

RESOURCE AND ENGINEERING PLANNING COMMITTEE

MINUTES

August 1, 2019

A meeting of the Resource and Engineering Planning Committee was held on Thursday, August 1, 2019 at 10:02 a.m. at the District Office, 31717 United Avenue, Pueblo, Colorado.

Chairman Mitchell announced a quorum was present.

COMMITTEE MEMBERS PRESENT:

Curtis Mitchell – Chairman, Seth Clayton – Vice-Chairman, Andy Colosimo, and Jim Broderick.

COMMITTEE MEMBERS ABSENT AND EXCUSED:

Tom Goodwin

OTHERS PRESENT:

Alan Hamel, Southeastern Colorado Water Conservancy District (District) Board; Kevin Meador, Garrett Markus, Leann Noga, and Chris Woodka, District staff.

APPROVAL OF MINUTES:

Chairman Mitchell asked for approval of the July 18, 2019 minutes, and if there were any corrections or additions. Hearing none, Andy Colosimo moved, second by Seth Clayton to approve the minutes. Motion passed unanimously.

PRESENTATIONS:

JAMES W. BRODERICK HYDROPOWER PLANT UPDATE

The James W. Broderick Hydropower Plant (JWBHP) generated at 85 percent of full capacity in July. Full capacity generation for the flow conditions (825 cfs) in July was approximately 7 Megawatts (MW) or 5208 MWhrs. Following is a summary of the operations:

Month	Scheduled (MWh)	Delivered (MWh)
May	1,032	765
June	4,512	4,495
July (estimated as of 7/25/19)	4,560	4,416

The average generation in July was 143 MWh per day compared to the maximum output capacity of 168 MWh per day or 85 percent of full capacity. There were two unplanned outages in July. On July 3, 2019 vibration issues in Unit 1 requiring the large turbine and generator to fully shut-down. The maintenance crew arrived on site on July 8, 2019 and full operation was restored on July 12, 2019. Unit 2 continued to run during this time. Lost generation was estimated at 653 MWh or about \$31,700. Since this was a warranty item, we are working with Mountain States Hydro to be reimbursed for the lost generation.

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On July 24, 2019 a ground fault alarm necessitated shutting down Unit 1 again. The maintenance group is working on a resolution of the ground fault issue. As before, Unit 2 is operating at about 3.85 MW.

Assuming no additional mechanical equipment issues, the hydro plant is expected to continue at full capacity through most of August.

August 12, 2019 the entire team will do efficiency testing on the Units to compare performance.

ACTION ITEMS:

JAMES W. BRODERICK HYDROPOWER PLANT CHANGE ORDERS 3, 4 AND 5 TO CONTRACT WITH MOUNTAIN STATES HYDRO, LLC

On September 21, 2017, the Southeastern Colorado Water Activity Enterprise Board of Directors ratified the Omnibus Resolution No. 2017-02E, which authorized and directed President Long to execute the Design and Construction Contract for the PDHP with Mountain States Hydro, LLC.

The Design and Construction Contract included in the original Omnibus Resolution authorized expenditures of \$14,878,260 for the PDHP construction. Change Orders 1 and 2 increased the contract amount to \$15,657,353. Change Orders 3, 4, and 5 total \$458,596 and increase the contract amount to \$16,115,949. The increase is included in the project's updated financial plan.

Board approval is required for the Change Orders 3, 4, and 5 to the Contract. The Change Orders are described as follows:

1. Change Order No. 3 is the cost of extending the Builders Risk Insurance through May 6, 2019. The substantial completion date was extended from March 31, 2019 as a result of project delays relating to approval of the mechanical plug valves and issues relating to the control system programming changes. The cost increase of \$5,876.00 is a direct pass through of the insurance cost.
2. Change Order No. 4 is for the cost of extending the Builders Risk Insurance through June 3, 2019. The substantial completion date was extended from May 6, 2019 as a result of project delays relating to Black Hills Energy equipment delivery required for project start-up. The cost increase of \$4,607.00 is a direct pass through of the insurance cost.
3. Change Order No. 5 includes additional costs for labor and materials related to the following items (see Attachment 3):
 - a. Items 1 and 2 - The original contract completion date was December 31, 2018. During the course of the project, construction was slowed during the resolution of several issues as described in the Change Order. These issues resulted in a five-month delay of the project to May 24, 2019. The additional labor and equipment costs amounts to \$187,768 and \$129,950, respectively.

