

WELCOME

CPS ENERGY

QUARTERLY POLE ATTACHMENT WORKSHOP

AUGUST 15, 2017



A F F O R D A B L E • R E L I A B L E • I N N O V A T I V E

HOUSEKEEPING



- **Sign-up Sheets**
- **Restrooms**
- **Evacuation / Staging**
- **Introductions in the room**
- **Introductions on the phone.**
 - **(also, for those on the phone please send an email to jmlopez@cpsenergy.com , type “August Quarterly Workshop Meeting” in the subject line.)**



PURPOSE OF TODAY'S WORKSHOP



- Provide update on the various initiatives of the CPS Energy Pole Attachment Program
- Continue constructive dialogue with Attaching Entities

TODAY'S AGENDA



CPS Energy *Quarterly Pole Attachment Workshop - August 15, 2017*

CPS Energy EMC Auditorium
4514 Frank Bryant – San Antonio

Agenda #	Item	Presenter	
1	Welcome & Introductions	Jesse Lopez	10:00 – 10:10 am
2	Pole Attachment Webpage, Standards & Application Submittal Process	Jesse Lopez	10:10 – 10:25 am
3	Pole Attachment communication process	Jesse Lopez	10:25 – 10:35 am
4	Work Manager task structure	Jesse Lopez	10:35 – 10:45 am
5	Business Case Authorization (BCA) process/training	Jesse Lopez	10:45 – 11:00 am
6	Discussion of Wireless Standards update/next steps/review process	Jesse Lopez	11:00 – 11:15 am
7	Discussion of Wireless Agreements / Legislative Update	Gabriel Garcia	11:15 – 11:25 am
8	Banner Attachment agreement update	Gabriel Garcia	11:25 – 11:35 am
9	Use of NJUNS	Jesse Lopez	11:35 – 11:45 am
10	Discussion of Ongoing Pole Attachment Inventory	Claudia Valles-Tovar	11:45 – 12:00 pm
11	Issues / Concerns	Jesse Lopez	12:00 – 12:30 pm
12	Open Discussion / Questions	Attendees	
13	Final Wrap-up	Jesse Lopez	
	Adjourn		

POLE ATTACHMENT WEBPAGE

Pole Attachment Services

CPS Energy Pole Attachment Program

CPS Energy's distribution system can facilitate the delivery of the variety of communication services offered today.

With a streamlined pole attachment process, we're dedicated to partnering with companies to assist with speed-to-market processes for future technologies.

CPS Energy's Pole Attachment Services Office is the single point of contact for all who wish to attach infrastructure to our distribution poles.

The Pole Attachment Services Office is responsible for:

- Registration
- Attachment agreements
- Applications for new pole attachments or removals
- Surveys of existing attachments
- Billing and collections for all the above services

For questions or more information on the pole attachment process, [SEND US AN EMAIL](#).

Subscribe to receive email updates:

If you would like to receive emails regarding CPS Energy's Pole Attachment Program, please click on the button below to register your contact information.

[Register Contact Info Here](#)



Pole Inventory Project

WEBSITE LAYOUT



Future Meetings/Workshops

- ▶ Quarterly Pole Attachment Workshop: May 11 2017
- ▶ Quarterly Pole Attachment Workshop: Aug 15 2017
- ▶ Quarterly Pole Attachment Workshop: Nov 15 2017

Previous Meetings/Workshops

- ▶ Quarterly Pole Attachment Workshop: Feb 16 2017
- ▶ EUCI Pole Attachment CPSE Case Study: Jan 2017
- ▶ Quarterly Pole Attachment Workshop: Nov 14 2016
- ▶ Quarterly Pole Attachment Workshop: Aug 22 2016
- ▶ Technical Workshop: Jul 11 2016
- ▶ Technical Workshop: Jun 2 2016
- ▶ Quarterly Pole Attachment Workshop: May 19 2016
- ▶ Quarterly Pole Attachment Workshop: Feb 17 2016

Pole Attachment Standards

- ▶ CPSE Pole Attachment Standards-V2-Effective Jan 1 2017
- ▶ CPSE Response to Comments to Standards - V2 - Jan 2017
- ▶ CPS Energy FCC Rate Calculation Support Jan 2017
- ▶ Pole Attachment Unit Pricing - Effective Jan 1 2017

