EXHIBIT: PacifiCorp PAC_019
CPUC PROCEEDING: H.25-07-005
SPONSOR/WITNESS: PacifiCorp/Hillary Klumpe-McKown
DESCRIPTION: July 30, 2020 Email re Guying Assemblies
for California Hendrix Project (PAC0000062)
DATE IDENT. 6/9/2026 RECD. _____
ALJ: GERALD F. KELLY

PAC_019

From: Bailey, Cary Ann (PacifiCorp) [redacted]
Sent: 7/30/2020 7:51:38 PM
To: brad.hennessey[redacted] Asgharian, Dave (PacifiCorp) [redacted]
CC: Connelly, Jonathan (PacifiCorp) [redacted]; david.obrien[redacted] kurt.penberthy[redacted] Talabathula, Shravani [redacted]; Akers, Shaun (PacifiCorp) [redacted]; Laughlin, Edward [redacted]; Klumpe-McKown, Hillary (PacifiCorp) [redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

Because the Crescent City jobs north and south hiouchi will be on hold for awhile due to possible ceqa issues and design needs to be revisited with the area engineer to make sure we are feeding the existing western taps correctly, please just leave the two hiouchi projects for now.

Thanks all for your efforts in getting these ready for transmission over to us.

From: brad.hennessey[redacted]
Sent: Thursday, July 30, 2020 7:33 AM
To: Bailey, Cary Ann (PacifiCorp) [redacted] Asgharian, Dave (PacifiCorp) [redacted]
Cc: Connelly, Jonathan (PacifiCorp) [redacted]; david.obrien[redacted] kurt.penberthy[redacted] Talabathula, Shravani [redacted]; Akers, Shaun (PacifiCorp) [redacted]; Laughlin, Edward [redacted]
Subject: [INTERNET] RE: Guying Assemblies for California Hendrix Projects

Hi Cary Ann,
The standards are working. The team is in the process of finalizing the estimates. Mt. Shasta projects are being prioritized first followed by Crescent City. You should start to see the projects finalized today with everything wrapped up by tomorrow.

Brad

From: Bailey, Cary Ann (PacifiCorp) [redacted]
Sent: Wednesday, July 29, 2020 6:55 PM
To: Asgharian, Dave (PacifiCorp) [redacted]; Hennessey, Brad [redacted]
Cc: Connelly, Jonathan (PacifiCorp) [redacted]; O'Brien, David [redacted]; Penberthy, Kurt [redacted]; Talabathula, Shravani

[redacted]; Akers, Shaun (PacifiCorp) [redacted]; Laughlin, Edward [redacted]
Subject: [EXTERNAL] RE: Guying Assemblies for California Hendrix Projects

Brad have your folks try to enter these and hopefully they are updated.
Thanks all,
cab

From: Asgharian, Dave (PacifiCorp)
Sent: Wednesday, July 29, 2020 3:57 PM
To: Bailey, Cary Ann (PacifiCorp) [redacted]
Cc: Connelly, Jonathan (PacifiCorp) [redacted]; david.obrien[redacted] brad.hennessey[redacted] kurt.penberthy [redacted] Talabathula, Shravani [redacted]; Akers, Shaun (PacifiCorp) [redacted]; Laughlin, Edward [redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

Here are the pdf files and should be on line tomorrow or latest Friday. Thanks

Dave Asgharian, P.E.
Engineering Standards
[redacted]

From: Asgharian, Dave (PacifiCorp)
Sent: Wednesday, July 29, 2020 2:02 PM
To: Bailey, Cary Ann (PacifiCorp) [redacted]
Cc: Talabathula, Shravani [redacted]; Akers, Shaun (PacifiCorp) [redacted]; Laughlin, Edward [redacted]; Connelly, Jonathan (PacifiCorp) [redacted]; david.obrien[redacted] brad.hennessey[redacted] kurt.penberthy [redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

The new guying standards EG 307 and EG 308 are in process of being published and will be available this week on line. I had to submit some changes Connelly requested.
Thanks

Dave Asgharian, P.E.
Engineering Standards
[redacted]

From: Bailey, Cary Ann (PacifiCorp)
Sent: Wednesday, July 29, 2020 1:23 PM
To: Connelly, Jonathan (PacifiCorp) [redacted]; david.obrien[redacted] brad.hennessey[redacted] kurt.penberthy [redacted] Asgharian, Dave (PacifiCorp) [redacted]
Cc: Talabathula, Shravani [redacted]; Akers, Shaun (PacifiCorp)

[redacted]; Laughlin, Edward [redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

Dave,

I need these guying spec ASAP – to finish the estimates. Please! Holding up my construction packages.

