



**Inspection/Correction Committee
Final Report**

June 10, 2004

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INTRODUCTION

Oregon law requires every public utility to furnish “adequate and safe service at reasonable rates” and that any charges assessed in connection with providing that service be “reasonable and just.” (ORS 757.020) In order to keep costs in check for customers, it is important for service providers to make the best use of their resources. However, utility pole owners and users have experienced frustration at the rising costs of regulatory compliance manifested, in part, in the cost of multiple inspection programs.

Following passage of HB 2271 in the 1999 legislature and the ensuing formation of the Oregon Joint Use Association (OJUA), member companies began to recognize and discuss the possibility of the industry coming together to coordinate a plan for a statewide inspection program in which companies would share in inspection costs. The concept posed many questions, not the least of which was whether companies could trust each other to conduct the inspections and allocate costs fairly and equitably. OPUC staff indicated that if the industry was successful in creating a workable plan, such a plan could be submitted to the OPUC for possible adoption as an administrative rule.

The concept of a joint inspection program was further spurred during the 2003 legislative session when SB 784 was introduced by the Oregon Cable Telecommunications Association (OCTA) as a means of initiating policy discussions relating to recovery of certain costs for pole renters. The OJUA Executive Committee discussed the issues that had prompted SB 784, such as the need for a policy to resolve equity issues for pole users to recover costs for inspection report errors. The bill did not pass, but served to further the discussions regarding the possibility of joint inspections.

On April 9 of that same year, 2003 OJUA Chair Kuhlman announced the formation of a new committee to review compliance issues and the “NESC Inspection/Correction Committee” was formed. Kuhlman provided an overview of the purpose of the Committee: providing examples of different types of violations, including varying degrees of hazards and varying costs to repair, as well as such obstacles as difficulty in identification of pole and/or facility ownership. His intent was for the Committee to study and make recommendations on how companies could best manage their resources and work together to form action plans or standards to address both inspections and repairs.

COMMITTEE PROCESS AND STRUCTURE

The Committee was originally chaired by Mike Matney of Qwest and upon his retirement, those duties were assumed by Mark Oberle of EWEB. In order to manage the various tasks of the Committee and produce a work product in a timely manner, the Committee was divided into five subcommittees and assigned specific tasks. The tasks were identified as follows:

1. Develop standardized inspection forms for all three types of inspections including:
 - a. new construction
 - b. drive-by (safety)
 - c. detailed
2. Develop a statewide detailed inspection plan
3. Address prioritization of repairs and corrections
4. Address communication of inspection-correction information to the appropriate parties
5. Address allocation of correction and inspection costs

Each subcommittee included representative members of power, cable and telecommunications industries:

Subcommittee 1: Inspection Forms

Gary Lee, Charter Communications, Chair
Dennis Desmarais, Portland General Electric
Tamara Johnson, Springfield Utility Board
Gary Payne, Qwest

Subcommittee 4: Communications

Dennis Desmarais, PGE, Chair
Tamara Johnson, Springfield Utility Board
Reed Hjort, Comcast
Mark Beaudry, Beaver Creek Cooperative

Subcommittee 2: Detailed Inspection Plan

Roger Kuhlman, Salem Electric, Chair
Mark Oberle, EWEB
Reed Hjort, Comcast
Mark Beaudry, Beaver Creek Cooperative
Patti Lama, PGE

Subcommittee 5: Cost Allocation

Stan Cowles, Qwest, Chair
Mark Oberle, EWEB
Mike Wilson, Central Lincoln PUD
Jim Watkins, Charter Communications

Subcommittee 3: Prioritization of Repairs

Roger Kuhlman, Salem Electric, Chair
Greg Crampton, EWEB
Reed Hjort, Comcast
Tom FitzGerald, Qwest
Bill Kiggins, Clear Creek

Committee members felt that a one-year time frame for reporting back to the OJUA was realistic and reasonable. They also agreed to pass the task of recommending a statewide uniform pole numbering or pole identification process to the OJUA Standards Committee.

SUBCOMMITTEE REPORTS

Subcommittee 1: Inspection Forms

The Subcommittee was charged with creating a standardized inspection form in an effort to streamline the inspection process and promote better communication and coordination between joint pole entities.

Discussion

Currently, many different utilities produce inspection results that require the entity notified to perform a repair of some type. However, the results are so widely varied that it often takes a great deal of time to determine the violation, location, and other essential information.

The Subcommittee focused on creating a tool that would provide for ease of use in the field while remaining compatible with common applications currently in use. One of the challenges of developing a standardized form was that each company and each industry uses its own jargon, designation, and abbreviation. Not only, for example, do power company reports vary from company to company (with some companies using forms recommended or mandated by out-of-state corporate entities), but power, telecom, and cable companies are not always familiar with each other's equipment. Finding commonalities and producing a form that could be used across industry lines proved to be challenging.

Recommendation

The Subcommittee produced and distributed several drafts before adopting a final work product that encompasses all aspects of the different inspection regiments. That product, which is attached to this report, is currently being used in the field by Qwest and others with favorable results. The next step is to transfer the form to a PDA format for electronic use in the field. The Subcommittee hopes the form will be utilized by many groups when notifying others of inspection results.

Subcommittee 2: Detailed Inspection Plan

The Subcommittee was charged with developing a plan for statewide coordination of detailed inspection by facility operators.