Pro Forma Agreements

- ▶ Standard Pole Attachment Agreement (Pro-Forma) Revised July 2016
- ▶ Wireless Addendum Final Revised Dec 2016
- ▶ Wireless Installation Agreement Final Revised Dec 2016
- ▶ Infrastructure Provider Sublicensee Wireless Installation Agreement Final Version Dec 2016

Pole Inventory Project

- ▶ Davey DRG Pole Inventory Customer Notification Letter

Helpful Links

- ▶ Certificate of Authority (City of San Antonio)
- ▶ NJUNS
- ▶ PDA Client File (SPIDA)
- ▶ PLA Client File (O'Calc)
- ▶ NEW! Approved Contractors

Special software is required to open PLA Client File links.

Forms

- ▶ A1 Registration and Annual Reporting Form
- ▶ B1 Standard Pole Attachment Application
- ▶ B2 Standard Wireless Installation Application
- ▶ B3 Request for Pre Certification of Wireless System
- ▶ B4 Request for Waiver of Applicable Engineering Standards
- ▶ B6 Request for Temporary Attachment
- ▶ B7 Completion of Attaching Entity Construction
- ▶ B11 Pole Attachment Standards Revision Request
- ▶ B12 Pole Attachment Standards Revision Request

REVIEW OF
**POLE ATTACHMENT
STANDARDS &
APPLICATION SUBMITTAL
PROCESS**

PROGRAM PRINCIPLES AND VALUES



Safety

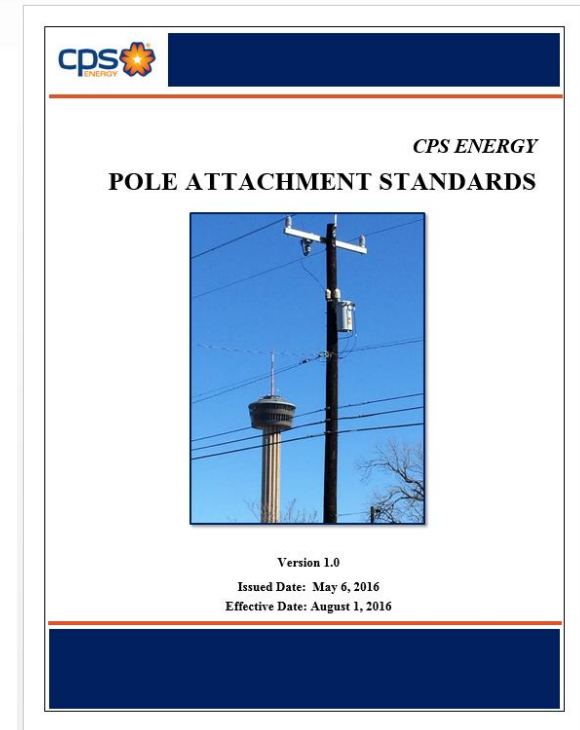
- Keep our employees and the public safe at all times

Reliability

- Continuous compliance with all standards
- Timely reporting & resolution of violations/noncompliance

Customer Service

- Non-discriminatory & transparent processes
- More control over & options for your project
- Less disruption to the community
- Appropriate cost recovery



STANDARDS & APPLICATION PROCESS



Submission of Application

- Completed applications may be submitted to poleapplications@cpsenergy.com

Pole Loading Analysis Standards – Appendix G

- Engineering and Planning Qualifications
- PLA Submittal requirements
- Pole Loading Parameters
- Required conditions for PLA

Request for Temporary Attachment form

Permits

- All required permits are to be submitted with the application (ex: railroad permits)

WORK MANAGER TASK



NOTES:

