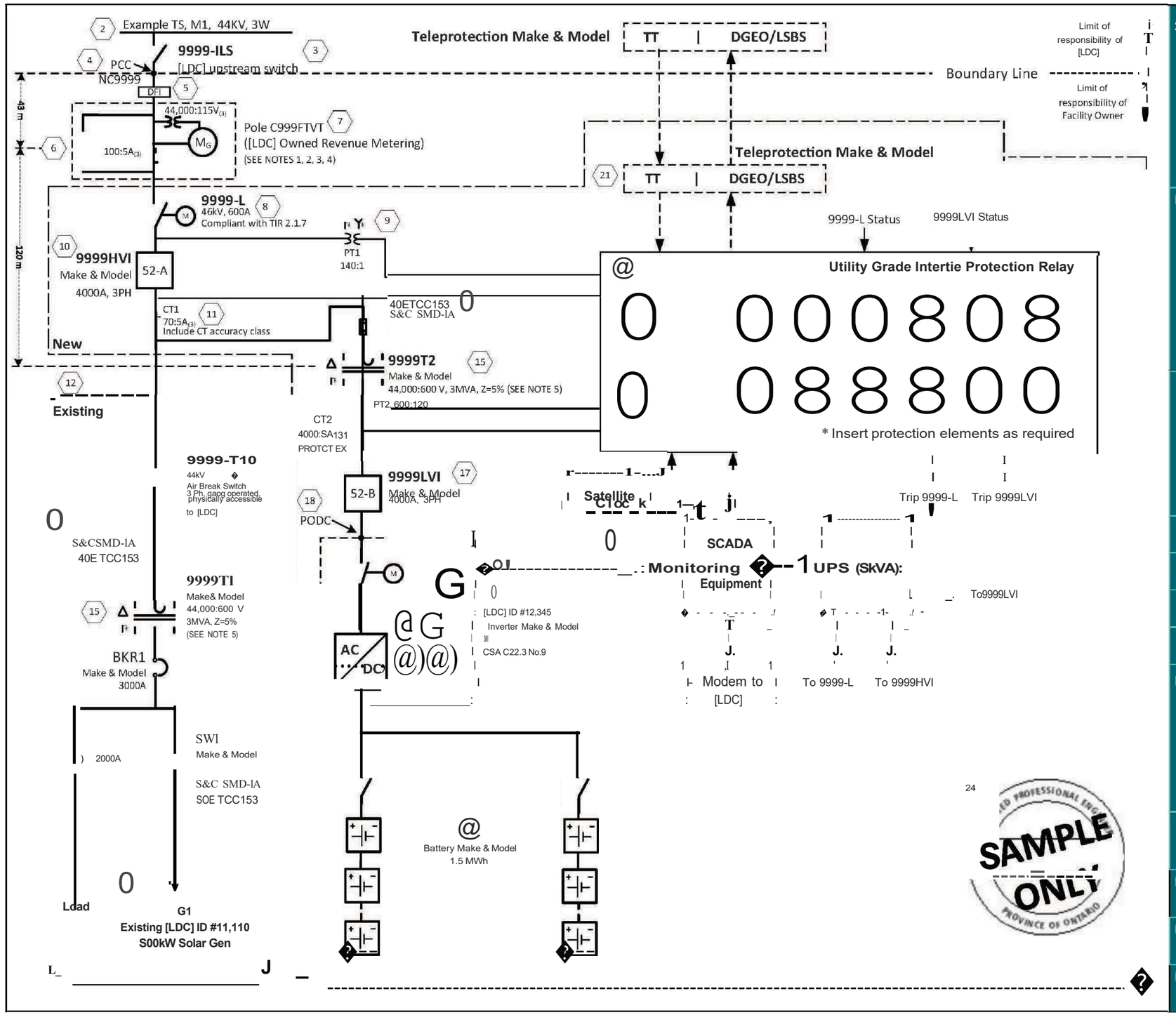
Burlington Hydro Inc., DERCP 2.0 July 15, 2025, Appendix B.

Item Number	Information to Include
1	The title block should include: • The legal name of the facility owner • Facility address/location • Project purpose • LDC assigned project ID • Revision history
2	• State utility's distribution and transmission facility (station) name(s) • State the name of utility's station feeder to which the generator is connected • State the nominal distribution supply voltage (eg. 44kV) • State the information for the upstream and downstream switches closest to the PCC (nomenclature, type, etc.)
3	•LDC to assign nomenclature for this switch. Note: initial submission can have the consultant/customer assigned nomenclature if a LDC designation is not yet available. Later, the customer is assigned a LDC designation, which should be added to the SLD and resubmitted to LDC before the SLD is considered finalized. The consultant/customer then has the option to replace the initial designation with LDC designation or keep both. Ensure the LDC designation is clearly marked to differentiate it from the consultant/customer designation (bolded, in brackets, etc). Item 3 has an example showing only LDC designation, while item 17 shows an alternate method that shows both designations. LDC only refers to the LDC designation when dealing with the customer. Example, when witnessing the switch used for work protection as per the LDC TIR. When submitting the new SLD with the changes, a higher revision number of the SLD should be used to track the changes. See SLD example.
4	• The Point of Common Coupling (PCC) is the point of demarcation between LDC and the DER. It is the point where the DER is to connect to LDC's Distribution System. PCC demarcation point • LDC designated facility operating designation (NCXXXX) • If the nomenclature is not included, the SLD is considered incomplete.
5	• Fault indicators with directional functionality are required for each phase between the PCC and the first pole on the customer owned new line and should be visible from the PCC location.
6	• Provide the length(s), ownership, and size(s) of line(s) from PCC to the meter. This data is used for SSLA determination. The metering point is at the location of the CT's and not the physical meter. • To comply with LDC TIR
7	• State the number of CTs being used • State the CT ratios including both ratios if they are dual ratio • State the in-use CT ratio if dual ratio • State the ANSI/CSA CT accuracy class information (provide example on SLD after)
8	• Clearly identify existing and new facility if applicable
9	• If a new equipment (ex. transformer) is being replaced in an existing facility, it should be indicated • Ensure all existing generators or backup generators are shown
10	• LDC designation must be shown • Voltage rating • Current rating