Discussion

According to the National Electrical Safety Code 214 (A2), "All Lines and equipment shall be inspected at such intervals as experience has shown to be necessary." Most facility operators are using a 10-year cycle, with approximately 1/10th of their system being inspected annually. Cost savings could be realized if facility operators in the same area work together to perform joint inspections. Development of a statewide inspection plan would enable operators to plan ahead to develop budgets and allocations of resources to provide cost-effective results.

Some of the biggest challenges to development of this plan include developing a database of all operators and their service areas; determining facility ownership; developing a plan that would not cause any operator to be out of compliance with the NESC, OPUC, or contracts; and designing a plan that would have minimal financial impact to any operator. Addressing these challenges will take time and the plan may undergo significant changes before it can be put into effect.

Recommendation

As a starting point, the Subcommittee suggests a graphic information system database (GIS) be established utilizing electric utility certified service areas. The electric utilities would be asked to provide a map of their service area indicating the areas they plan to inspect each year. This map could then be made available to all facility operators and used as a tool in helping to determine their plans if they are interested in joint inspection. At some point in the future, all facility operators could be asked to provide their plan on a service area map that could be added as a map "layer." The Oregon Geospatial Enterprise Office (www.gis.state.or.us) may be the place to build and maintain this system.

Subcommittee 3: Prioritization of Repairs

The Subcommittee was charged with developing a plan for prioritizing and identifying timelines for the repair of NESC violations. This plan would be used by pole owners and pole users to develop “plans of correction.”

Discussion

All owners and users of poles in the State of Oregon must install and maintain their facilities in compliance with the National Electrical Safety Code. Due to the increased activity in joint use construction over the past several years, many facilities have been installed or modified and are currently not in compliance with the NESC.

Some have estimated as many as one-third to one-half of all facilities in the State are in violation of some part of the NESC. Based on the assumption that there are approximately 2 million poles in the state, as many as one million could be in violation. In spite of this, there have been very few (if any) recorded injuries to members of the public or utility workers as a result of these joint use violations.

One electric utility has estimated their costs at approximately \$158 per pole to correct simple violations. This estimate does not include any major work such as changing out poles. If by adding a factor for these major expenses, the cost to correct all electric utility violations in the state could easily exceed \$300,000,000. Assuming all of these corrections were made over a 10-year period, (\$30,000,000 per year) it would require a **19 percent** increase in distribution expenses for the electric utilities in Oregon (According to the “2002 Oregon Utility Statistics” published by the PUC the total distribution expenses for all electric utilities in Oregon was \$159,140,459 in 2002). **This increase would have a major impact on rates paid by electric utility customers.**

A plan must be developed to manage this expense to ensure facilities are safe and that rate payers are not adversely affected. The plan should require pole owners and users to correct NESC violations based on a prioritized process.

The Subcommittee has developed a priority classification for the NESC violations:

- A. High hazard requiring immediate response.
- B. Violation with potential hazard requiring correction no later than the following year.
- C. Violation that can **not** reasonably be expected to endanger life or property and can be corrected during next major activity (i.e. pole change out, or rebuild).

The following is list of example items that would fall into these categories:

- A. Broken Crossarm
Broken Pole
Clearance below 14 feet over public road
Tree in primary lines
Broken/missing guy
Exposed underground wires
Damaged anchor
- B. Items that don't fall into A or C
- C. Climbing space violation where pole is accessible by mechanical means.
Fire hydrant less than 3 feet from pole with approval of all affected parties.
Clearance between supply and communication on pole less than 40 inches but greater than 30 inches.
Clearance between communication lines less than 12 inches with approval of all effected parities.

All "C" items require the following action:

1. Adequate identification on pole to ensure workers are aware of violation. Use "Proceed With Caution" tag.
2. Records maintained by pole owner and users until correction is made.
3. All effected parties notified.
4. Correction defined and agreed upon by all effected parties
5. Correction completed before any major work is completed. Major work is defined as pole replacement, re-conductor, over lash, or a new pole tenant.

The Oregon PUC staff has expressed a concern about using this approach and specifically does not like the use of category "C". According to discussions with the staff, they feel that any item not corrected within the following year of discovery is not in compliance with NESC rules, creates an additional liability for both the utility and the PUC, creates a very expensive system to keep track of the violation through correction, and compromises worker safety.

The Subcommittee has looked at the PUC's staff concern and feels the suggested plan is adequate. Section 214 of the NESC describes the expectations for Inspection and Tests of Lines and Equipment. Section 4 of the code states: "*Any defects affecting compliance with this code revealed by inspection or tests, if not promptly corrected, shall be recorded; such records shall be maintained until the defects are corrected.*" Section 5 notes, "*Lines and equipment with recorded defects that could **reasonably be expected to endanger life or property** shall be promptly repaired, disconnected, or isolated.*"

The Subcommittee feels that items that fall into category “C” cannot reasonably be expected to endanger life or property and by following the suggested action plan, they will not “fall through the crack”; instead they will be identified and scheduled for future repair. With the use of databases and mapping systems, the cost to track these violations is minor. The issue of increased liability can be argued.

The Subcommittee would also like to point out that much progress has been made in the past few years regarding NESC compliance issues. The OJUA is a fairly new entity represented by a number of concerned utilities and we expect to continue to prevent, identify, and resolve NESC violations in the coming years.