- **2150** – Long Lead (DESIGNER) – “Install” poles in Design Revision REV1 if design has PCO’s.
 - **2360** – Design Job (DESIGNER) – Attach all design documents here.
 - **2460** – Design Review (SUPERVISOR) – Review design for correctness.
 - **2550** – Submit to DP (DESIGNER) – Only required when changing overall electrical system
 - **2605** – CIAC (SUPERVISOR; originally set to designer) – Perform CIAC Calculations/Contributions.
 - **2680** – Official Revision (DESIGNER) – If PE stamp is required on design, upload to Task 2360.
 - **3100** – CIAC Payment (DESIGNER) – Task will auto-complete when CPS A.R. processes payment.
 - **5000** – Supervisor Approval (SUPERVISOR) – PE Stamp (if required) must be on design and CIAC payment processing (Task 3100) required before approval.
 - **5100** and **Subtask** – Approve WR (JESSE – LJM2) – CPS Design Approval.
 - **11080** – Material Availability (SUPERVISOR) – Material check only really required if design has uncommon equipment.
 - **17000** – As-Builts (DESIGNER; Supervisor) – Designer enters As-Built and send to Supervisor to Verify. If As-Built is verified Task will auto-complete. (If problems occur. See training book.)
 - **18200** – WR Closing (NO ONE ASSIGNED) – Will auto-complete if As-Built is verified without problems. (If problems occur. See training book.)
- 🔗 After 18200 completed. Supervisor should confirm job posted correctly in GIS.

WM TASK STRUCTURES



POLE ATTACHMENT WMIS TASK NOTES

- WR 40104772: DSGN, 09/18/2017, JUMR, CAPITAL, 401 ISDM RD , , SAN ANTONIO, TX - TWC#1481337 - IP
- Task 1000: C, M, REQ, 07/19/2017, 07/19/2017, APDM, Create Work Request, 0
- Task 1040: C, M, REQ, 07/19/2017, 07/19/2017, CZ, Review WR Details / Assign Designer - Project - Grids, 0
- Task 2025: C, M, DSGN, 07/19/2017, 07/19/2017, FJ1, Pre-Design Meeting and/or Field Survey, 0
- Task 2150: B, M, DSGN, 07/19/2017, 07/19/2017, FJ1, Request Long Lead and/or Non-Stock Material, 0
- Task 2220: B, O, DSGN, 07/19/2017, 07/19/2017, FJ1, Meet With All Third Parties, 0
- Task 2230: B, M, DSGN, 07/19/2017, 07/19/2017, FJ1, Preliminary TESS Locate, 0
- Task 2280: C, M, DSGN, 07/19/2017, 07/19/2017, FJ1, Perform Field Survey / Obtain Data, 0
- Task 2325: B, M, DSGN, 07/19/2017, 07/19/2017, FJ1, Request ROW, 0
- Task 2360: C, M, DSGN, 08/01/2017, 08/01/2017, FJ1, Design Job, 0
- Task 2445: C, M, DSGN, 08/01/2017, 08/01/2017, FJ1, Obtain Permit(s), 0
- Task 2460: W, M, DSGN, 08/01/2017, , NK2, Perform Supervisor Review of Design, 0
- Task 2550: P, M, DSGN, 08/01/2017, , FJ1, Submit Design to Distribution Planning, 0
- Task 2570: P, O, DSGN, 08/01/2017, , , Obtain Distribution Planning Approval, 0
- Task 2605: P, M, DSGN, 08/01/2017, , FJ1, Calculate Contribution Charges and Send to Customer, 0
- Task 2670: W, O, DSGN, 07/19/2017, , LJG, Obtain ROW, 0
- Task 2680: P, M, DSGN, 08/01/2017, , FJ1, Indicate Official Revision, 0
- Task 2850: W, M, DSGN, 08/01/2017, , FJ1, CT/VT Required? - Complete if YES/Bypass if NO, 0
- Task 3100: P, O, CIAC, 08/01/2017, , FJ1, Receive Customer Pre-Work Payment, 0
- Task 5000: P, M, APPR, 08/01/2017, , NK2, Perform Supervisor Approval, 0
- Task 5100: P, M, APPR, 08/01/2017, , , Approve Work Request, 0
- Task 6000: P, M, DESFN, 08/01/2017, , FJ1, Finalize and Lock Down Design, 0
- Task 11025: P, M, REL, 08/01/2017, , FJ1, Final Field Survey / Perform Staking, 0
- Task 11080: P, M, REL, 08/01/2017, , NK2, Supervisor Check Material Availability, 0
- Task 11100: P, M, REL, 08/01/2017, , FJ1, Accept Work Request for Construction, 0
- Task 12005: P, M, SCH, 08/01/2017, , , Update and/or Obtain Permit(s), 0
- Task 12300: P, M, SCH, 08/01/2017, , , Update and/or Obtain TESS For Construction, 0
- Task 12350: P, M, SCH, 08/01/2017, , , Verify Material Availability, 0
- Task 12500: P, M, SCH, 08/01/2017, , , Schedule Work, 0
- Task 12700: P, M, CIP, 08/01/2017, , , Construction in Progress, 0
- Task 16100: P, M, CMPL, 08/01/2017, , , Perform Field Work, 0
- Task 16500: P, M, ABRPT, 08/01/2017, , , Perform Initial Material Reconciliation, 0
- Task 16900: W, O, ABRPT, 07/19/2017, , FJ1, Receive Customer Post-Work Payment, 0
- Task 17000: P, M, ABRPT, 08/01/2017, , FJ1, Enter As-Built, 0
- Task 18200: P, M, CLOSE, 08/01/2017, , FJ1, Close Work Request, 0

