

REDACTED

Docket No. 20000-__-ER-23

Witness: Ryan D. McGraw

BEFORE THE WYOMING PUBLIC SERVICE
COMMISSION

ROCKY MOUNTAIN POWER

REDACTED

Direct Testimony of Ryan D. McGraw

March 2023

1 **Q. Please state your name, business address, and present position with PacifiCorp**
2 **d/b/a Rocky Mountain Power (“PacifiCorp” or the “Company”).**

3 A. My name is Ryan D. McGraw. My business address is 1407 West North Temple, Suite
4 310, Salt Lake City, Utah. My position is Vice President of Project Development.

5 **QUALIFICATIONS**

6 **Q. Briefly describe your education and business experience.**

7 A. I have a Bachelor of Science Degree from the University of California at Davis, a Juris
8 Doctorate from the Willamette University College of Law, and a Master of Business
9 Administration from Willamette University’s Atkinson Graduate School of
10 Management. My career in energy began in 2003, including positions at Pacific Gas
11 and Electric Company and the Bonneville Power Administration. Prior to joining
12 PacifiCorp in July 2020, I was Vice President of Development for Orion Renewable
13 Energy Group LLC, a developer of renewable energy facilities across the United States.
14 To date, I have helped to develop, construct, and operate over 4,000 megawatts (“MW”)
15 of wind and solar facilities across the United States. In my current role at PacifiCorp
16 as Vice President of Project Development, my responsibilities encompass strategic
17 planning, regulatory support, stakeholder engagement, and development and execution
18 of major generation resource additions.

19 **PURPOSE OF TESTIMONY**

20 **Q. What is the purpose of your testimony?**

21 A. I provide a general description of the Rock Creek I Wind Project (“Rock Creek I”) that
22 the Company is requesting rate recovery on in this proceeding, provide an update on
23 the development and status of the project, and discuss general project costs.

1 **Q. Why did the Company pursue Rock Creek I?**

2 A. As described in the testimony of Mr. Rick T. Link, the Company identified a resource
3 need based on a near-term capacity deficit. The Company conducted the 2020 all-
4 source request for proposal (“2020AS RFP”) in order to identify cost-effective
5 resources to fill this need. Bids were received from third-parties for resources in the
6 form of build-transfer agreements (“BTA”), power purchase agreements, and tolling
7 agreements. The Rock Creek I and II Wind Projects were bid by a third-party developer
8 (Invenergy) as BTAs, and these bids were identified among the most economical assets
9 to meet the Company’s identified resource need.

10 **Q. Is the Company requesting rate recovery of the Rock Creek II Wind Project?**

11 A. Not at this time. Rock Creek II is not expected to be in-service until 2025, which is
12 beyond the test period for this rate case.

13 GENERAL DESCRIPTION OF ROCK CREEK I

14 **Q. Please describe Rock Creek I.**

15 A. Invenergy is currently developing two separate facilities, the 190 MW Rock Creek I
16 and 400 MW Rock Creek II facilities. Equipment at each of the facilities will include
17 the following: Wind turbine generators (“WTG”) with associated foundations and base
18 pads, electrical collector systems, collector substations, access roads, operations and
19 maintenance buildings, fiber optical and/or microwave communication equipment,
20 supervisory control and operating status data acquisition control system, main power
21 transformers, meteorological evaluation towers, and overhead transmission tie-lines
22 from the collector substations to each project’s respective point of interconnection.

23 Rock Creek I will consist of 32, ■-MW nameplate-rated WTGs and an

1 approximately nine-mile, 230-kilovolt (“kV”) generation transmission tie-line from a
2 new collector substation that will interconnect with the Company’s existing Foote
3 Creek substation in Carbon County. Rock Creek I is located in Carbon and Albany
4 counties in southeast Wyoming on approximately 13,000 acres of private and state-
5 owned lands.

6 **Q. Have preliminary evaluations of the wind potential been performed at the Rock**
7 **Creek I Wind Project site?**

8 A. Yes. Studies completed by Invenenergy indicate that the Rock Creek I site is suitable for
9 a wind facility. Moreover, the site is adjacent to the Company’s existing High
10 Plains/McFadden Ridge and Foote Creek wind facilities. Wind data collected from
11 existing operations and the area of the project indicate that this site has favorable wind
12 regimes suitable for high performance wind resources.