Recommendations

The Subcommittee recommends the OJUA Board adopt the following recommendations:

NESC violations will be classified as A, B, or C.

Category A violations will be repaired as quickly as possible.

Category B violations will be repaired no later than end of the following year.

Category C violations will be repaired during the next major work. Major work would consist of pole replacement, re-conductor, over lash, or make-ready work that involves the violation. All category C violations will be identified in the field and on pole owner and users databases and the correction will be identified and agreed to by all affected parties. The pole owner will have the final authority of classification of the violation using the guidelines established by the OJUA.

Subcommittee 4: Communications

The Subcommittee was charged with making recommendations to enhance communication between pole owners and users regarding inspection-correction information.

Discussion

Facility owners are required to conduct periodic inspections of their plant per the National Electric Safety Code (NESC) and the Oregon Public Utility Commission Line Inspection Policy. During these inspections violations of the NESC are identified for the pole owners plant as well as the plant of the licensees on pole. Pole owners need to communicate the violations to the licensees so that the licensee can bring their plant into compliance. The licensees then need to inform the pole owners when the violations are corrected and occasionally request assistance from the pole owner and/or other licensees to correct the violations.

Pole owners and licensees also need to communicate with the OPUC when the violations are identified during OPUC inspections.

Problems and Recommended Solutions

Problem 1: Poles are often not tagged in the field; even when tagged, it still may not be clear as to who owns the pole.

Recommendation: Implement identification standards from the OJUA Standards Committee.

Problem 2: Pole owners and licensees number poles differently so it is often difficult for the licensees to locate the pole owner's pole without pole owner provided maps.

Recommendation: Encourage pole owners and licensees to maintain each other's pole numbers in their databases. Ultimately, it is the licensee's responsibility to be able to locate the poles based on the pole owner's numbers.

Problem 3: There are no standard codes for identifying NESC violations.

Recommendation: Adopt the codes developed by the OJUA Sub-committee on Inspection Forms. If pole owners are not willing to adopt the OJUA standard codes, they should provide a look-up table that allows their codes to be translated to the corresponding OJUA codes.

Problem 4: Once a licensee is at the pole, it is often difficult to locate the identified code violation. For instance, in urban settings there are often

numerous service drops off of each pole. Determining which drop has the problem is often difficult.

Recommendation: The codes developed by the Inspection Forms Subcommittee contain additional fields that should eliminate this problem.

Problem 5: Each utility has different tools it is comfortable with for data storage and retrieval.

Recommendation: All violation information should be provided electronically in a widely available format such as MS Excel or MS Access. The violating company needs to send the information back to the pole owner indicating one of the following:

1. Corrected - the violation has been corrected
2. Not _____ (licensee) - the licensee is not the violating party
3. No Violation - the licensee does not agree that this is a violation
4. Assistance Required - the licensee agrees with the violation but cannot correct it with out assistance from the pole owner or other licensee. For instance, cable needs power to raise the neutral to clear the violation.

Subcommittee 5: Cost Allocation

The Subcommittee was asked to establish guidelines for cost negotiation associated with the repairs of NESC violations on joint use poles.

In the process of these negotiations, three items are to be considered:

1. Create a safe working environment for line technicians and the public.
2. Maintain a cooperative relationship with joint tenants.
3. Maintain an efficient use of the right-of-way.

Three types of cost-associated elements have been established:

1. Facility Maintenance: The general repairs associated with pole ownership are to be the sole responsibility of the pole owner. Such items shall include but not be limited to:

- A. The replacement of rotten or otherwise deteriorated poles
- B. Broken vertical grounds
- C. Illegible pole tag replacements
- D. Items generally established to be part of the maintenance process

2. Individual Violations: The correction of violations that are associated with one individual tenant shall be incurred solely by that tenant with no cost incurred by other tenants or by the pole owner. These items shall include but not be limited to:

- A. Excessive sag in aerial service wires provided that the sag was not created by the load from another tenant or owner's attachments.
- B. Clearance from the ground
- C. Non-bonded or insulated down guys

3. Joint Violations: The costs associated with mutual violations shall be shared equally with all associated tenants. These items shall include but not be limited to:

- A. Improper clearance between facilities that have been established for a number of years so that no singular responsibility can be established.
- B. Obstructed climbing space that affects all tenants and no singular responsibility can be established.
- C. Replacement of poles where clearance has not been established or has changed due to the change in the surrounding grade, etc.

These elements represent an overall guideline for the allocations of costs. Because of the wide scope, the number of scenarios involved with aerial plan, and its ever changing make-up, it is difficult to pinpoint individual items. Cooperation between pole owners and tenants is a necessary part of the equation when deciding these costs.

CONCLUSION

The OJUA Inspection-Correction Committee completed its tasks in May 2004 and is pleased to submit this report to the OJUA Board of Directors for its consideration. The Committee is confident that the OJUA will take the necessary steps needed to implement the recommendations contained herein.