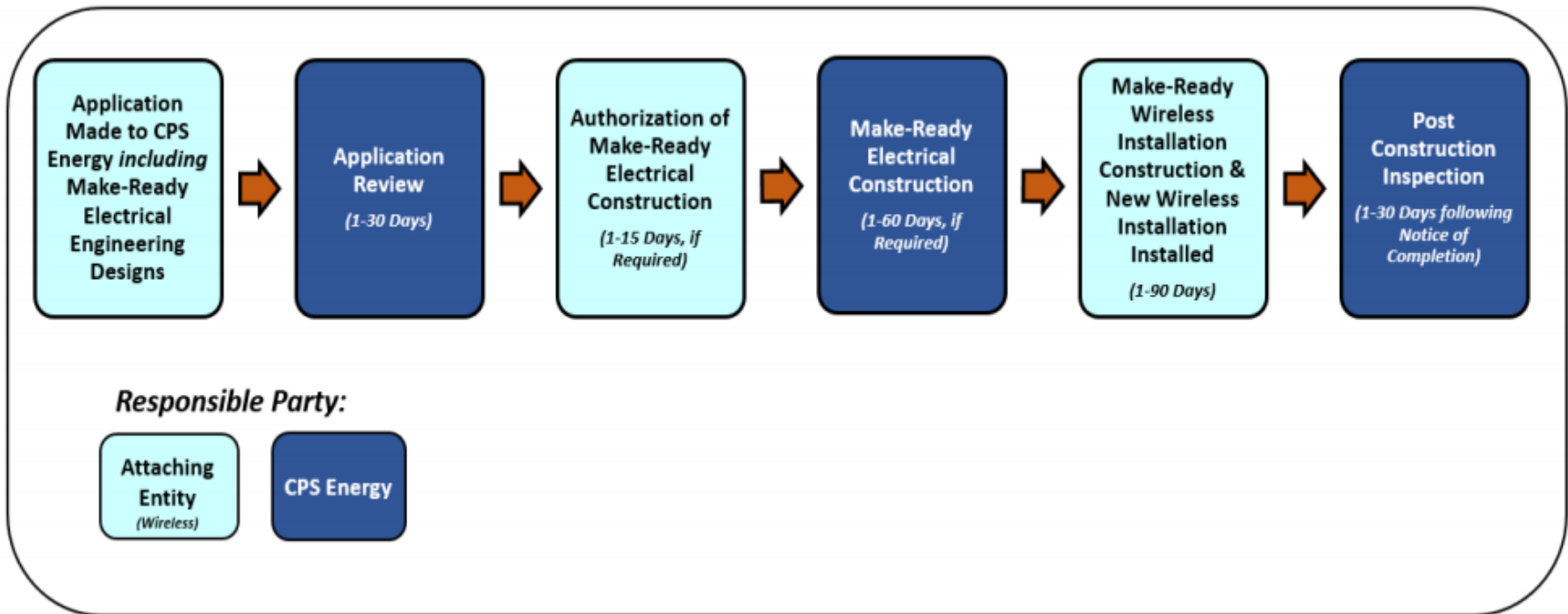
WORK MANAGER (BUSINESS CASE AUTHORIZATION)