From: Connelly, Jonathan (PacifiCorp)
Sent: Monday, July 27, 2020 3:27 PM
To: Bailey, Cary Ann (PacifiCorp) [redacted]; david.obrien[redacted]
[redacted]; kurt.penberthy [redacted]
Cc: Talabathula, Shravani [redacted]; Akers, Shaun (PacifiCorp)
[redacted]; Laughlin, Edward [redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

Cary Ann,

Also below is the information regarding CU's to specify for guying/anchor assemblies. Let us know if you have any questions.

5/16" guy cable, **wood** pole, **downguy** + 14" screw anchor:
5/16" downguy assembly:
EG307AB_ (last letter based on guy length, refer to standard EG301)
14" screw anchor assembly:
EG421FAA

7/16" guy cable, **wood** pole, **downguy** + 14" screw anchor:
7/16" downguy assembly:
EG301CB_ (last letter based on guy length, refer to standard EG301)
14" screw anchor assembly:
EG421FAA

5/16" guy cable, **wood** pole, **span guy**:
5/16" span guy assembly:
EG371AB_ _ (first blank based on primary or neutral attachment height, last blank based on span length, refer to standard EG371)

7/16" guy cable, **wood** pole, **span guy**:
7/16" span guy assembly:
EG371CB_ _ (first blank based on primary or neutral attachment height, last blank based on span length, refer to standard EG371)

5/16" guy cable, **fiber octagonal** pole, **downguy** + 16" disk anchor:
5/16" downguy assembly:
EG307A_B (middle letter based on guy length, refer to standard EG307)
14" screw anchor assembly:
EG421FAA

7/16" guy cable, **fiber octagonal** pole, **downguy** + 16" disk anchor:
7/16" downguy assembly:
EG307C_B (middle letter based on guy length, refer to standard EG307)
14" screw anchor assembly:
EG421FAA

5/16" guy cable, **fiber octagonal** pole, **span guy**:

5/16" span guy assembly:
EG371AB_ _ (first blank based on primary or neutral attachment height, last blank based on span length, refer to standard EG371)
Replace EG702 guy hook with TD568 Tee Deadend for each guy attaching to fiber pole (1 guy per bracket)
Add 4" X 3/8" oversized washers for all connections to fiberglass poles (2 per TD568 needed)

7/16" guy cable, **fiber octagonal** pole, **span guy**:
7/16" span guy assembly:
EG371CB_ _ (first blank based on primary or neutral attachment height, last blank based on span length, refer to standard EG371)
Replace EG702 guy hook with TD568 Tee Deadend for each guy attaching to fiber pole (1 guy per bracket)
Add 4" X 3/8" oversized washers for all connections to fiberglass poles (2 per TD568 needed)

Thanks,

Jonathan Connelly, P.E.
Manager – Field Engineering West
825 NE Multnomah St. Portland, OR 97232
[redacted]
PACIFIC POWER
A DIVISION OF PACIFICORP

From: Connelly, Jonathan (PacifiCorp)
Sent: Monday, July 27, 2020 3:24 PM
To: Bailey, Cary Ann (PacifiCorp) [redacted]; david.obrien [redacted]; kurt.penberthy [redacted]
Cc: Talabathula, Shravani [redacted]; Akers, Shaun (PacifiCorp) [redacted]; Laughlin, Edward [redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

Cary Ann,

Attached is the updating guying/anchoring spreadsheets with screw type anchor specified for all Mt.Shasta projects and Hiouchi North/South for Crescent City. The new calculations provided by Hendrix agree with our calculations so we are okay with the guying/anchor recommendations we came up with. We are still in the process of adding the guying direction information for the double circuit 5R151 & 5R152 project, so we will send the spreadsheet for that project tomorrow.

Let me know if you need anything else.

Thanks,

Jonathan Connelly, P.E.
Manager – Field Engineering West
825 NE Multnomah St. Portland, OR 97232
[redacted]

PACIFIC POWER
A DIVISION OF PACIFICORP

From: Bailey, Cary Ann (PacifiCorp)
Sent: Friday, July 24, 2020 12:38 PM
To: david.obrien [redacted] brad.hennessey [redacted] kurt.penberthy [redacted]
Cc: Connelly, Jonathan (PacifiCorp) [redacted]; Talabathula, Shravani [redacted]; Akers, Shaun (PacifiCorp) [redacted]; Laughlin, Edward [redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

We will get you the results and specification recommendations ASAP and hope for a quick turnaround for the Mt. Shasta bundle to be completed.

Will touch base with you early next week.