ATTACHMENT A

Inspection/Correction Form and Supporting Documents



Inspection Type

Pre Constructio
 Post Constructic
 Quality Contr
 Detailec
 Safet
 NJUNS Number: _____

Inspection Company: _____ Inspection Date: _____

Inspector Last: _____ First: _____ Inspection start time: _____

Base Pole Info

| | | | | | | | | | | | |
|--------------------------------------|--------|--------------------------------------|-----|--------|--------------------------------------|-----|--------|-------------------------------------|--------|--------|-------|
| <input type="checkbox"/> Telco Owned | | <input type="checkbox"/> Power Owned | | | <input type="checkbox"/> Other Owned | | | <input type="checkbox"/> CATV Owned | | Wire | Stree |
| U.C. | Number | U.C. | Map | Number | U.C. | Map | Number | U.C. | Number | Center | Cod |
| | | | | | | | | | | | |

Address: _____ City: _____ Zip Code: _____

Height: _____ Class: _____ Year Set: _____ Material: _____ Latitude: _____ Longitude: _____

Access Issues: _____

Not On Ma
 Not in fiel
 Double Pol
 Transfer
 U.C.: _____ U.C.: _____ U.C.: _____ U.C.: _____

Anchors

| U.C. | Rod Size | Eye Type | U.C. | Rod Size | Eye Type | U.C. | Rod Size | Eye Type | U.C. | Rod Size | Eye Ty |
|------|----------|----------|------|----------|----------|------|----------|----------|------|----------|--------|
| | | | | | | | | | | | |

Guys

| U.C. | Size | Type | Height | Lead | Insulated | Bonded | Comments |
|------|------|------|--------|------|-----------|--------|----------|
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Attachments

| U.C. | Type | Height | Comments | U.C. | Type | Height | Comments |
|------|------|--------|----------|------|------|--------|----------|
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Violations

| U.C. | Dev. | Equip. 1 | Equip. 2 | Toward | Action Needed | SEV. | Comments |
|------|------|----------|----------|--------|---------------|------|----------|
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Comments

Request field meet

Powe
 Telc
 CATV
 Othe
 Comments: _____
 Inspection end time: _____

Inspection Form Abbreviation Tables

| Base Pole Info (Material) | Code |
|------------------------------|------|
| Douglas fir | DF |
| Jack Pine | JP |
| Lodgepole Pine | LP |
| Red Pine | NP |
| Southern Pine | SP |
| Southern Yellow Pine | SYP |
| Western Red Cedar | WC |
| Western Larch | WL |
| Ponderosa Pine | WP |
| Concrete | CC |
| Fiberglass | FG |
| Laminated | LM |
| Metal/Steel | MS |

| Attachment Type (Type) | Code |
|------------------------------------|------|
| Communication drop | COMD |
| Communication equipment (other) | CEO |
| Communication fiber-optic | COFO |
| Communication main line | COML |
| Communication messenger | COMM |
| Conduit | CON |
| Conduit-metal | MCON |
| Cross-arm | XARM |
| Down guy | GUY |
| Load coil | LOAD |
| Pedestal | PED |
| Platform | PF |
| Pole to pole guy | PPG |
| Power meter | PM |
| Power neutral | NEUT |

| | |
|----------------------------|------|
| Power primary | PRI |
| Power secondary | SEC |
| Power service drop | DROP |
| Power service support wire | PSSW |
| Power street light | SLT |
| Power supply | PS |
| Power switch | SWCH |
| Power transformer | XFMR |
| Private party attachment | PVT |
| Repeater | REP |
| Riser | RIS |
| Signs | SIGN |
| Stand off brackets | SOB |
| Supply fiber-optic | SPFO |
| Terminal | TRM |
| X-Box | XB |

| Deviation Code (DEV.) | Code |
|-------------------------------|------|
| Abandoned | AB |
| Building | BD |
| Building/Horizontal clearance | BH |
| Building/Vertical clearance | BV |
| Damaged/Broken | DB |
| Mid-span/Horizontal clearance | MH |
| Mid-span/Vertical clearance | MV |
| Missing | MS |
| Pole Leaning | PL |
| Pole/Climbing/working space | PC |
| Pole/Grounding | PG |
| Pole/Horizontal clearance | PH |
| Pole/Marking | PM |
| Pole/Riser | PR |
| Pole/Structure | PS |
| Pole/Vertical clearance | PV |
| Underground | U |

| Equipment (EQUIP. 1 & 2) | Code |
|---------------------------------|------|
| Anchor | ANC |
| Anchor (auxiliary) | AANC |
| Bridge | BR |
| Communication drop | COMD |
| Communication equipment (other) | CEO |
| Communication fiber-optic | COFO |
| Communication main line | COML |
| Communication messenger | COMM |
| Conduit | CON |
| Conduit-metal | MCON |
| Cross-arm | XARM |
| Curb | CURB |
| Down guy | GUY |
| Driveable surface | DRSR |
| Fire hydrant | HYD |
| Ground rod | GRND |
| Guy marker | GM |
| Insulator | INS |
| Lashing wire | LWR |

| | |
|--------------------|------|
| Load coil | LOAD |
| MGN | MGN |
| Padmount equipment | PAD |
| Pedestal | PED |
| Pedestrian surface | PEDS |
| Platform | PF |
| Pole | POLE |
| Pole step | STEP |
| Pole to pole guy | PPG |
| Power bracket | PBRK |
| Power capacitor | PCAP |
| Power Drip-loop | PDLP |
| Power jumpers | JUMP |
| Power mast | PMST |
| Power meter | PMR |
| Power neutral | NEUT |
| Power primary | PRI |
| Power secondary | SEC |
| Power service drop | PDRP |