13 **Q. What is the expected operational life of Rock Creek I?**

14 A. Rock Creek I has an anticipated operational life of 30 years, which aligns with the
15 Company’s currently approved depreciable life for wind resources.

16 **Q. Has the Company received a certificate of public convenience and necessity**
17 **(“CPCN”) for Rock Creek I ?**

18 A. Yes. The Company filed a CPCN application with the Wyoming Public Service
19 Commission (“Commission”) in August 2022, and the Commission approved the
20 application during public deliberations held on February 28, 2023.¹

¹ See, *In the Matter of the Application of Rocky Mountain Power for Certificates of Public Convenience and Necessity for the Rock Creek I and Rock Creek II Wind Projects and the Associated Transmission Infrastructure for Interconnection*, Docket No. 20000-623-EN-22 (Record No. 17154).

ROCK CREEK I DEVELOPMENT STATUS

1

2 **Q. What is the current development status of Rock Creek I?**

3 A. Rock Creek I is in the advanced stages of development. Invenergy, as the project
4 developer, has undertaken multiple years of wind resource analysis and substantial
5 wildlife and environmental analyses. Invenergy also has significant amounts of land
6 under control to host the necessary facilities, signed interconnection agreements, and
7 approved conditional use permits in Carbon and Albany Counties. Invenergy is
8 responsible for the final development and construction of the project in accordance with
9 all permitting and technical requirements.

10 **Q. Has PacifiCorp conducted due diligence to confirm the development status of the**
11 **Rock Creek I?**

12 A. Yes. As part of the 2020AS RFP and throughout the subsequent negotiations with
13 Invenergy, PacifiCorp has conducted due diligence to confirm the on-time development
14 of various items including interconnection status, wind resource performance,
15 production tax credit (“PTC”) eligibility, site control, permitting status, and
16 conformance to technical specifications. This due diligence informed the Company’s
17 negotiations with Invenergy on the scope, schedule, cost, and other terms to establish
18 a mutually agreeable BTA.

19 **Q. Has the Company finalized a BTA for Rock Creek I?**

20 A. Yes. The Company and Invenergy have negotiated an arm’s-length BTA for Rock Creek
21 I, that includes provisions for the supply of WTGs and service for construction of the
22 balance of plant, and managing the complete construction of Rock Creek I. The
23 Company and Invenergy are in the process of obtaining all final internal approvals

1 necessary to execute the BTA and expect the BTA to be fully executed in March 2023.

2 **Q. Please explain the key terms and customer protections of the BTA.**

3 A. Pursuant to the BTA, Invenergy is obligated to develop, engineer, procure equipment
4 for, construct, and transfer ownership of Rock Creek I to the Company. The proposed
5 in-service date for Rock Creek I is December 2024, assuming normal construction
6 circumstances such as weather conditions, labor availability, materials delivery, and
7 permit and agreement processing durations. PacifiCorp is obligated to pay a defined
8 purchase price to Invenergy pursuant to the BTA. The purchase price is fixed, but can
9 be amended based on certain events, however any increased costs are mitigated by
10 additional risk and cost-sharing mechanisms. Examples of cost mitigation protections
11 include:

- 12 • [REDACTED]
- 13 [REDACTED]
- 14 [REDACTED]
- 15 [REDACTED]
- 16 • [REDACTED]
- 17 [REDACTED]
- 18 [REDACTED]
- 19 [REDACTED]
- 20 [REDACTED]
- 21 [REDACTED]
- 22 [REDACTED]
- 23 [REDACTED]

1 [REDACTED]
 2 [REDACTED]
 3 [REDACTED]
 4 [REDACTED]
 5 [REDACTED]
 6 [REDACTED]
 7 [REDACTED]
 8 [REDACTED]

- 9 • Liquidated Damages: In the event that the project is delayed, Invenergy is
 10 required to pay liquidated damages to PacifiCorp.