Thanks

From: Laughlin, Edward [redacted]
Sent: Friday, July 24, 2020 9:24 AM
To: Bailey, Cary Ann (PacifiCorp) [redacted]
Cc: Connelly, Jonathan (PacifiCorp) [redacted]; Talabathula, Shravani [redacted]; Akers, Shaun (PacifiCorp) [redacted]
Subject: [INTERNET] RE: Guying Assemblies for California Hendrix Projects

Cary Ann:

Yes, we'll review all of Shaun's questions and respond by Monday.

Sincerely,

Edward Laughlin | Engineering Manager

Hendrix
OVERHEAD POWER SOLUTIONS

[redacted]

[redacted]

53 Old Wilton Road, Milford, NH 03055

From: Bailey, Cary Ann (PacifiCorp) [redacted]
Sent: Thursday, July 23, 2020 4:29 PM
To: Laughlin, Edward [redacted]; Talabathula, Shravani [redacted]
Cc: Connelly, Jonathan (PacifiCorp) [redacted]; Akers, Shaun (PacifiCorp) [redacted]
Subject: FW: Guying Assemblies for California Hendrix Projects

I know we have asked for this for early next week and just want to see if we can get all this by Monday end of day. This is holding up our construction packages to get final bids back.
Thanks in advance.

From: Akers, Shaun (PacifiCorp)
Sent: Thursday, July 23, 2020 11:03 AM
To: Bailey, Cary Ann (PacifiCorp) [redacted]; Connelly, Jonathan (PacifiCorp) [redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

Cary Ann,
I figured I should restate the specific actions we are waiting for from Hendrix:

5G69 Radio Tower:
Hendrix has not provided their guy tension analysis, so I have not been able to confirm my calculations. Jon also asked that Hendrix provide a list of which guying was existing and which guying was proposed, as this was omitted from the Plan & Profile drawings, even though the other Mt Shasta jobs did have it listed on the P&P.

5G77 Ringfence North:
Hendrix's guy tension analysis shows much higher tensions on every single guy then what I calculated. If these higher tensions are correct then I need to change the guying and anchors on several poles. We have asked that Hendrix review their calculations and our findings to better understand the disconnect and the actual tensions required.

5G79 Ringfence South:
I updated this sheet today to add in span guys in 5 locations, and corrected a calculation error on the last 5 poles. Our calculations and Hendrix's guy tension analysis agree on every pole that Hendrix provided values

for. This job is ready to go to estimating in my opinion. I have attached the updated sheet which should be used for the next steps.

5G69 Dunsmuir-Mott:
Hendrix has not provided their guy tension analysis, so I have not been able to confirm my calculations.

Thanks,
Shaun Akers

From: Akers, Shaun (PacifiCorp)
Sent: Thursday, July 23, 2020 10:45 AM
To: Bailey, Cary Ann (PacifiCorp) [redacted]; Asgharian, Dave (PacifiCorp) [redacted]; Connelly, Jonathan (PacifiCorp) [redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

All,
Jon is travelling today and will likely have limited access to email, so I will try to address these questions as best I can, but I am still fairly new to this role. Jon might have a different understanding, and hopefully he can weigh in soon.

Cary Ann,
We are waiting for Hendrix to provide justifications or updates to their calculations regarding the inconsistent results of guy tension calculations. I have used the same methodology for the Mt Shasta projects, but found that Hendrix's provided calcs match very closely on some jobs and disagree substantially with my findings on other jobs that should use the same GO95 safety factors. The values are far enough apart that if my calcs are wrong completely different guying and anchoring will be required on several poles. I have not received any updates on Hendrix's progress. Jon initially asked for Hendrix to begin reviewing these on Friday, July 17. I stand behind my calcs and would be comfortable using those to move the process along, but that call is probably not mine to make.

Dave,
Regarding the anchor type, we assumed soil class 2 for these jobs, and used EG041 Table 5, which states to use 16" disk anchors for this soil class. As I am in Portland and unable to assess the soil along these circuits, a more accurate soil assessment would need to be performed by crews in the areas of construction. It is my understanding that the 16" disk anchor will meet or exceed the helix anchors ratings for the tensions we are looking at on these projects to date, so to move these jobs along I would like to use the disk anchors, and we can refine anchor selection based on more complete soil analysis as we gather more info and update the standards for Hendrix jobs.