| Equipment (EQUIP. 1 & 2) cont'd | Code |
|--|-------------|
| Power service support wire | PSSW |
| Power street light | SLT |
| Power supply | PS |
| Power switch | SWCH |
| Power transformer | XFMR |
| Private party attachment | PVT |
| Railroad | RR |
| Repeater | REP |
| Riser | RIS |
| Roof | ROOF |
| Sidewalk fixture | SWF |

| | |
|----------------------|------|
| Signs | SIGN |
| Stand off brackets | SOB |
| Stencils | STN |
| Supply fiber-optic | SPFO |
| Terminal | TRM |
| Trees/Vegetation | TREE |
| Unaccessible surface | UNSR |
| Unusual support | UNSP |
| Water surface | WSR |
| Weather head | WH |
| Window | WIN |
| X-Box | XB |

| Action Needed |
|----------------------|
| Attach |
| Attach mid-span |
| Ground/Bond |
| Guard |
| Lengthen |
| Lower |
| Lower CATV |
| Lower Fiber |
| Lower Neutral |
| Lower Other |
| Lower Secondary |
| Lower Telco |
| Move 1st attachment |
| Move mid-span |
| Place |
| Place California top |
| Place clearance pole |

| |
|----------------------|
| Place mid-set pole |
| Place split duct |
| Place taller pole |
| Raise |
| Raise CATV |
| Raise fiber |
| Raise neutral |
| Raise other |
| Raise secondary |
| Raise Telco |
| Refer to Engineering |
| Relocate/Move |
| Remove |
| Repair |
| Replace |
| Shorten |
| Tighten |
| Transfer |
| Trim |

Severity Codes

Severity Code A

Significant hazards requiring immediate response.

Examples are:

- Broken crossarms
- Broken poles
- Lines less than 14' over public roads
- Trees in primary power lines
- Broken or missing guy wires
- Exposed underground wires
- Damaged anchors

Severity Code B

Violations that do not require immediate attention but do need to be corrected no later than the following year. This includes violations not listed here as Severity Code A or C.

Severity Code C

Violations that do not endanger life or property and can be corrected during the next major activity at that location, such as pole change out or system rebuild.

Examples include:

- Fire hydrant less than 3' from pole with approval from all affected parties
- Climbing space violations where the pole is accessible by mechanical means
- Clearance between power and comm. is less than 40" but greater than 30" at the pole
- Clearance between comm. facilities at the pole is less than 12"

Inspection Form Utility Codes

| Utility Code | Description |
|---------------------|---|
| ATTEUG | COMCAST - NESC Violations Only - Lane County |
| ATTLNS | AT&T LOCAL SERVICES - AT&T LOCAL SERVICES |
| ATTSLM | COMCAST - Yamhill County (Salem and McMinville) |
| BANDON | CITY OF BANDON - ELECTRIC DEPT. - Bandon |
| BCC | BEND CABLE COMMUNICATIONS - Bend |
| BCT001 | BEAVER CREEK COOPERATIVE TELEPHONE - Beaver Creek |
| BLACK | BLACKSTONE CABLE - BLACKSTONE CABLE |
| BLEC | BLACHLY-LANE ELECTRIC COOPERATIVE - BLACHLY-LANE ELECTRIC COOP |
| BMTV | BLUE MOUNTAIN TV CABLE CO - BLUE MOUNTAIN TV CABLE CO |
| BRCI | BOUNDARY RIDER COMMUNICATIONS - BOUNDARY RIDER COMMUNICATIONS |
| CANBYT | Canby Telephone Association - Clackamas County |
| CAS-OR | C.A. SIMON, INC. - C.A. SIMON, INC. |
| CASC | CASCADE UTILITIES - CASCADE UTILITIES |
| CCCS | CHARTER COMMUNICATIONS - CHARTER COMMUNICATIONS |
| CCEC | COOS CURRY ELECTRIC COOPERATIVE, INC. - Port Orford |
| CCEC1 | COOS CURRY ELECTRIC COOPERATIVE, INC. - COOS CURRY ELECTRIC COOP, INC. |
| CCECA | COOS CURRY ELECTRIC COOPERATIVE, INC. - COOS CURRY ELECTRIC COOP. |
| CCI | COASTCOM, INC. - COASTCOM, INC. |
| CCMTC | CLEAR CREEK MUTUAL TELEPHONE CO. - CLEAR CREEK MUTUAL TELEPHONE C |
| CCPVM | CRESTVIEW CABLE COMMUNICATIONS - PRINEVILLE, CROOKED RIVER RANCH, CULVER, METOLIUS, MADRAS, LA PINE, WALLOWA, LOSTINE, ENTERPRISE, JOSEPH AND WALLOWA LAKE. |
| CECRM | CENTRAL ELECTRIC COOPERATIVE - CENTRAL ELECTRIC COOPERATIVE |
| CH2MEN | CH2M HILL - CH2M HILL |
| CHARLG | CHARTER COMMUNICATIONS - CHARTER COMMUNICATIONS |
| CHART | CHARTER COMMUNICATIONS - Lane County (Florence, Mapleton and Dunes City); Douglas County (Gardiner, Reedsport, Winchester Bay and Schofield); Coos County (Lakeside, Hauser, North Bend, Coos Bay, Coquille, Myrtle Point, Powers and Bandon); Curry County (Langlois and Port Orford). |
| CHARTE | CHARTER COMMUNICATIONS - CHARTER COMMUNICATIONS |
| CHMED | CHARTER COMMUNICATIONS - Medford |
| CHRTL | CHARTER COMMUNICATIONS - CHARTER COMMUNICATIONS |
| CHTRGP | CHARTER COMMUNICATIONS - CHARTER COMMUNICATIONS |
| CHTRKF | CHARTER COMMUNICATIONS - CHARTER COMMUNICATIONS |
| CHTRRB | CHARTER COMMUNICATIONS - Roseburg |
| CHTRTD | CHARTER COMMUNICATIONS - The Dalles |
| CITZOR | CITIZENS COMMUNICATIONS - Myrtle Creek |

