

June 12<sup>th</sup>, 2007

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**Subject: Grant County Public Utility District's (GCPUD) 2007 Existing Transmission Expansion Ten (10) Year Plan**

The following is GCPUD's Existing Transmission Expansion Plans for the next ten (10) years.

**1. Columbia – Rocky Ford 115 kV Reconductor:**

- a. Name: Columbia – Rocky Ford 115 kV Line Reconductor
- b. Participant(s): GCPUD
- c. One-Line Diagram: Existing Line
- d. Status: Completion November 30<sup>th</sup>, 2008
- e. Facilities: In support of load growth in northwest Grant County and surrounding areas, 30.25 miles of the Columbia – Rocky Ford 115 kV line will need to be reconducted from 556 ACSR to 795 ACSS to increase the rating of the line.
- f. Studies: Recent studies have demonstrated that the rating of the Columbia-Rocky Ford 115 kV line will need to be increased to prevent overloading during an outage of Grand Coulee #2 – Rocky Ford 230 kV line, or a loss of Rocky Ford 230 kV bus. By reconducting the existing 556 ACSR conductor with 795 ACSS, the Columbia-Rocky Ford 115 kV line will obtain a higher rating and mitigate reliability criteria violations.
- g. Impact on Other System: This project will have no regional impacts.

**2. Larson – Rocky Ford 115 kV Reconductor:**

- a. Name: Larson – Rocky Ford 115 kV Line Reconductor
- b. Participant(s): GCPUD
- c. One-Line Diagram: Existing Line
- d. Status: Completion April 30<sup>th</sup>, 2008
- e. Facilities: In support of load growth in northeast Grant County and surrounding areas, 11.46 miles of the Larson – Rocky Ford 115 kV line will need to be reconducted from 556 ACSR to 795 ACSS to increase the rating of the line.

- f. Studies: Loss of the Larson – Rocky Ford 230 kV line forcing a portion of the loads at 230 kV Upper Coulee to be served out of the Larson-Rocky Ford 115 kV line, causing this line to overload. Reconductoring the existing 556 ACSR conductor with 795 ACSS will eliminate the possibility of overloading this line during loss of several line outages in the area.
- g. Impact on Other System: This project will have no regional impacts.

**3. Columbia – Ancient Lake 115 kV Reconductor:**

- a. Name: Columbia – Ancient Lake 115 kV Line Reconductor
- b. Participant(s): GCPUD
- c. One-Line Diagram: Existing Line
- d. Status: Completion April 30<sup>th</sup>, 2009
- e. Facilities: Technical studies have indicated that based on projected load growth in northwest Grant County and surrounding areas, 19.80 miles of the Columbia – Ancient Lake 115 kV line will need to be reconducted from 556 ACSR to 795 ACSS to increase the rating of the line.
- f. Studies: Recent studies have demonstrated that the rating of the Columbia – Ancient Lake 115 kV line will need to be increased to prevent overloading during an outage of the existing Ancient Lake 230/115 kV auto-transformer or breaker failure at the Columbia 230 kV bus. This project will obtain a higher rating and mitigate reliability criteria violations.
- g. Impact on Other System: This project will have no regional impacts.

**4. Larson – Wheeler Tap 115 kV Reconductor:**

- a. Name: Larson – Wheeler Tap 115 kV Line Reconductor
- b. Participant(s): GCPUD
- c. One-Line Diagram: Existing Line
- d. Status: Completion November 30<sup>th</sup>, 2007
- e. Facilities: In support the load growth in southeast Grant County and surrounding areas, 5.60 miles of the Larson – Wheeler Tap 115 kV line will need to be reconducted from 556 ACSR to 795 ACSS to increase the rating of the line
- f. Studies: Loss of the Larson – Upper Coulee 230 kV line breaks the 230 kV portion of the 230 kV and 115 kV loop that exists between Larson and Sand Dunes substations, shifting power onto the 115 kV portion causing the Larson – Wheeler Tap 115 kV line to overload. In addition, loss of the Sand Dunes 230 /115 kV auto-transformer removes the southern end source to the 115 kV line paths between Larson and Sand Dunes causing this Larson – Wheeler Tap 115 kV line to overload. Reconductoring the existing 556 ACSR conductor with 795 ACSS will eliminate the

possibility of thermal loading violations on this line during loss of several line outages in the area.

- g. Impact on Other System: This project will have no regional impacts.

## **5. Larson – Stratford 115 kV Reconductor:**

- a. Name: Larson – Stratford 115 kV Line Reconductor  
b. Participant(s): GCPUD  
c. One-Line Diagram: Existing Line  
d. Status: Completion November 30<sup>th</sup>, 2010  
e. Facilities: Technical studies have indicated that 16.14 miles of the Larson – Stratford 115 kV line will need to be reconducted to increase the rating of the line.  
f. Studies: Recent studies have demonstrated that the rating of the Larson – Stratford 115 kV line will need to be increased to prevent overloading during a loss of the Rocky Ford 230 kV bus. This project will obtain a higher rating and mitigate reliability criteria violations. However, the in-service date for this project is tentative and subject to change depends upon the Summer Falls/Headwork generation interconnection project. If the Summer Falls/Headwork generation is removed from the existing interconnection with Avista on its 115 kV system and connected to a new BPA 230kV station on Rocky Ford – Grand Coulee 230 kV line, thermal loading violations on this line will be eliminated.  
g. Impact on Other System: This project will have no regional impacts.

## **6. Future Projects:**

In order to provide capacity to meet load growth, increase transmission system reliability and improve voltage stability performance, Grant PUD plans to construct a new 230 kV line from Rocky Ford to Columbia or Wanapum. The proposed route of this 230 kV transmission line is not finalized. Grant is conducting studies to refine the route, cost and timing of this project. This project is subject to change as new information becomes available or as circumstances change.

Please call me at (509) 754-5033 or via email at [kche@gcpud.org](mailto:kche@gcpud.org) if you have any questions.

Sincerely,

*Ken V. Che*

Kenneth V. Che, P.E.  
Grant County PUD  
ColumbiaGrid Representative

Enclosure  
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*Public Utility District No. 2 of Grant County, Washington*