Thanks,
Shaun Akers

From: Bailey, Cary Ann (PacifiCorp)
Sent: Thursday, July 23, 2020 10:25 AM
To: Asgharian, Dave (PacifiCorp) [redacted]; Connelly, Jonathan (PacifiCorp) [redacted]
Cc: Akers, Shaun (PacifiCorp) [redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

Jon/Shawn
I need to know if the Mt. Shasta projects have been reviewed and are complete or are you waiting to get something back from Hendrix?
I know you are for the Crescent City jobs.
If I get answers on the email I just sent that will help me plan finalizing the estimate packages.
thansk

From: Asgharian, Dave (PacifiCorp)
Sent: Thursday, July 23, 2020 9:21 AM
To: Connelly, Jonathan (PacifiCorp) [redacted]
Cc: Akers, Shaun (PacifiCorp) [redacted]; Bailey, Cary Ann (PacifiCorp)
[redacted]
Subject: RE: Guying Assemblies for California Hendrix Projects

In general I agree with your recommendations but standard anchor is power installed anchors offered in standard EG421. You may use 10" twin anchor or select based on soil type. I have added a few comments for your consideration.
Also, we are about to publish two new standards for fiberglass guying, see attached draft due to washer sizes. Let me know if you need more information.

Dave Asgharian, P.E.
Engineering Standards
[redacted]

From: Connelly, Jonathan (PacifiCorp)
Sent: Wednesday, July 22, 2020 10:15 AM
To: Asgharian, Dave (PacifiCorp) [redacted]
Cc: Akers, Shaun (PacifiCorp) [redacted]; Bailey, Cary Ann (PacifiCorp)
[redacted]
Subject: FW: Guying Assemblies for California Hendrix Projects

Hi Dave,

We were asked to provide POWER the CU's and parts for down guy and anchor assemblies for the RCMS estimates for the Hendrix projects. Below is what we developed based on our standards and Creative Pultrusions recommendations.

Can you review this and let us know if this looks correct to you or if we need to revise anything?

Thanks,

Jonathan Connelly, P.E.
Manager – Field Engineering West
825 NE Multnomah St. Portland, OR 97232
[redacted]
PACIFIC POWER
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From: Akers, Shaun (PacifiCorp)
Sent: Wednesday, July 22, 2020 9:10 AM
To: Connelly, Jonathan (PacifiCorp) [redacted]
Subject: Guying Assemblies for California Hendrix Projects

Hi Jon,
Here is my first attempt to specify guying assemblies for our California Hendrix projects:

5/16" guy cable, **wood** pole, **downguy** + 16" disk anchor:
5/16" downguy assembly:

EG301AB_ (last letter based on guy length, refer to standard EG301)
16" disk anchor assembly: consider standard power anchor EG421EAA (10" twin)
EG411AA

7/16" guy cable, **wood** pole, **downguy** + 16" disk anchor:
7/16" downguy assembly:
EG301CB_ (last letter based on guy length, refer to standard EG301)
16" disk anchor assembly: consider standard power anchor EG421EAA (10" twin)
EG411AA

5/16" guy cable, **wood** pole, **span guy**:
5/16" span guy assembly:
EG371AB_ _ (first blank based on primary or neutral attachment height, last blank based on span length, refer to standard EG371)

7/16" guy cable, **wood** pole, **span guy**:
7/16" span guy assembly:
EG371CB_ _ (first blank based on primary or neutral attachment height, last blank based on span length, refer to standard EG371)

5/16" guy cable, **fiber octagonal** pole, **downguy** + 16" disk anchor:
5/16" downguy assembly:
EG301AB_ (last letter based on guy length, refer to standard EG301)
Replace EG702 guy hook with TD568 Tee Deadend for each guy (1 guy per bracket)
Add 4" X 3/8" oversized washers for all connections to fiberglass poles (2 per TD568 needed)
16" disk anchor assembly:
EG411AA

7/16" guy cable, **fiber octagonal** pole, **downguy** + 16" disk anchor:
7/16" downguy assembly:
EG301CB_ (last letter based on guy length, refer to standard EG301)
Replace EG702 guy hook with TD568 Tee Deadend for each guy (1 guy per bracket)
Add 4" X 3/8" oversized washers for all connections to fiberglass poles (2 per TD568 needed)
16" disk anchor assembly:
EG411AA

5/16" guy cable, **fiber octagonal** pole, **span guy**:
5/16" span guy assembly:
EG371AB_ _ (first blank based on primary or neutral attachment height, last blank based on span length, refer to standard EG371)
Replace EG702 guy hook with TD568 Tee Deadend for each guy attaching to fiber pole (1 guy per bracket)
Add 4" X 3/8" oversized washers for all connections to fiberglass poles (2 per TD568 needed)

7/16" guy cable, **fiber octagonal** pole, **span guy**:
7/16" span guy assembly:
EG371CB_ _ (first blank based on primary or neutral attachment height, last blank based on span length, refer to standard EG371)
Replace EG702 guy hook with TD568 Tee Deadend for each guy attaching to fiber pole (1 guy per bracket)
Add 4" X 3/8" oversized washers for all connections to fiberglass poles (2 per TD568 needed)

Thanks,
Shaun Akers

e-mail or any attachments, and please notify us immediately by returning it to the sender and delete this copy from your system. Thank you.