| | |
|--------|---|
| CLC | CENTRAL LINCOLN'S PEOPLE'S UTILITY DIST. - CENTRAL LINCOLN PUD |
| CLPUDA | CENTRAL LINCOLN PEOPLE'S UTILITY DISTRIC - CENTRAL LINCOLN PEOPLE'S UTILI |
| CLPUDF | CENTRAL LINCOLN PEOPLES UTILITY DISTRICT - CENTRAL LINCOLN PEOPLES UTILI |
| CLPUDN | CENTRAL LINCOLN PEOPLES UTILITY DISTRICT - CENTRAL LINCOLN PEOPLES UTILI |
| CLPUDR | CENTRAL LINCOLN PEOPLES UTILITY DISTRICT - CENTRAL LINCOLN PEOPLES UTILI |
| CME720 | TCI CABLEVISION OF OHIO - TCI CABLE OF OHIO (PARAGON) |
| CME721 | TCI CABLEVISION OF OHIO - TCI CABLE OF OHIO (PARAGON) |
| CNTRY | COUNTRY CABLEVISION - COUNTRY CABLEVISION |
| COMEUG | Comcast - Engineering and Construction - Pole Transfers - Lane County |
| CPIOPR | CONSUMERS POWER INC. - CONSUMERS POWER INC. |
| CPIPLE | CONSUMERS POWER, INC - CONSUMERS POWER - PERMITS |
| CPUD | CLATSKANIE PEOPLE'S UTILITY DISTRICT - CLATSKANIE PEOPLE'S UTILITY |
| CRPUD | COLUMBIA RIVER PUD - Deer Island |
| CTEAST | CENTURYTEL - Douglas, Lane, Linn and Wasco Counties |
| CTWEST | CENTURYTEL - Clatsop and Columbia Counties |
| CTYCOR | CITY OF CORVALLIS - PUBLIC WORKS DEPT. - Corvallis |
| CVO-PW | CITY OF CORVALLIS - Public Works |
| DALLAS | CHARTER CABLE - CHARTER CABLE |
| DEAINC | DAVID EVANS & ASSOCIATES INC. - DAVID EVANS & ASSOC., INC. |
| DGLSOR | DOUGLAS ELECTRIC COOPERATIVE - DOUGLAS ELECTRIC COOPERATIVE |
| DKSAOR | DKS ASSOCIATES - Jackson County (Medford) |
| DSIOR | DOUGLAS SERVICES, INC. - DOUGLAS SERVICES, INC. |
| EBSORE | ENRON BROADBAND SERVICES - ENRON BROADBAND SERVICES |
| ELGNTV | ELGIN TV ASSOCIATION - ELGIN TV ASSOCIATION |
| ELIPT | ELECTRIC LIGHTWAVE - Pole Transfers - All pole activity in Portland, Salem, Eugene, & Clark County, WA area's; includes Clackamas, Multnomah, Washington, Marion & Lane counties in Oregon and Clark county in Washington |
| EOT | EASTERN OREGON TELECOM - EASTERN OREGON TELECOM |
| EPUD | Emerald Peoples Utility District - EMERALD PEOPLES UTILITY DISTRICT - Eugene |
| EWBPA | Eugene Water and Electric Board - EUGENE WATER AND ELECTRIC BOARD - Eugene (Lane County) |
| EWBPT | Eugene Water and Electric Board - EUGENE WATER AND ELECTRIC BOARD - Eugene (Lane County) |
| FALCON | CHARTER COMMUNICATIONS - Curry County from California state line north to northern end of Nesika Beach (end of Ophir Rd) |
| FKFALL | FALCON CABLE TV - FALCON CABLE TV |
| GOCTV | GLIDE CABLEVISION - GLIDE CABLEVISION |
| GTPOLE | Verizon - Metro Area |
| HILLOR | CITY OF HILLSBORO - CITY OF HILLSBORO |

