CenterPoint Energy Pole Attachment Application and Overlash Notification Requirements

All pole attachment proposals and overlash notifications shall be submitted to CenterPoint Energy through SPANS™ (Spatially-enabled Permitting and Notification System). Only companies with a valid CenterPoint Energy Wireline Attachment Agreement may submit attachment proposals or overlash notifications. All submitted proposals or notifications must indicate whether the proposal is for One Touch Make Ready (OTMR), wireline (non-OTMR), wireless, or overlash.

Direct all questions concerning these requirements to: INPoleAttachments@CenterPointEnergy.com.

For Centerpoint to consider an OTMR application complete, it must meet the following requirements:

- Application shall include a route map in Portable Document Format (PDF).
- Application shall include type and nature of proposed attachment (e.g. ¼ strand and 48 ct fiber).
- All poles included in application shall be identified by a CenterPoint Energy pole number. If pole number is absent, pole must be identified with latitude and longitude coordinates to a minimum of five decimal places.
- Application shall include a Field Survey
- Application shall include a recent digital photograph of each pole. The date of the photograph shall be within 30-days of the application submittal date. Photograph shall clearly show existing attachments, guying, and attached equipment. Each photograph shall be identified such that it can be paired with the associated pole in the route map.
- Application shall include pole height and class for each pole. Pole height and class shall be obtained from the pole brand. In situations where the pole brand is not legible, a pole's measured height and ground line circumference shall be used in place of the information normally found on the brand.
- Application shall include all span lengths and associated line angles for all attachments.
- Application shall include complete electrical and communication equipment data including type, size and orientation.
- Application shall include type, height, owner, clearance and size of all electrical and communication attachments.
- A pole load analysis (PLA) shall be included in the application for each pole that satisfies one or more of the following conditions:
    - Junction poles
    - Dead-end poles
    - Angle change poles
    - Poles with two or more attachments
    - One attachment with at least one overlashed cable
    - Although the scenarios noted above will cover most conditions requiring a pole load analysis, CenterPoint Energy cannot anticipate every possible situation requiring

additional analysis and therefore, reserves the right to require a pole load analysis on any pole.

For Centerpoint Indiana to consider a non-OTMR or traditional pole attachment application complete, it must meet the following requirements:

- Application shall include a route map in Portable Document Format (PDF).
- Application shall include type and nature of proposed attachment (e.g. ¼ strand and 48 ct fiber).
- All poles included in application shall be identified by a CenterPoint Energy pole number. If pole number is absent, pole must be identified with latitude and longitude coordinates to a minimum of five decimal places.

Pole attachment applications that do not satisfy the aforementioned requirements shall be rejected.

For Centerpoint to consider an overlash notification complete, it shall include the following:

- Note that CenterPoint Energy defines overlash(ing) as a specific method of attaching multiple communications cables on a single supporting strand as further described in the FCC's orders. CenterPoint Energy does not consider strand mounted wireless equipment as overlashing. Furthermore, CenterPoint Energy does not allow strand mounted antennas or equipment on its facilities.
- Notification shall include a route map in Portable Document Format (PDF).
- Notification shall include type and nature of overlash (e.g. ¼ strand and 48 ct fiber).
- All poles affected by overlashing shall be identified by a Centerpoint pole number. If pole number is absent, pole must be identified with latitude and longitude coordinates to a minimum of five decimal places.
- Notification shall include a recent digital photograph of each pole affected by overlashing. The date of the photograph shall be within 30-days of the notification submittal date. Photograph shall clearly show existing attachments, guying, and attached equipment. Each photograph shall be identified such that it can be paired with the associated pole in the route map.

All Pole Load Analyses (PLA) shall meet the following requirements:

- PLAs shall use the following strength requirements:
  - NESC Grade B construction
  - NESC Heavy Ice and Wind Loading district requirements
- PLAs shall set electrical wire tensions at 50% of rated breaking strength to satisfy NESC Heavy Loading District requirements.

