
2018 Renewable Energy Standard Compliance Report

Black Hills Colorado Electric, LLC d/b/a Black Hills Energy
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Proceeding No. 16A-0436E



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Black Hills Colorado Electric, LLC d/b/a Black Hills Energy
2018 Renewable Energy Standard (RES) Compliance Report

Executive Summary

Black Hills Colorado Electric, LLC (“Black Hills” or “Company”) is pleased to report that it is in compliance with the 2018 Renewable Energy Standard (“RES”) established by C.R.S. § 40-2-124 *et seq.* (“RES statute”) and implemented by Code of Colorado Regulations 723-3 rules 3650-3668 (“RES Rules”).

The RES statute requires Black Hills to generate or cause to be generated at least twenty percent of its retail electricity sales from renewable energy resources with at least two percent from distributed generation resources including at least one percent from retail distributed generation.

Pursuant to Commission rule 3659(a), Renewable Energy Credits are used to comply with RES. As described in this report, Black Hills has sufficiently generated or caused to be generated Renewable Energy Credits (“RECs”) to satisfy each component of the 2018 RES requirements.

This 2018 Annual RES Compliance Report contains a narrative description of how Black Hills achieved compliance with each component of the RES rules that were in effect in compliance year 2018, citing to individual rules and supporting exhibits with details of monthly REC contributions.

An electronic copy of this annual compliance report has been posted on the Black Hills website pursuant to Rule 3662(d). Black Hills will also provide the Commission with an electronic copy of this report, excluding any confidential material, pursuant to Rule 3662(e).

2018 RES Compliance Overview

Pursuant to Rule 3662(b), Black Hills reports that for the compliance year 2018, the Company achieved compliance with each component of the RES. This report follows Rule 3662, “Annual RES Compliance Report,” and demonstrates that Black Hills has complied with the requirements of the RES.

In 2018 Black Hills had total retail sales of 1,969,683 megawatt hours (“MWh”). Therefore, the RES requirement for 2018 is 393,937 MWh of renewable energy. Black Hills has exceeded this requirement and has carried forward 85,560 RECs to 2019.

Black Hills met the requirements for non-distributed generation of the RES through the following Black Hills renewable sources:

- Busch Ranch I Wind Project – 141,891 RECs (Attachment A.1 – “RES Compliance Summary” and Attachment A.2 – “Busch Ranch Wind”).
 - 73,463 RECs were carried forward from 2017 for 2018 compliance.
 - 68,428 RECs generated in 2018 were used for 2018 compliance.
- Peak View Wind Project – 212,652 RECs (Attachment A.3 – “Peak View Wind”).
 - 212,652 RECs generated in 2018 were used for 2018 compliance.

Black Hills met the requirements for renewable distributed generation (“DG”) including retail distributed generation (“Retail DG”) of the RES through the following Black Hills Commission-approved wind and solar programs:

- On-Site Solar <10kW – 19,697 RECs (Attachment A.4 – “Onsite Solar <10kW”)
 - 1 REC was carried forward from 2014 for 2018 compliance.
 - 7,512 RECs were carried forward from 2015 for 2018 compliance.
 - 8,527 RECs were carried forward from 2016 for 2018 compliance.
 - 3,657 RECs were carried forward from 2017 for 2018 compliance.
- On-Site Solar >10kW – 7,472 RECs (Attachment A.5 – “Onsite Solar >10kW”)
 - 1,383 RECs were carried forward from 2016 for 2018 compliance.
 - 6,089 RECs were carried forward from 2017 for 2018 compliance.
- Non-Solar Retail DG (Vestas) – 12,225 RECs (Attachment A.7 – “Non-Solar Retail DG”)
 - 2,751 RECs were carried forward from 2015 for 2018 compliance.
 - 3,378 RECs were carried forward from 2016 for 2018 compliance.
 - 3,113 RECs were carried forward from 2017 for 2018 compliance.
 - 2,983 RECs generated in 2018 were used for 2018 compliance.

2018 – 2021 RES Compliance Plan Overview

The Commission approved Black Hills’ 2018 – 2021 RES Compliance Plan by Decision No. R17-0039, issued January 17, 2017. The Commission approved, without modification, the terms of a unanimous Settlement Agreement joined by Black Hills, Staff of the Colorado Public Utilities Commission, the Colorado Office of Consumer Counsel, the Colorado Energy Office, the Colorado Independent Energy Association, Western Resource Advocates, and the Interwest Energy Alliance. The Company’s 2018 – 2021 RES Compliance Plan is comprised of three generating resource types: wind projects, Community Solar Gardens, and On-site solar programs.

