

Heidi Gordon (#11655) (hgordon@fabianvancott.com)
FABIAN VANCOTT
215 So. State Street, Suite 1200
Salt Lake City, Utah 84111
Telephone: 801-531-8900

Bret Reich (#9542) (bret.reich@pacificorp.com)
PACIFICORP, d/b/a ROCKY MOUNTAIN POWER
1407 W. North Temple, Suite 320
Salt Lake City, Utah 84116

Attorneys for Petitioner Rocky Mountain Power

BEFORE THE UTAH UTILITY FACILITY REVIEW BOARD

<p>PACIFICORP, doing business as ROCKY MOUNTAIN POWER,</p> <p style="text-align: right;">Petitioner</p> <p style="text-align: center;">vs.</p> <p>MIDWAY CITY,</p> <p style="text-align: right;">Respondent</p>	<p style="text-align: center;">DIRECT TESTIMONY OF JAKE BARKER</p> <p style="text-align: center;">Docket No. 20-035-03</p>
---	---

1 **BACKGROUND OF WITNESS**

2 **Q: Please state your name, business address and present position.**

3 A: My name is Jake Barker. My business address is 1407 W. South Temple, Salt Lake City,
4 Utah. I am the Director of Transmission Planning and Power Quality at Rocky Mountain
5 Power. I have held that position since March, 2018.
6

7 **Q: Please describe your education and business experience.**

8 A: I have a Bachelor’s degree in electrical engineering from Utah State University and a
9 Master’s degree in Business Administration from the University of Utah. I have been
10 employed by Rocky Mountain Power for 17 years, holding positions in distribution
11 engineering, transmission planning, asset management and power quality.
12

13 **Q: What is your role with regard to the Jordanelle to Midway project?**

14 A: As the Director of Transmission Planning and Power Quality, I am responsible for
15 ensuring that Rocky Mountain customers receive safe, reliable and efficient energy. I
16 do this by applying reliability standards to Rocky Mountain Power’s transmission
17 system and planning for necessary upgrades to the system to provide additional
18 capacity and improve electric service reliability to meet power requirements.
19

20 **PURPOSE OF TESTIMONY**

21 **Q: What is the purpose of your testimony?**

22 A: The purpose of my testimony is to discuss the purpose and need for this project.
23

24 **DESCRIPTION OF THE PROJECT**

25 **Q: Please describe the Jordanelle to Midway project.**

26 A: The Jordanelle to Midway line project (the “Project”) is to construct new and reconstruct
27 portions of an existing transmission line to 138 kilovolt (kV) between Jordanelle and
28 Midway substations starting at approximately 900 North Main Street, Heber City, in
29 Wasatch County, Utah, and ending at Rocky Mountain Power’s Midway Substation, also
30 in Wasatch County, Utah. It will also include installing fiber optic communication lines
31 on existing transmission structures between the Jordanelle and Midway substations as

1 well as the Silvercreek Substation in Summit County, Utah, the Hale Substation in Utah
2 County, Utah, and the Wallsburg Substation, in Wasatch County, Utah. The new and
3 rebuilt 138kV transmission lines is located in Heber City, Midway City, and
4 unincorporated Wasatch County, Utah. The Project involves approximately ten (10) miles
5 of transmission line.

6
7 Approximately eight (8) miles of 138 kV transmission line is a jointly sited and funded
8 project between Rocky Mountain Power and Heber Light & Power, with both companies'
9 facilities occupying the same set of poles and rights of way. In March and April 2017 the
10 final agreement between Rocky Mountain Power and Heber Light & Power was
11 executed.

12
13 The Project is designed to meet the National Electric Safety Code.

14
15 **Q: What is the purpose of the Project?**

16 A: To provide needed capacity and increased reliability based on current system needs and
17 limitations in Wasatch County and surrounding areas. Rocky Mountain Power's 138 kV
18 transmission line will provide regional transmission service to customers in Wasatch
19 County and surrounding areas, including Heber Light & Power and its customers.

20 21 **WHY IS THIS PROJECT NEEDED**

22 **Q: How is electricity brought into the Heber Valley?**

23 A: Heber Valley is part of the Park City transmission planning area. The Park City area is
24 served by three Rocky Mountain Power transmission sources.