11 **Q. Who is responsible for constructing Rock Creek I?**

12 A. Invenergy is responsible for construction of the project and will likely utilize and
 13 manage multiple contractors for different aspects of the construction. Invenergy is
 14 managing the construction progress with PacifiCorp oversight until construction is
 15 completed.

16 **Q. Who will be responsible for supplying WTGs for Rock Creek I?**

17 A. The Company anticipates that the WTGs will be purchased and delivered according to
 18 the terms of a turbine supply agreement to be negotiated and executed by Invenergy.
 19 The project is currently expected to utilize WTGs manufactured by [REDACTED]
 20 with a nominal nameplate capacity of [REDACTED] MW each and rotor diameter of [REDACTED] meters.
 21 The final selection of WTG manufacturer and model remains subject to change by
 22 Invenergy. Any changes to these selections would be reviewed by PacifiCorp.

1 **Q. When will construction begin and end?**

2 A. The Company anticipates construction will commence in the second quarter of 2023
3 for the project. The proposed in-service date for Rock Creek I is December 2024,
4 assuming normal construction circumstances such as weather conditions, labor
5 availability, materials delivery, and permit and agreement processing durations.

6 The Company will provide a notice to the Commission before construction
7 begins and regular construction status updates as required by the Commission. The
8 Company also expects to provide a status update for Rock Creek I with rebuttal
9 testimony in this case.

10 **Q. How will the Company oversee construction of Rock Creek I to maintain the**
11 **proposed in-service date?**

12 A. PacifiCorp's Owner's Engineer will oversee construction to ensure the project will be
13 completed on time. This will include reviewing all design submittals to ensure they
14 meet the technical specifications and performance requirements outlined in the BTA,
15 and make periodic site visits to ensure that critical infrastructure is installed per the
16 design documents and has passed acceptability testing.

17 PacifiCorp will also use full-time, on-site inspector(s) to ensure that Invenergy
18 adheres to the project schedule, and builds the project consistent with the terms of the
19 BTA. This includes monitoring Invenergy's day-to-day activities, attending daily site
20 meetings, and providing inspection services as needed. The Company will also hold
21 weekly or bi-weekly project status meetings with Invenergy, where Invenergy will
22 report on the status of the project, discuss critical issues that impact schedule, and
23 address the status of any recovery plans as needed.

1 **Q. Who will operate and maintain Rock Creek I?**

2 A. After the project is built, a qualified third-party is expected to provide certain
3 operations and maintenance services for the first five years of operation. During the
4 initial five-year period, the Company will oversee the third-party to ensure compliance
5 with all relevant agreements, and may self-perform any operations and maintenance
6 activities that are not included in the scope of the third-party's work.

7 Beginning in the sixth year of operation, the Company expects to take over all
8 operations and maintenance activities at the project. The Company has an experienced
9 team of personnel that are highly qualified and currently operate and maintain an
10 extensive Company-owned wind generation fleet that includes the High
11 Plains/McFadden Ridge, Foote Creek I, Seven Mile Hill I and II, Ekola Flats, TB Flats
12 I and II, and Dunlap in this region of Wyoming.

13 Once Rock Creek I construction is complete, the wind turbine supplier will
14 provide a warranty for the project for a period of time, during which any significant
15 repairs will be conducted by the wind turbine supplier. In addition, the wind turbine
16 supplier or other third parties may be engaged from time to time to help operate and
17 maintain the Wind Projects.

18 **Q. Has Invenergy obtained the necessary local permits and rights-of-way ("ROW")**
19 **for Rock Creek I?**

20 A. Yes. Carbon County issued a Conditional Use Permit for the project on November 16,
21 2021, and Albany County issued a Conditional Use Permit for the project on January
22 18, 2022. In addition, the Industrial Siting Council approved Invenergy's application
23 for an Industrial Siting Permit on April 15, 2022. Invenergy has also been collaborating

1 with the U.S. Fish and Wildlife Service in developing and implementing the project.