- If lower tension is deemed necessary, PLA shall include an analysis to determine sag and maximum design tension using Southwire's SAG10 program.
- Total usage of pole strength based on available ground line moment capacity of the pole shall be less than 100%. If the load on a pole exceeds 100% of a its rated strength, the pole shall be replaced with a larger pole that shall not be loaded greater than 100% of its rated strength.
- Pole setting depth for wood poles shall be based upon Table 1.
- Pole setting depth for steel poles shall be based upon Table 2.
- PLA shall include, at a minimum, guy wire diameter, anchor location, and orientation. CenterPoint Energy currently uses 8M, 16M and 32M downguy assemblies. Guying load data shall be based upon Table 3 and Table 4.
- PLA shall include recommendations to remedy pole issues.
- PLA shall be conducted using industry accepted software that is current to the latest available revision. CenterPoint Energy recognizes Osmose's O-Calc Pro and SPIDA's SPIDA CALC as acceptable analysis programs.
- Any PLA shall be prepared at the direction of a licensed professional engineer (PE) and must conform to CenterPoint Energy approved methodology. CenterPoint Energy shall accept and rely on the documentation submitted by the licensee, but CenterPoint Energy reserves the right to conduct its own PLA in place of the one supplied in the application. All costs for such engineering and evaluation shall be paid by the licensee.

Table 1 Setting Depths for Wood Pole Directly Embedded in Soil

Basic Soil Class*	Good		Average**		Poor		
Pole Length (ft)	Class 3 or Smaller Poles	Class 2 or Class 1 Poles	Class 3 or Smaller Poles	Class 2 or Class 1 Poles	Class 5 or Smaller Poles	Class 4 or Class 3 Poles	Class 2 or Class 1 Poles
30	5.5	6.0	6.5	7.5	7.0	7.5	8.5
35	6.0	6.5	7.0	7.5	7.5	8.0	9.0
40	6.0	6.5	7.0	8.0	7.5	8.5	9.5
45	6.5	7.0	7.5	8.0	8.0	9.0	10.0
50	7.0	7.5	7.5	8.5	8.0	9.0	10.0
55	7.5	7.5	8.0	8.5	8.5	9.5	10.5
60	8.0	8.0	8.0	9.0	8.5	9.5	10.5
65	8.5	8.5	8.5	9.0	9.0	10.0	11.0
70	9.0	9.0	9.0	9.5	9.0	10.0	11.0

*Source for soil classes: USDA National Engineering Handbook, Part 654, Technical Supplement 14A—Soil Properties and Special Geotechnical Problems Related to Stream Stabilization Projects.

** CenterPoint Energy uses average soil class in most situations. Use of good or poor soil class in a PLA will required an accompanying soil study or approval by CenterPoint Energy.

Table 2 Steel Pole Equivalents

Steel Pole Length (feet)	Wood Class Equivalent
65	H3
70	H3
75	H3
80	H3
85	H3
90	H3
95	H3

Steel poles are embedded to a depth of 10% of total pole length plus two feet. This applies to 65' through 95' poles.

Table 3 Guy Strand Strength Chart

NESC Wire Tension Load Factor = 1.65; Strength Factor = 0.9

Strand Material	Ultimate Strength	Maximum Allowable Strain (Grade B=54.5%)
8M Alumoweld	8,000	4,360
12.5M Alumoweld	12,500	6,813
16M Alumoweld	16,000	8,720
1/2" EHS Galv	26,900	14,661

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Table 4 Anchor Holding Strength Table

Anchor Type	Area (sq in)	Hole Size (in)	Rod Diameter (in)	Ultimate Soil / Anchor / Anchor Rod Holding Strength (lbs)			
				Class 4	Class 5	Class 6	Class 7
Expanding	135	8	5/8	16,000	16,000	15,000	10,000
Expanding	200	10	3/4	23,000	21,000	16,500	12,000
Pole Key	276	NA	NA	9,500	7,400	5,800	NL
8” Single Helix*	NA	NA	5/8	13,000	10,000	7,500	5,000
8” Twin Helix	NA	NA	3/4	23,000	20,000	15,500	12,000
12” Single Helix*	NA	NA	3/4	23,000	22,000	17,000	13,000
10” Twin Helix	NA	NA	1	29,000	24,000	21,000	17,000
10”-12”-14” Helix	NA	NA	1-1/2” SQ	53,000	45,000	37,000	29,000

* These items are for reference only and shall not be used for new installations.

Anchor Rod Size	UBS (lb)
5/8	16,000
3/4	23,000
1	36,000
1-1/2” SQ	70,000

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