

1 Q. Please describe Hydro's distribution line and pole inspections/treatment policies
2 and practices. In the response include who conducts the inspections treatments,
3 how the inspections and the resulting repairs are tracked, whether inspectors use
4 paper forms or handheld computers, whether Hydro has a formal policy stating the
5 number of inspections to be completed each year and the expected inspection and
6 repair (CM) completion rates, the level of management who monitors the
7 inspection and repair completions consistent with policy and schedules and the title
8 of the person held accountable for the completion of the inspection work
9 consistent with the policy and the schedule.

10

11

12 A. Overhead Distribution Lines (New)

13 As per PUB-NLH-175 Attachment 1, new major line extensions or replacements will
14 receive a visual inspection within two years of construction. The next scheduled
15 visual inspection will be ten years after the first inspection. Climbing inspections
16 may be required at the discretion of the supervisor (see PUB-NLH-175 Attachment 1
17 and PUB-NLH-175 Attachment 2).

18

19 Overhead Distribution Lines (Existing)

20 The frequency of line structure inspections for existing lines is set by the
21 Distribution Maintenance Committee, in consultation with Operations staff in each
22 region. Inspection frequencies typically range from five years to ten years,
23 depending on the overall age of the line, exposure to the elements (high wind
24 and/or salt conditions), and trouble history (see PUB-NLH-175 Attachment 1 and
25 PUB-NLH-175 Attachment 2).

26

1 Hydro does not have a wood pole treatment policy for distribution poles, but is
2 currently looking at whether a treatment program would offer any long term
3 benefits.

4
5 All pole inspections are performed by line crew members who currently use paper
6 forms to record information. Hydro is currently in the process of initiating a pilot
7 project using handheld computers that is scheduled to begin in September of this
8 year.

9
10 Once a pole line inspection is complete, the information is forwarded to office
11 services for input into our computerized work order system. Work orders are
12 initiated for any work that needs to be performed based on the comments from the
13 line crews. The information is also forwarded to the Asset Specialist – Distribution
14 for review and comments.

15
16 The inspection numbers are driven by the above mentioned criteria for new and
17 existing overhead distribution lines. A target of 90% is set for expected inspection
18 and repair completion rates.

19
20 There are three functions of asset management that ensure inspections are
21 identified, scheduled, executed and tracked. They are:

- 22
23 1. Long Term Asset Planning (LTAP) - the LTAP Manager is accountable for
24 developing the preventive maintenance program. Accountabilities include
25 setting/modifying inspection frequencies, determining/modifying
26 maintenance tactics and ensuring the preventative maintenance (PM)
27 program is set up in the computerized maintenance management system
28 (CMMS). The LTAP Manager also tracks any changes to the PM program.

1 2. Short Term Planning and Scheduling (STPS) - the STPS Supervisor ensures
2 the PM program is included on the annual work plan, revisions/additions to
3 PMs are entered into the CMMS, all activities have resources identified and
4 weekly work schedules are developed. The STPS Supervisor also tracks
5 progress of the annual work plan through monthly reports and annual work
6 plan review meetings.

7
8 3. Work Execution (WE) - the WE Manager is accountable for execution of the
9 PM program as identified in weekly schedules and annual work plans and to
10 report back to the STPS Group any deviation of actual work completed
11 versus planned work. The WE manager also ensures details of actual work
12 completed are recorded in the CMMS and that corrective maintenance work
13 orders are initiated for deficiencies found during PM inspections.

14
15 The Regional Manager is accountable for oversight and measurement of the STPS
16 and WE functions and to ensure recovery plans are in place when the actual work
17 completed deviates from the planned work. In addition, the Regional Manager is
18 accountable for reporting progress of the PM program to the General Manager and
19 status of any required recovery plans. The General Manager is ultimately
20 accountable for all facets of asset management and to be fully engaged in ensuring
21 recovery plans are in place and that performance measures are reported to the
22 Leadership Team.



DISTRIBUTION LINE MAINTENANCE MANUAL

TITLE: Transformer Structure / Line Structure Inspection	Inst. No. 020 Rev. No. 3 Page 1 of 1
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1.0 Introduction:

All distribution transformers (Pole top , Padmounts, Step-down) & associated structures will be inspected visually as determined by the System Maintenance Review and will receive a climbing inspection at the discretion of the supervisor. This includes Diesel Plant & Single Phase Power Transformers .

- 1.1** Line structures will be inspected visually as per the System Maintenance Review, however, new major line extensions or replacements will receive a visual inspection, within two years of construction. The next scheduled visual inspection will be 10 years after the 1st inspection. Climbing inspections may be required at the discretion of the supervisor.

2.0 Procedure:

Each transformer structure / line structure will be carefully inspected following the standard form # 120 and any additional instruction given by the Supervisor. Visual inspections may be aided by the use of binoculars

3.0 Checklist:

To complete the checklist refer to Standard Code Instructions.