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| HRECOR | Hood River Electric Cooperative - HOOD RIVER ELECTRIC COOPERATIVE - Hood River County |
| HUNTER | HUNTER COMMUNICATIONS - HUNTER COMMUNICATIONS |
| INDEP | CITY OF INDEPENDENCE - CITY OF INDEPENDENCE |
| KFCHTR | CHARTER COMMUNICATIONS - CHARTER COMMUNICATIONS |
| LEBSCH | LEBANON COMMUNITY SCHOOLS - LEBANON COMMUNITY SCHOOLS |
| LEC | Lane Electric Cooperative - LANE ELECTRIC COOPERATIVE - Eugene |
| LKCHRT | CHARTER COMMUNICATIONS - CHARTER COMMUNICATIONS |
| MCMWL | McMinnville Water and Light - McMinnville |
| MCN002 | MOLALLA CABLENET CORPORATION - CABLENET CORPORATION : MOLALLA |
| MDM | MILLENNIUM DIGITAL MEDIA - MILLENNIUM DIGITAL MEDIA |
| MFCLP | MILTON-FREEWATER CITY LIGHT & POWER - MILTON-FREEWATER P&L |
| MFL&P | CITY OF MILTON-FREEWATER POWER & LIGHT - CITY OF MILTON-FREEWATER POWER |
| MONROE | MONROE TELEPHONE / CATV - MONROE TELEPHONE / CATV |
| MORDEV | Morrow Development Corp. - MORROW DEVELOPMENT CORP. |
| MP&L | CITY OF MONMOUTH POWER & LIGHT - CITY OF MONMOUTH POWER & LIGHT |
| MTC001 | MOLALLA TELEPHONE COMPANY - MOLALLA |
| MTCATV | MONROE TELEPHONE / CATV - MONROE TELEPHONE / CATV |
| NHLMOR | NEHALEM TEL & TEL - NEHALEM TEL & TEL |
| NOA-OR | NORTHWEST OPEN ACCESS NETWORK OREGON - NORTHWEST OPEN ACCESS NETWORK |
| NWCPUD | NORTHERN WASCO COUNTY PUD - NORTHERN WASCO COUNTY PUD |
| NWN | NW NATURAL - NW NATURAL |
| NWT | NORTH WILLAMETTE TELECOM - NORTH WILLAMETTE TELECO: CANBY |
| ORCA | ORCA Communications - ORCA COMMUNICATIONS - Coos Bay and North Bend (PPL and Verizon facilities only) |
| ORCANB | ORCA COMMUNICATIONS - ORCA COMMUNICATIONS |
| OREGON | Comcast - Master Code for OR & WA - COMCAST - Master Code for Oregon and Washington |
| OTC | OREGON TELEPHONE CORPORATION - OREGON TELEPHONE CORPORATION |
| OTECBK | OREGON TRAIL ELECTRIC CONS. COOPERATIVE - OREGON TRAIL ELECTRIC CONS. CO |
| OTECBU | OREGON TRAIL ELECTRIC CONS. COOPERATIVE - OREGON TRAIL ELECTRIC CONS. CO |
| OTECJD | OREGON TRAIL ELECTRIC CONS. COOPERATIVE - OREGON TRAIL ELECTRIC CONS. CO |
| OTECLG | OREGON TRAIL ELECTRIC CONS. COOPERATIVE - OREGON TRAIL ELECTRIC CONS. CO |
| PCIEU | PRIMELINE CONSTRUCTION - PRIMELINE CONSTRUCTION |
| PCINW | PREFERRED CONNECTIONS INC., NW - PREFERRED CONNECTIONS INC., NW |
| PDXSIG | CITY OF PORTLAND TRANSPORTATION DEPT. - Portland within |

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| | Multnomah County. City of Portland traffic signal circuits. |
| PEOP | PEOPLE'S TELEPHONE COMPANY - PEOPLE'S TELEPHONE COMPANY |
| PGB03 | Portland General Broadband - |
| PGEPR | PORTLAND GENERAL ELECTRIC - PORTLAND GENERAL EL: BEAVERTON |
| PGEPT | PORTLAND GENERAL ELECTRIC - PORTLAND GENERAL EL: BEAVERTON |
| PP143 | PACIFICORP - Pole Transfers - Portland |
| PPL | PACIFICORP - PT/PA All Regions Oregon and Washington |
| PPLALB | PACIFICORP - Albany |
| PPLAST | PACIFICORP - Clatsop County |
| PPLBND | PACIFICORP - Deschutes County |
| PPLCBY | PACIFICORP - Coos Bay |
| PPLCOR | PACIFICORP - Corvallis |
| PPLDAL | PACIFICORP - Dallas |
| PPLENT | PACIFIC POWER - PACIFIC POWER |
| PPLGPS | PACIFICORP - Grants Pass |
| PPLHRV | PACIFICORP - Hood River |
| PPLKLM | PACIFICORP - Klamath Falls |
| PPLLEB | PACIFICORP - Lebanon |
| PPLLIN | PACIFICORP - Lincoln City |
| PPLMAD | PACIFICORP - Madras |
| PPLMED | PACIFICORP - Medford |
| PPLPEN | PACIFICORP - Umatilla County |
| PPLPRI | PACIFICORP - Prineville |
| PPLROS | PACIFICORP - Roseburg |
| PPLSTA | PACIFICORP - Stayton |
| PTC | PIONEER TELEPHONE COOPERATIVE - Asea, Bellfountain, Blodgett, Chitwood, Deadwood, Harlan, Horton, Lobster Valley, Philomath, South Beach, Summit, Tidewater, Triangle Lake, Waldport, and Yachats |
| Q-LIFE | Q-Life Network - Q-LIFE NETWORK - Wasco County (The Dalles) |
| QCOR | QUANTUM COMMUNICATIONS - QUANTUM COMMUNICATIONS |
| QINSOR | QWEST - INSPECTORS - QWEST - NESC INSPECTORS |
| QLINE2 | Qwest - Portland Construction - This is a non-published membercode for Qwest Construction in the Portland Metro Area including, including Oregon City, Milwaukie, Lake Oswego, Metzger, West Linn, Rainier, St. Helens and Burlington. |
| QLINE4 | Qwest - North Coast Construction - This is a non-published membercode for Qwest Construction in the North Oregon Coast area including, including towns of Astoria, Warrenton, Westport, Cannon Beach, Gearhardt and Seaside |
| QLINE5 | Qwest - Central Oregon Construction - QWEST - Central Oregon Construction (Non-pub) |
| QLINE6 | Qwest - Eastern Oregon Construction - QWEST - Eastern Oregon Construction (Non-pub) |
| QOR1 | QWEST - Portland - OSP Engineering |