- Go live is August 14, 2017
- BCA will be used for tracking pole attachment applications
- Adoption of the Work Manager:
 - **Introduces electronic process to create the BCA and Work Orders per application**
 - **Improves visibility of application status regardless of Make Ready work**
 - **Enhances oversight and management application process through reports and dashboards**

WIRELESS STANDARDS & PROCESS

STANDARD PROCESS FOR WIRELESS INSTALLATIONS



WIRELESS INSTALLATION STANDARDS



- **Four types of Wireless Installations under CPS Energy's Pole Attachment Standards:**
 - Pole-Top Antenna Installations
 - Mid-Span Antenna Installations
 - Distribution Pole Standard Mounted Antenna Installations
 - Streetlight (Distribution Wood) Pole Antenna Installations

PRE-CERTIFICATION PROCESS



- **Attaching Entity shall submit a report certifying FCC OET 65 compliance for each applied or licensed Wireless Installation location**
- **Report must contain:**
 - A Statement of Compliance (or non-compliance)
 - Date of the report
 - Date of statement of compliance
 - CPS Energy Pole Number proposed for the Wireless Installation
 - Attaching Entity's site or identification number for the installation
 - Calculation of RF power at the transmitter or Remote Radio Heads
 - Calculation of RF power at the Antennas
 - Location of the applicable signage with above ground level height listed
- **Submittal to poleapplications@cpsenergy.com**

WIRELESS STANDARDS- ACCOMPLISHMENTS



- Several wireless providers have successfully completed simulated pole installations of small cell equipment at CPS Energy's training grounds
- These mock-up installations are part of the pre-certification process and have facilitated input/feedback from several CPS Energy units:
 - Distribution Overhead Engineering Construction
 - Field Operations
 - Customer Engineering
 - Safety Operations
 - Standards & Specifications Engineering
- The process of reviewing the mock-up installations results in:
 - A set of proposals to improve the Wireless Standards
 - Determine number of pole feet used per installation
 - Approval of the proposed small cell installation design