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- b. Item 3 – Additional surveying costs were required to prepare the Lease Area descriptions as required by Reclamation to meet their standards in the amount of \$1,616.
- c. Items 4 and 5 – During resolution of the auto-control valve (emergency isolation of the powerhouse) issue with Reclamation, additional construction measures were required to allow the contractor to continue construction with site restrictions. Items 4 and 5 reflect the additional labor and materials to work around the valve issue in the amounts of \$8,353 and \$53,902, respectively.
- d. Item 6 - Replacement of Turbine Shutoff Valves (TSV) flow control valves were required by Reclamation due to design concerns of using needle valves. The costs total \$14,692.
- e. Item 7 – In order to resolve the auto-control valve issue, Reclamation required that the project provide emergency mechanical plugs and pressure domes to provide isolation of the powerhouse in case of TSV and/or wicket gates failures. Item 7 includes the design, material, and delivery costs of the pressure domes and rack in the amount of \$53,886. The mechanical plugs are still in the design process and will be included in a future change order.
- f. Item 8 – The final route of the power transmission line resulted in a decrease in the total distance and costs for installation in the amount of \$100,103.
- g. Item 9 – Black Hills Energy required an additional fiber optic cable for communication purposes. Item 9 includes the material and labor to install the upsized fiber optic cable in the amount of \$1,695.
- h. Item 10 – Delivery of the switchgear was expedited to meet the start- up schedule and prevent further delays. Item 10 reflects the expedited delivery charge in the amount of \$16,950.
- i. Item 11 – Reclamation required additional hydro communication programming to address needs identified late in the project construction. Item 11 reflects the additional labor and materials needed to address the communications and control related issues in the amount of \$62,454.
- j. Item 12 – Black Hills Energy required a transmission relay be added to the project design late in the project due to an oversight in the facility plan. Long delivery timeframes resulted in a month delay for the project and required electrical and mechanical crews to make separate trips for the project start-up. Item 12 shows the costs for the extra project trips to the site over and above the original contract requirements in the amount of \$16,950.

All cost increases were negotiated with Mountain States Hydro, LLC. The Change Orders represents the negotiated value of the work. The change orders include a 3 percent Bond markup and a 10 percent Overhead and Profit markup as allowed by the Contract. Cost backup for the Change Orders is available upon request. The Change Orders represents a 2.8

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percent increase to the total contract amount. The total of Change Orders 1-5 resulted in an 8.3 percent increase to the contract cost.

Andy Colosimo moved, seconded by Seth Clayton, to recommend approval to the Board of Directors of JWBHP Change Orders 3, 4, and 5 to the Design and Construction Contract with Mountain States Hydro, LLC in the amount of \$458,596.00. Motion passed unanimously.

INFORMATION ITEMS:

Board meetings will focus on the Financial Strategy and Sustainability Study, only action items will be presented at the next Board meeting, no more workshops concerning the Executive Committee will be held regarding the subject.

OTHER BUSINESS

Discussion was held on Firm versus non-Firm rates, which will be a topic at another meeting. Southeastern Colorado Water Conservancy District is coordinating a tour with Division of Water Resources for September 9-10, 2019.

NEXT MEETING

Thursday, September 5, 2019 conflicts with the Colorado Springs tour. The next meeting is to be determined.

ADJOURN

Chairman Mitchell adjourned the meeting at 11:28 a.m.

Respectfully submitted,

Garrett J. Markus, P.E.
Water Resources Engineer