APPROVED BY: Distribution Maintenance Committee	ISSUED DATE: 1990/12/10	REV. DATE: 2012/11/14
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Distribution System: _____
Line #: _____

Asset Information

Pole # _____ # of Anchors _____
Unique # _____ Aliant Attached _____ Strand ☐ Drop ☐
Pole Height _____ CATV Attached _____ Strand ☐ Drop ☐
Treatment _____ Trans # _____ kVA _____ Voltage _____
Wood Species _____ Sec. Wire (Type/Size) _____
Class _____ Sec. Leads (Type/Size) _____
Vintage _____ Geographic Location _____
Structure Type/s _____ Community/Highway _____

DMM INSTRUCTION # 20

Transformer Structure / Line Structure Inspection

☐ Climbing Inspection
☐ Visual Inspection

Also to be used for Recloser / Voltage Regulator / Sectionalizer Structure Inspections

Structure Condition (Check box if condition is OK, N/A - Not Applicable
or Circle box if condition is abnormal and comment)

Code	Item	Code	Item
01	<input type="checkbox"/> BRUSH A ___ B ___ C ___ D ___ E ___	31	<input type="checkbox"/> SECONDARY NEUT. TIED TO SYSTEM NEUT.
02	<input type="checkbox"/> PRIMARY CONDUCTOR	32	<input type="checkbox"/> SWITCH / DEVICE NUMBER
03	<input type="checkbox"/> INSULATOR	35	<input type="checkbox"/> TANK CONDITION A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/>
04	<input type="checkbox"/> INSULATOR TIES	36	<input type="checkbox"/> COND OF BANDS & RADS A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/>
05	<input type="checkbox"/> INSULATOR HARDWARE	38	<input type="checkbox"/> STREET LIGHT
06	<input type="checkbox"/> CROSSARM A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/>	39	<input type="checkbox"/> PLATFORM
07	<input type="checkbox"/> CORSSARM HARDWARE	40	<input type="checkbox"/> BUSHINGS
08	<input type="checkbox"/> HOT LINE CLAMP	44	<input type="checkbox"/> CONNECTIONS
09	<input type="checkbox"/> PRIMARY LEAD	46	<input type="checkbox"/> LOCK
10	<input type="checkbox"/> CUTOUTS	49	<input type="checkbox"/> DOOR
11	<input type="checkbox"/> NEUTRAL BRACKET	50	<input type="checkbox"/> WARNING SIGNS
13	<input type="checkbox"/> SECONDARY HARDWARE	51	<input type="checkbox"/> PROTECTIVE MECHANICAL BARRIERS
14	<input type="checkbox"/> SECONDARY TIES	53	<input type="checkbox"/> GROUNDING / BONDING - PAD MOUNT
15	<input type="checkbox"/> SECONDARY CONNECTIONS	54	<input type="checkbox"/> OIL LEAKS
16	<input type="checkbox"/> SERVICE DROPS	56	<input type="checkbox"/> LIGHTING ARRESTOR
19	<input type="checkbox"/> GUY WIRE	64	<input type="checkbox"/> TERMINATORS
20	<input type="checkbox"/> GUY WIRE BONDED	80	<input type="checkbox"/> STRUCTURE / UNIQUE NUMBER TAG
21	<input type="checkbox"/> GUY GUARD	81	<input type="checkbox"/> MOUNTINGS BOLTS
22	<input type="checkbox"/> ANCHORS	87	<input type="checkbox"/> CONCRETE PAD
23	<input type="checkbox"/> CRIB A ___ B ___ C ___	96	<input type="checkbox"/> GROUND WIRE TIED TO CASE GROUND
24	<input type="checkbox"/> POLE A ___ B ___ C ___	97	<input type="checkbox"/> GROUND WIRE TIED TO SYSTEM NEUTRAL
25	<input type="checkbox"/> SECONDARY LEADS	98	<input type="checkbox"/> NEUTRAL TIED TO H2
26	<input type="checkbox"/> SECONDARY WIRE	99	<input type="checkbox"/> H2 TIED TO X2 (DUAL BUSHINGS)
27	<input type="checkbox"/> GROUND WIRE	100	<input type="checkbox"/> X2 BONDED TO TANK
28	<input type="checkbox"/> GROUND WIRE MOULDING	101	<input type="checkbox"/> X2 BONDED TO NEUTRAL

Secondary Voltage ϕ -N _____ ϕ - ϕ _____
Secondary AMPS A ϕ _____ B- ϕ _____ C- ϕ _____ N _____

Code	Comments
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____

Inspector _____ Date _____
Supervisor _____ Date _____
W/O Assigned for Corrective Action. W/O # _____ Date _____