PROPOSED CHANGES TO WIRELESS STANDARDS



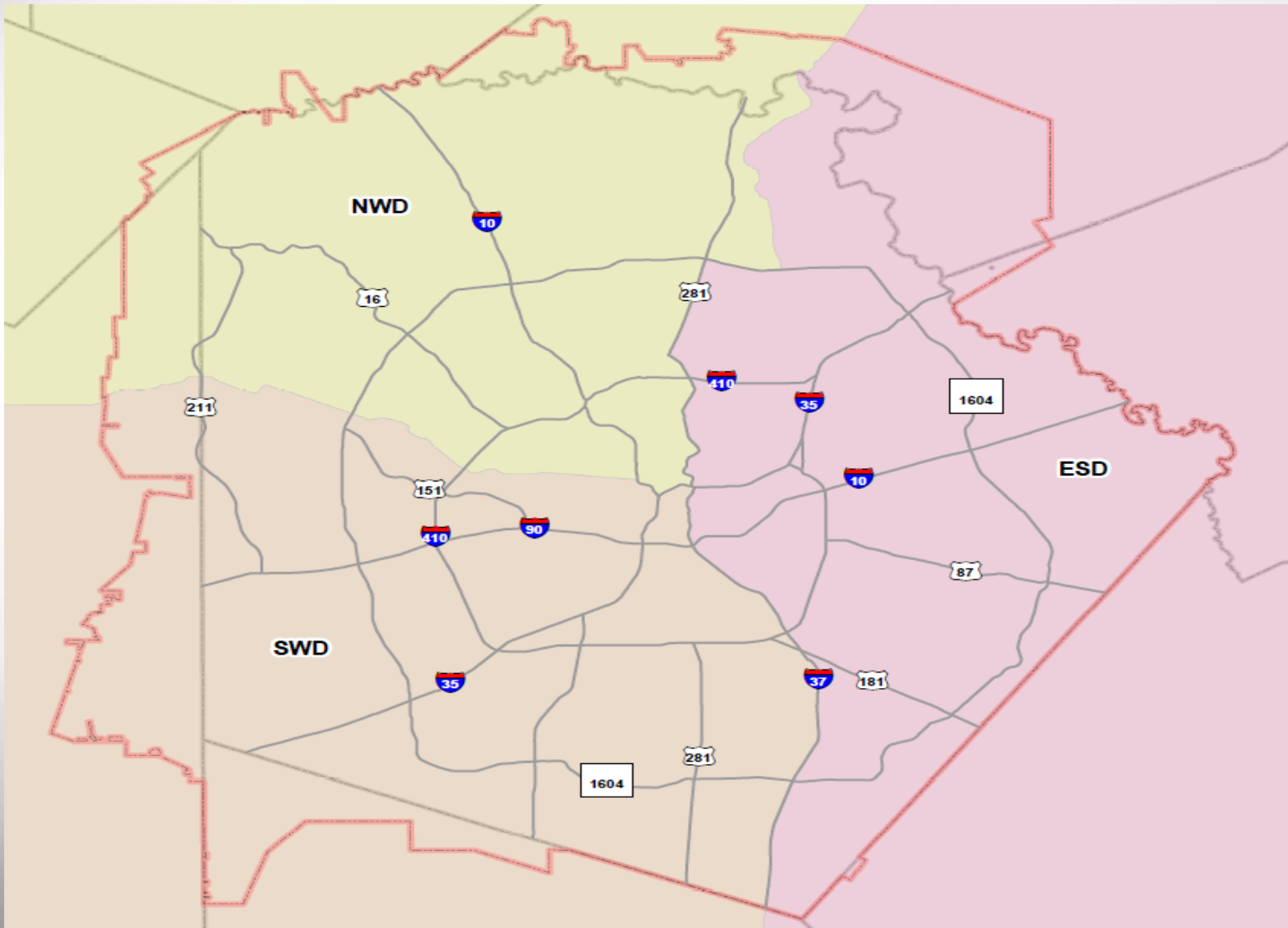
- Need to provide list of proposed changes to the Wireless Standards
- Need to provide time frame for adoption of proposed changes

NEXT STEPS



- **Pole Attachment Services to train construction crews at service districts on the small cell wireless equipment installations**
- **Continue to work with CPS Energy Safety Team**
- **Continue to work with all wireless communications providers on:**
 - **Pre-Certification Process**
 - **Wireless Attachment Applications**
 - **Make Ready Work Orders for the Different Types of Installations**
- **Certification of pole-top engineering contractors**
- **Revisions to Wireless Standards:**
 - **Incorporation of lessons learned from mock-up installations**
 - **Update Appendix I – CPS Energy Wireless Installation Diagrams**

