

1 **Q. Reference: Response to PUB-NLH-117**

2 **a)** Provide a complete list of all transmission lines and power transformers that have been
3 upgraded with modern digital multifunction relays.

4 **b)** In addition to transmission lines and power transformers, have similar modern digital
5 multifunction relays been deployed by Hydro on distribution feeders and rural systems?
6 If yes, provide a list of all distribution systems that have been upgraded with modern
7 digital multifunction relays.

8

9

10 **A. a)** Please refer to PUB-NLH-154, Attachment 1 for a list of Newfoundland and Labrador Hydro
11 transmission lines and power transformers that have been upgraded with modern digital
12 multifunction relays.

13 **b)** Yes, similar modern digital relays have been deployed on distribution systems. Please refer
14 to PUB-NLH-154, Attachment 2 for a list of distribution systems that have been upgraded
15 with modern digital multifunction relays.

**Transmission Lines and Power Transformers
Protected by Microprocessor-Based Relays**

Station	Equipment
BBK1	T1
BBK1	T2
BBK1	T3
BBK1	TL214
BBK1	TL250
BCV	TL256
BDE2	T7
BDE1	T1
BDE1	T2
BDE1	T3
BDE1	T4
BDE1	T5
BDE1	T6
BDE1	TL202
BDE1	TL204
BDE2	T10
BDE2	T12
BDE2	TL206
BDE2	TL220
BDE2	TL231
BDE2	TL234
BDE2	TL267
BHL	TL226
BHL	TL227
BHL	TL259
BUC	T1
BUC	T1S
BUC	TL205
BUC	TL228
BUC	TL232
BUC	TL233
BUC	TL264
BUC	TL280
CAT	T1
CAT	TL247
CBC	TL207
CBC	TL237
CHD	TL227
CHF	L23
CHF	L24
DHR	TL227
DHR	TL262
DLK	T2
DLK	TL225
DLK	TL226
DLK	TL239
DLK	TL245
DLK	TL247
DLK	TL248
DLS	T1
DLS	TL214
DLS	TL215
DPD	T1
FHD	T1
GCL	T1
GFC	T1
GFC	T2
HBV	T1

Station	Equipment
HBV	T2
HBV	T3
HBV	TL221
HLK	T1
HLK	T2
HLV	TL224
HLV	TL243
HLV	TL245
HLV	TL251
HRD	T10
HRD	T4
HRD	T5
HRD	T6
HRD	T7
HRD	T8
HRD	TL218
HRD	TL265
HRD	TL268
HVY	L1303
HVY	T4
HVY	T5
HWD	T2
HWD	T3
HWD	TL236
HWD	TL242
HWD	TL266
IRV	TL223
IRV	TL224
MDR	T1
MDR	T3
MDR	TL211
MDR	TL228
MDR	TL248
OPD	T1
OPD	T3
OPD	TL218
OPD	TL236
PBN	TL221
PBN	TL241
PBN	TL262
PPT	TL241
PPT	TL244
PRV	T1
QZT2	L32
QZT2	L40
QZT2	T1
QZT2	T2
RWC	TL257
SDP	TL261
SLK	TL271
SOK	T1
SPL	TL222
SPL	TL223
SSD	T1
SSD	T4
SSD	TL202
SSD	TL203
SSD	TL206
SSD	TL207
SSD	TL212
STA	T1

Station	Equipment
STA	TL256
STA	TL257
STA	TL261
STB	T1
STB	T2
STB	TL204
STB	TL205
STB	TL210
STB	TL222
STB	TL231
STB	TL232
STB	TL235
SVL	T3
SVL	TL209
USL	T1
USL	TL234
USL	TL263
VAN	L33
VAN	L40
VAN	T1
VAN	T2
VBN	T1
VBN	T2
VBN	T2
VBN	TL208
WABSS	L36
WABSS	T1
WABTS	L1
WABTS	L2
WABTS	L23
WABTS	L24
WABTS	L3
WABTS	L32
WABTS	L33
WABTS	L34
WABTS	L35
WABTS	L36
WABTS	L4
WABTS	L5B
WABTS	L7
WABTS	T1
WABTS	T2
WABTS	T3
WABTS	T4
WABTS	T5
WABTS	T6
WABTS	T7
WABTS	T8
WAV	T1
WAV	T2
WAV	T4
WAV	T5
WAV	TL201
WAV	TL203
WAV	TL208
WAV	TL217
WAV	TL237
WAV	TL267
WDL	TL229

Distribution Systems
Protected by Microprocessor-Based Relays

Station	Equipment
FGO	T1
FHD	L1
HVY	L1
HVY	L10
HVY	L15
HVY	L16
HVY	L17
HVY	L7
HVY	L8
QZT2	B3
QZT2	B4
VAN	B3
VAN	B4