	• Type of switch • Single/3 phase • Physically accessible to LDC Alternatively, switch information can be shown on SLD as per item number 14
11	Fuse information to include: • Fuse rating • Manufacturer make/model • Fuse type on the SLD • Example: S&C SMD-1A 50E TCC153
12	Transformer Information to include: • Winding configuration • LDC designation • Manufacturer make/model • Rating • Ratio • Transformer ownership
13	• Please detail where the existing FIT/micro-FIT generator/meter are connected. • Include LDC ID • Show existing load • Capacity • Type For new generators: • Show the generator(s) connection(s) to the power transformer(s) • Show the operating nomenclature of the generator(s) (e.g. G1, G2, etc.) • State the nameplate capacity of the generator or individual generators, where there is more than one, in kVA / MVA. or kW / MW • For solar, state the size(s) and number of inverter(s) • State the operating power factor (PF) • State connection type (Wye, Delta, etc.) and indicate grounding • State whether the generator is induction or synchronous type.
14	This is an alternate way to item number 10 to show the information for a switch • LDC designation • Voltage rating • Current rating • Indicate which device is complaint with isolation device requirements
15	To comply with LDC TIR
16	See item number 12
17	• LDC designation • Manufacturer make/model • Current rating

	• Single/3 phase Note: initial submission can have the consultant/customer assigned nomenclature if a LDC designation is not yet available. Later, the customer is assigned a LDC designation, which should be added to the SLD and resubmitted to LDC before the SLD is considered finalized. The consultant/customer then has the option to replace the initial designation with LDC designation or keep both. Ensure the LDC designation is clearly marked to differentiate it from the consultant/customer designation (bolded, in brackets, etc). Item 3 has an example showing only LDC designation, while item 17 shows an alternate method that shows both designations. LDC only refers to the LDC designation when dealing with the customer. Example, when witnessing the switch used for work protection as per the LDC TIR. When submitting the new SLD with the changes, a higher revision number of the SLD should be used to track the changes. See SLD example.
18	• The Point of DER Connection (POC) is the point where DER unit(s)'s interconnection system connects the DER unit(s) to the DER facility. • Depending on the facility, it can be the same as the PCC
19	• Include LDC Project ID # • Inverter manufacturer make/model • MW rating • IEEE/ANSI protection elements need to be noted for the customer's inverters • Include • CSA Certification
20	• Manufacture make/model • MWh rating • Include information for gross load billing where required
21	• Teleportation equipment make/model • Flow of information/signals
22	• Relay manufacturer make/model • ANSI Device numbers used • Flow of information signals
23	Flow of signals between devices
24	Other general information required: • SLD must be stamped and signed by a Registered Professional Engineer in the Province of Ontario • All information on the SLD must be legible, and of a reasonably sized font for ease of reading • The Connection Impact Assessment provides details regarding the type and configuration of isolation devices required. • The DER facility must comply with all applicable interconnection requirements specified in the "Distributed Generation Technical Interconnection Requirements Interconnections at Voltages 50kV and Below" (TIR).

Refer to file "DERCP Sample Single Line Diagram Drawing" (OEB, Distributed Energy Resources Connection Procedures Version 2.0, Appendix B) for drawing.



SLD CHECKLIST

- The legal name of the facility owner, facility address/location, project purpose, [LDC] assigned project ID, and revision history should be included in the title block
- **See attached table for remaining important items. Note, please do not include the hex markers on the official SLD submitted to [LDC]. They are shown here for illustration only**

NOTES:

1. Colour code of the revenue metering instrument transformers secondary wiring shall match the overhead phase conductors
2. 100:5A, Measurement of Canada approved current transformer AE 1653, 0.15B0.9 CCRF=1.5
3. 44000:115V Measurement of Canada approved voltage transformer AE 2160r3, 0.3WXY, 200kV BIL
4. Compliant with Settlements & Revenue Metering SLD Requirements Revision 1.5.1
5. Transformer owned by ABC Inc

DISCLAIMER: This sample SLD shall only be used to highlight some of the main information that must be shown on the SLD submitted to [LDC]. All design decisions must be made by the proponent and meet the minimum requirement set forth in the TIR. Due to limited space, only some of the required items are shown. The rest of the information is indicated in the notes related to each number.

01	Revised as per {LDC} comments	18/11/2020
00	Initial SLD for [LDC] review	13/07/2020
NO	**REVISION/ISSUE**	**DATE**

PROJECT: Customer Name
Customer Address Line 1
Customer Address Line 2

Project Purpose

[LDC] Project ID: #12,345
Other Info

ABC Inc. LOGO **ABC Inc.**

DWG NAME: BEHIND THE METER EXAMPLE SLD

DATE: DD/MM/YYYY	DRAWN:	CHECKED:
18/11/2020	S. M.	S. H.

DWG NO:	SHEET NO:	REV NO:
18/11/2020	1 of 1	01