CPS ENERGY SERVICE DISTRICT BOUNDARIES



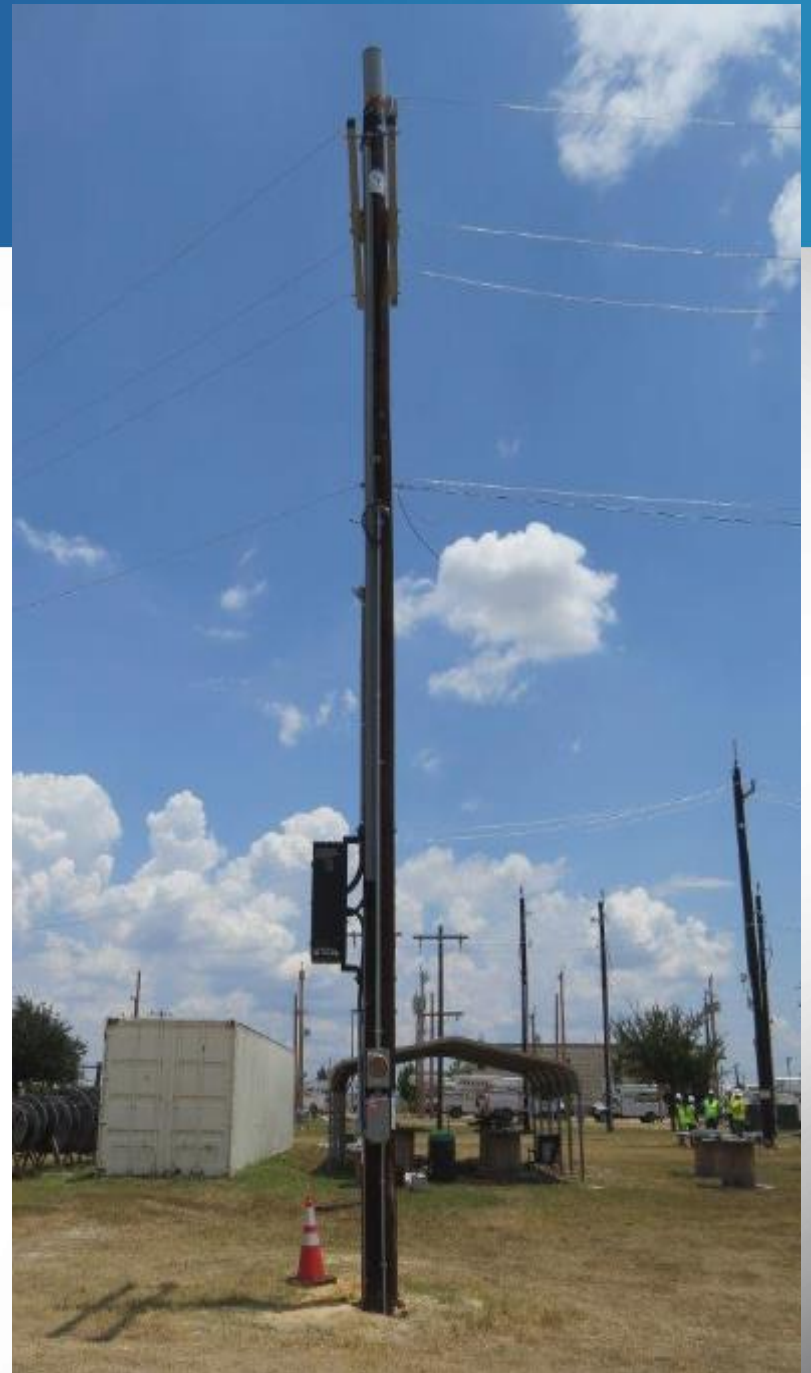
MOCK UPS



MOCK UPS



MOCK UPS



WIRELESS AGREEMENTS / LEGISLATIVE UPDATE

PASSAGE OF SB 1004



- SB 1004 becomes effective September 1, 2017.
- Effect of SB 1004 on wireless attachments:
 - All wireless providers must execute wireless pole license agreement in order to access CPS Energy’s poles.
 - The installation of “Network Nodes” and “Micro-Network Nodes” is subject to CPS Energy’s Pole Attachment Standards.
 - Pole attachment rate for “Network Nodes” and “Micro-Network Nodes” is based on FCC Telecom Formula applied on a per-foot-basis.

PASSAGE OF SB 1004



- Coordination with City:
 - Wireless provider will need to obtain ROW permit from city prior to making wireless attachment.
 - ROW permitting requirements applicable to cities do not apply to CPS Energy’s pole attachment process.
 - “Network Node Poles” fall outside the scope of CPS Energy’s Pole Attachment Standards, but are subject to Electric Service Standards.

CONTRACT EXECUTION CONSIDERATIONS



- CPS Energy will not execute any wireless license agreement if:
 - Infrastructure provider is claiming ROW rights outside the scope of SB 1004.
 - Wireless provider has unpaid accounts.
- Wireless carriers need to provide list of all FCC licensed frequencies and the names of the licensed corporate entities.
- CPS Energy invites all wireless providers to begin pre-certification process before execution of wireless license agreement.
- CPS Energy will not review applications for wireless installations until following completion of pre-certification process.