2 Invenergy has obtained all the required ROW for the Rock Creek I project
3 including the transmission tie-line.

4 The project remains on-track for completion and an in-service date of December
5 2024.

6 **ROCK CREEK I COSTS**

7 **Q. What is the estimated total project cost for the Rock Creek I Wind Project?**

8 A. The Company has estimated the total project costs for Rock Creek I to be \$ [REDACTED]
9 million.

10 **Q. How did the Company estimate construction and operations and maintenance
11 (“O&M”) costs for Rock Creek I?**

12 A. Project costs are based on negotiations with Invenergy. Interconnection costs were
13 informed by the cost estimates included in the project’s executed large generator
14 interconnection agreement (“LGIA”), along with the interconnection studies that
15 informed the interconnection agreement. The Company’s costs for engineering, legal,
16 internal project management, and allowance for funds used during construction
17 (“AFUDC”) were estimated based on the Company’s experience with development and
18 construction of existing wind facilities. O&M cost estimates were developed based on
19 the Company’s experience with wind resource O&M budgets and third-party contracts
20 for the Company’s existing wind facilities.

21 **Q. Will Rock Creek I qualify for federal PTCs?**

22 A. Yes. Under the Inflation Reduction Act (“IRA”), the Company believes that the project,
23 with a 2024 in-service date, qualifies for 100 percent of the PTC available for projects

1 placed in service after 2021. For projects placed in service after 2022, the IRA also
2 provides an additional 10 percent bonus credit if the project is located in an “energy
3 community.” This definition includes census tracts, or any directly adjoining census
4 tracts, in which: (1) after 1999 a coal mine has closed, or (2) after 2009 a coal-fired
5 electric generating unit has been retired. The Company understands that Rock Creek I
6 satisfies this definition.

7 Taken together, the Company expects Rock Creek I to qualify for a PTC equal
8 to 110 percent of the full credit available. This credit will be returned to customers in
9 the Company’s annual Energy Cost Adjustment Mechanism filing.

10 **Q. How did the Company assess the customer benefits provided by Rock Creek I?**

11 A. Mr. Link provides a detailed description of the Company’s customer benefits
12 assessment in his testimony. The methodology used to perform the economic analysis
13 of the Rock Creek I Wind Project is consistent with the methodology used to perform
14 the economic analysis of both the Rock Creek I and Rock Creek II Wind Projects from
15 the CPCN application. The economic analysis reflects significant benefits from the
16 acquisition of the Rock Creek I and Rock Creek II Wind Projects.

17 **SUMMARY AND RECOMMENDATION**

18 **Q. Please summarize your testimony.**

19 A. The Company successfully negotiated a BTA with Invenergy that prudently manages
20 risks, mitigates costs, allows effective oversight, and ensures that Rock Creek I remains
21 on schedule for a 2024 in-service date. Rock Creek I will provide significant benefits
22 to Wyoming customers, and I recommend the Commission approve Rock Creek I in
23 the Company’s retail rates.

1 **Q. Does this conclude your direct testimony?**

2 **A. Yes.**

BEFORE THE PUBLIC SERVICE COMMISSION OF WYOMING

IN THE MATTER OF THE) APPLICATION OF ROCKY) MOUNTAIN POWER FOR) AUTHORITY TO INCREASE ITS) RETAIL ELECTRIC SERVICE RATES) AND TO REVISE THE ENERGY COST) ADJUSTMENT MECHANISM)	DOCKET NO. 20000-__-ER-23 (RECORD NO. ____)
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AFFIDAVIT, OATH AND VERIFICATION

Ryan McGraw (Affiant) being of lawful age and being first duly sworn, hereby deposes and says that:

Affiant is the VP, Project Development for PacifiCorp, which is a party in this matter.

Affiant prepared and caused to be filed the foregoing testimony. Affiant has, by all necessary action, been duly authorized to file this testimony and make this Oath and Verification.

Affiant hereby verifies that, based on Affiant's knowledge, all statements and information contained within the testimony and all of its associated attachments are true and complete and constitute the recommendations of the Affiant in his official capacity as VP, Project Development.

Further Affiant Sayeth Not.


Dated this 27th day of February, 2023



 Ryan McGraw
 VP, Project Development

STATE OF Utah)
) SS:
 COUNTY OF Salt Lake)

The foregoing was acknowledged before me by Ryan McGraw on this 27th day of February, 2023. Witness my hand and official seal.



 Notary Public

My Commission Expires: 2/14/2026