25
26 **Q: What are the three Rocky Mountain Power transmission sources that serve Heber
27 Valley and Park City?**

28 A: The first source is a 138kV transmission line from Cottonwood substation in Salt Lake
29 Valley through Parley's Canyon to Snyderville substation near Kimball Junction. The
30 next source is a 138kV transmission line from Hale substation in Utah Valley through
31 Provo Canyon to Midway substation. The third source is a 138kV transmission line from

1 Railroad substation in Evanston, Wyoming to Silver Creek substation near the
2 intersection of Highway 248 and Highway 40.

3
4 **Q: Why is this project needed if Heber Valley and the Park City area are served by
5 three Rocky Mountain Power transmission sources?**

6 A: With all three sources connected, voltage meets all applicable PacifiCorp voltage
7 standards. However, if any of the three sources experience an outage, voltage will not
8 meet all applicable PacifiCorp voltage standards.

9
10 **Q: What standards does Rocky Mountain Power use to supply power?**

11 A: The Rocky Mountain Power planning standards for transmission voltage require the
12 voltage to remain above 90% of nominal voltage (138kV) for this looped system during
13 an outage.

14
15 **Q: What are the Rocky Mountain Planning standards based on?**

16 A: Planning standards for transmission voltage are based on the American National
17 Standards Institute (ANSI) C84.1 voltage utilization standard.

18
19 **Q: What is the forecasted load for the 2020-2021 winter in the Heber Valley and Park
20 City area?**

21 A: Based on historical loading values and calculated growth rates, a forecasted load of 217
22 megawatts is anticipated for the 2020-2021 winter in the Park City and surrounding area.

23
24 **Q: What would happen if an outage occurred on the Cottonwood-Snyderville 138kV
25 transmission line if the project is not completed?**

26 A: It would result in reduced voltages in the Park City and surrounding area below the
27 planning standards for transmission voltage limits.

28
29 **Q: What is its practical impact on customers?**

30 A: Planning models show voltage reducing to 63% of nominal voltage of 138 kilovolts at
31 Snyderville substation during highest loading periods. Communities affected under this

1 scenario are Midway City, Heber City, Brighton, Deer Valley, Park City, Kimball
2 Junction, Summit Park, Kamas, and Oakley. The effects of voltages outside the planning
3 standards limits to these communities can range from black out, to partial loss of load, to
4 equipment damage.

5
6 **Q: What would happen if an outage occurred on the Hale-Midway 138kV transmission
7 line if the project is not completed?**

8 A: An outage of the Hale-Midway 138 kilovolt transmission line would result in voltage at
9 Midway substation to be 73% of the nominal voltage of 138 kilovolts. Communities
10 affected in this scenario are Midway City, Heber City, Brighton, Deer Valley and Park
11 City. The effects of reduced voltage to these communities can range from black out, to
12 partial loss of load, to equipment damage.

13
14 **Q: If either the Hale-Midway or the Cottonwood-Snyder 138kV transmission lines
15 experienced an outage, couldn't Rocky Mountain Power system operators switch
16 the power to come from alternate sources?**

17 A: All available transmission sources are being utilized under this scenario. Switching by
18 Rocky Mountain Power system operators would enable the restoration of all but 42
19 megawatts of customer load which would raise voltages above planning standard limits.
20 The unrestored customer load would remain out until line repairs could be made to the
21 Cottonwood-Snyder 138kV transmission line in Parley's canyon or the Hale-Midway
22 138kV transmission line in Provo canyon.

23
24 **Q: What are Rocky Mountain Power's risk projections for the Heber Valley and Park
25 City area if the project is not completed?**

26 A: During the 2020-2021 winter, there will be up to 620 hours of exposure to the risk of
27 inadequate voltage to customers in the Heber Valley and Park City area. Given the
28 underlying growth rate and load interconnections studied and in the queue, it is
29 anticipated the number of hours at risk will continue to increase annually.

30

1 **Q. Please explain the interconnection with Heber Light & Power? What is its purpose?**

2 A. Heber Light & Power through Utah Associated Municipal Power Systems (UAMPS)
3 requested a second point of delivery at 138 kilovolts for redundancy and the increasing
4 need for capacity on their system. Heber Light & Power's first point of delivery is located
5 at Midway substation.

6

7

SUMMARY OF TESTIMONY

8

9 **Q: Please summarize your testimony.**

10 A: Until this project is completed, Heber Valley and the Park City area may experience
11 inadequate voltage during outages on the Cottonwood-Snyderville 138kV transmission
12 line or the Hale-Midway transmission line.

13

14 **Q: Does this conclude your direct testimony?**

15 A: Yes.

16