BANNER ATTACHMENTS

BANNER ATTACHMENTS – FUTURE ACTIVITIES



- CPS Energy will release draft of Banner Standards and Banner Agreement at same time as proposed revisions to the Pole Attachment Standards
- Stakeholder deadline to submitting written comments and for CPS Energy's written response is also the same as above
- Final version of Banner Standards and Banner Agreement will become effective 11/24/17
- Revised Pole Attachment Standards become effective 11/17/17
- Deadline to Execute New Banner Agreement will be 12/24/17

NJUNS

NJUNS TYPES

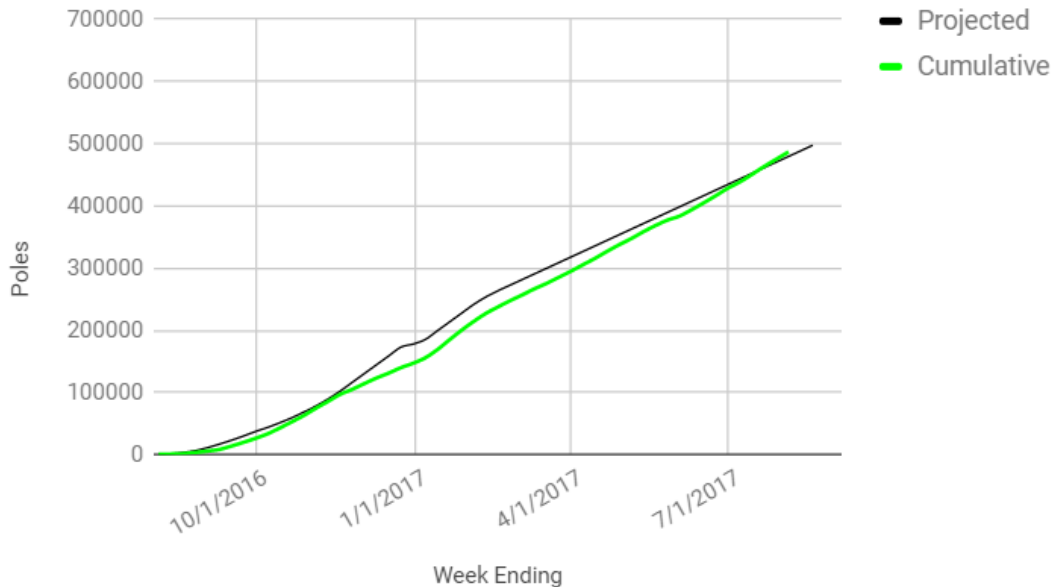


- **CPS Energy has 2 user accounts types for NJUNS transfer notifications:**
- **CPSE01**
 - **Simple Transfer Notification Process**
 - **Complex Transfer Notification Process**
- **CPSE02**
 - **Internal CPS Energy Project Notification Process**
- **Utilization of NJUNS**
- **NJUNS used for visibility and tracking of pole transfers**

UPDATE ON
**POLE ATTACHMENT
INVENTORY PROJECT**

INVENTORY PROGRESS (8/5/17)

Inspection Schedule



Poles inspected:

- 486,826 out of 490,000
(99%)

Grids - field completed:

- 984 out of 1,032
(95%)

Grids - data delivered:

- 927 out of 1,032
(94%)

NEXT STEPS

- Once all grids have been delivered and processed by CPS Energy (est. early-mid Sept)
 - Deliver report that includes draft attachment count and corresponding GIS coordinates to each attaching entity
 - Attaching entity may challenge results within **30 calendar days** of issuance of the report (**must be in writing and must include relevant documentation to substantiate its challenge for review**)

***see Section D.3 of Pole Attachment Standards*

- Deliver invoice for share of the cost for inventory project to each attaching entity

COST ALLOCATION EXAMPLE



For illustrative purposes...

- 432,000 (approximate) CPS Energy Poles inventoried
- Total cost of Inventory: \$2,500,000 (approximate)
- Total number of Attachments Inventoried (*including CPS Energy's 1/Pole*): 1,037,122 {432,000+605,122 (*as of 8-4-17*)}
- Cost per Attachment: $\$2,500,000 / 1,037,122$ or \$2.41 per Attachment

So for this example, CPS Energy's share of the cost is \$1,041,343.26; and If an Attaching Entity had 100,000 Attachments, their share of the cost would be \$241,051.68.

OPEN DISCUSSION & QUESTIONS

THANK YOU
FOR PARTICIPATING IN
TODAY'S WORKSHOP



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