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| RAINER | USA MEDIA - USA MEDIA |
| RCNORG | RCN - RCN |
| RTIOR | ROOME TELECOMMUNICATIONS INC - Halsey |
| SCTC | STAYTON COOPERATIVE TELEPHONE - STAYTON COOPERATIVE TELEPHONE |
| SCVI | SCIO CABLEVISION INC. - SCIO CABLEVISION INC. |
| SE | SALEM ELECTRIC - OREGON - SALEM ELECTRIC - OREGON |
| SMTA | SCIO MUTUAL TELEPHONE ASSN. - SCIO MUTUAL TELEPHONE ASSN. |
| SPNTDP | SPRINT - SPRINT |
| SPNTGE | SPRINT - SPRINT |
| SPNTGW | SPRINT - SPRINT |
| SPNTJS | SPRINT - The Dalles, Arlington, Grass Valley, Moro, Rufus, Wasco, Hood River, Mosier, Odell, Cascade Locks, Parkdale |
| SPNTKM | SPRINT - White City, Shady Cove, Prospect, Damond Lake, Eagle Point, Sheridan, Willamina, Grand Ronde, Carlton, Beaver, Cloverdale, Pacific City, Tillamook, Bay City, Garibaldi, Rockaway, Lincoln City |
| SPNTLC | SPRINT - SPRINT |
| SPNTSH | SPRINT - SPRINT |
| SPNTTL | SPRINT - SPRINT-OR |
| SPNTWC | SPRINT - SPRINT |
| SPNTYK | SPRINT - SPRINT |
| SS417 | PACIFICORP - Pole Attachments - Portland |
| SUB | SPRINGFIELD UTLITY BOARD - Springfield City Limits |
| TCIJO | TCI CABLE - TCI CABLE: MILWAUKIE |
| TCINBG | TCI CABLE - MCMINNVILLE - TCI CABLE - MCMINNVILLE |
| TCIORE | Comcast - COMCAST |
| TCIPA | TCI CABLEVISION OF OREGON, INC. (PA) - TCI CABLEVISION OF O: PORTLAND |
| TCIPT | TCI CABLEVISION OF OREGON, INC. - TCI CABLEVISION OF O: PORTLAND |
| TCISLM | TCI CABLE - TCI CABLE: SALEM |
| TCISTH | TCI - CABLEVISION - TCI - CABLEVISION |
| TPUDPA | TILLAMOOK PEOPLE'S UTILITY DISTRICT - TILLAMOOK PEOPLES UTILITY DIST |
| TPUDPT | TILLAMOOK PEOPLE'S UTILITY DISTRICT - TILLAMOOK PEOPLES UTILITY DIST |
| TWTCOR | TIME WARNER TELECOM - Clackamas, Multnomah, and Washington Counties |
| UEC | UMATILLA ELECTRIC COOPERATIVE - UMATILLA ELECTRIC COOPERATIVE |
| UPCOR | NJUNS, Inc. - NJUNS, INC. - NJUNS Oregon testing and troubleshooting code |
| USWBND | Qwest - Central Oregon Engineering - QWEST - Central Oregon Engineering |
| USWEUG | QWEST - QWEST |
| USWME | USWEST - MEDFORD - USWEST - MEDFORD |
| USWMED | QWEST - MEDFORD - |

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| USWOR2 | Qwest - Portland Engineering - Portland Metro area, including Oregon City, Milwaukie, Lake Oswego, Metzger, West Linn, Rainier, St. Helens and Burlington. |
| USWOR3 | QWEST COMMUNICATIONS - QWEST COMMUNICATIONS: SALEM AND THE NORTH OREGON COAST TOWNS OF CANNON BEACH, ARCH CAPE, SEASIDE, GEARHARDT, WARRENTON, ASTORIA AND WESTPORT. |
| USWOR4 | Qwest - Eastern Oregon Engineering - QWEST - Eastern Oregon Engineering |
| UVISTA | UVISION LLC - UVISION LLC |
| VZCB | VERIZON - Coos Bay |
| VZLG | VERIZON COMMUNICATIONS - La Grande |
| WANTEL | WANTEL, INC. - WANTEL, INC. |
| WASHCO | COLUMBIA CABLE - COLUMBIA CABLE: BEAVERTON |
| WAVE | ELECTRIC LIGHTWAVE - ELECTRIC LIGHTWAVE: OR |