Wind Projects:

Busch Ranch Wind I Project –

The Busch Ranch Wind I Project, nameplate capacity of 29 MW, came on-line in late 2012, and 2018 was the sixth full year of operation for the project. Black Hills owns a 50% undivided ownership in this facility, the other 50% is owned by Black Hills Colorado Wind, LLC. On December 10, 2018 Black Hills Colorado Wind, LLC purchased AltaGas’ 50% ownership stake in the Busch Ranch Wind Project. Black Hills had a Renewable Energy Purchase Agreement (“REPA”) to purchase the renewable energy from AltaGas. This REPA was transferred to Black Hills Colorado Wind, LLC after the ownership transition. The Busch Ranch Wind Project is located in Huerfano County, Colorado.

Peak View Wind Project –

The Peak View Wind Project came on-line in late 2016, and 2018 was the second full year of operation for the project. The project was approved by Commission Decision C15-1182 in Proceeding No. 15A-0502E. The Company purchased this 60 MW project from Invenergy, LLC after it was selected as the winning bid in a competitive bid solicitation in Proceeding No. 13A-0445E. Attachment B provides more information regarding the settlement agreement reached in Proceeding No. 15A-0502E. The Peak View Wind Project is located in Huerfano County and Las Animas County in Colorado.

Busch Ranch II Wind Project –

The Company initiated Phase II of the 2016 ERP, through Decision No. R17-0039, by requesting approval of Accion Group, LLC as Independent Evaluator for the Phase II solicitation. The Commission approved the Company's request on June 19, 2017. The Company issued two Request for Proposals ("RFPs") on August 4, 2017: 1) the Eligible Energy Resources RFP and 2) the Standalone REC RFP. Black Hills received 34 bids in response to the Eligible Energy Resources RFPs. Of those bids, 14 included standalone RECs. The majority of the bids included alternative pricing options which increased the number of bids that the Company screen in its initial evaluation to 102. The Company filed its 30-Day Report on September 1, 2017. Pursuant to Commission Rule 3618(b)(I), the 30-Day Report included the identity of the bidders that submitted bids, the number of bids received, the quantity of MW offered by bidders, a breakdown of the number of bids, MW received by resource type, and a description of the prices of the resources offered. Additionally, the report identified the bids claiming Section 123 status.

The Company filed its 120-Day Report on February 9, 2018. The Company's evaluation determined that the bid that offered a power purchase agreement for a 60 MW wind project (Busch Ranch II Wind Project"), was the most competitive based upon the standard set forth in Decision No. R17-0039. The winning bid ranked the highest in both economic and non-economic evaluation criteria, had the lowest Net Present Value of Revenue Requirements, and provided the most net incremental cost savings of all the bids that the Company evaluated.

On April 25, 2018, the Commission issued Decision No. C18-0462 authorizing the Company to pursue the cost-effective resource plan with further due diligence and contract negotiations. The Company entered into an Energy Purchase Agreement with Black Hills Electric Generation, LLC on September 25, 2018 where Black Hills Electric Generation, LLC will design, develop, and construct the Busch Ranch II Wind Project. The Commercial Operation Date is set forth as December 31, 2019.

Community Solar Gardens:

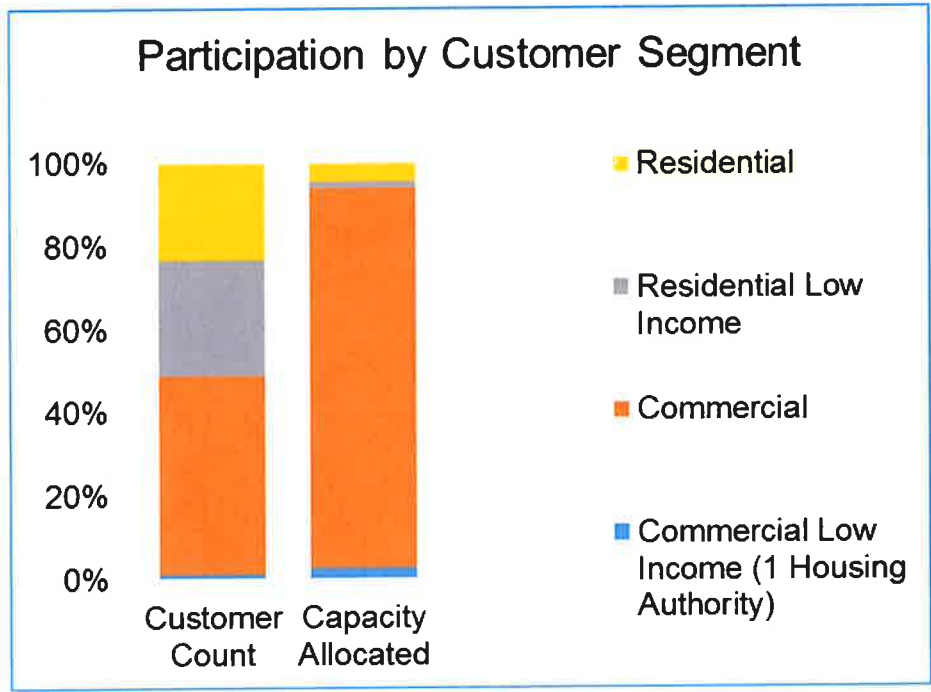
The Company's 2018 – 2021 RES Compliance Plan consists of 8 new community solar gardens precured through a competitive bidding process. Each year of the 2018 – 2021 RES Compliance Plan, the Company will issue two RFP's; (1) 500 kilowatt ("kW") 100% Low-Income Community Solar Garden ("CSG") RFPs, and (2) 2,000 kW "Open" CSG RFPs.

In 2018 the Company issued a RFP for up to 500 kW of Low-Income CSG capacity and a RFP for up to 2,000 kW of "Open" CSG capacity on July 2, 2018 with a response deadline of August 10, 2018. The Company received a total of four 500 kW Low-Income CSG bids and ten 2,000 kW Open CSG bids. As defined in the RFP, the Company evaluated the bids on economic and non-economic criteria such as location, developer experience, development schedule, equipment description, energy production profile, permitting plan, operations and maintenance plan, and community assessment. On October 17, 2018, the Company conducted a meeting with Staff of the Colorado Public Utilities Commission to discuss and review the Company's CSG RFP schedule, responses received, evaluation of the responses, and the Company's recommendations for the bids received in the 2018 solicitation. On October 19, 2018, the Company offered Grid Alternatives Colorado a Notification of Acceptance for the 500 kW Low-Income CSG and the 2,000 kW Open CSG. Grid Alternatives Colorado accepted and executed the Notification of Acceptance on October 22, 2018. The two CSGs are currently in the design and permitting phase and have an expected Commercial Operation Date of Fall 2020. Pursuant to Rule 3652(d), Grid Alternatives Colorado submitted the winning bids as a Community Based Project. Subsequently,

the Company will realize a 1.5 multiplier on the RECs generated as a result of the classification of a Community Based Project.

Consistent with the 2015 – 2017 RES Compliance Plan Settlement, the Company issued two RFPs for up to 2,500 kW of CSG capacity in 2016. The capacity was awarded and the two CSGs had a Commercial Operation Date of September 2018. In 2017, the Company again issued two RFPs for up to 2,500 kW of CSG capacity. The awarded 500 kW CSG came on-line in April 2019 and the awarded 2,000 CSG is currently under construction and has a Commercial Operation Date of October 2019.

As of December 31, 2018, Black Hills currently has 2.48 MW of installed CSG capacity. Through those three separate CSGs, the Company has 94 subscribers and a total of 1.69 MWh of unsubscribed energy throughout the year. Refer to Rule 3662(a)(XVIII) below for further information on 2018 CSGs. Additionally, refer below for a representation of the 2018 CSG subscriber segments for Black Hills:



On-site solar program:

The on-site solar program has experienced a significant growth in the number of customers interconnecting private area solar systems in the past two years. In 2017, the Company, for the first time, ran out of available capacity for the production-based incentive program and began interconnecting customers without an incentive payment. In 2017, the Company interconnected a total of 437 customers. 264 customers were eligible for the production-based incentive, and 173 customers received net-metering only service. In 2018, the Company interconnected a total of 382 customers. 52 customers were eligible for the production-based incentive and 330 customers received net-metering only service. The Company does not obtain the RECs associated with net-metering only customers; these RECs remain with the customer. Customers participating in the performance-based program receive an incentive payment based on the production of their on-site solar systems and the Company retains the RECs generated by the customer. In 2018, 0.42 MW of on-site performance-based solar capacity was installed and 1.93 MW of on-site net-metering

only solar capacity was installed. Additionally, 21,879 RECs were obtained through existing performance-based solar systems and systems installed in 2018.

RES Compliance Report

Pursuant to Rule 3662(a)(I), Black Hills reports that its retail electricity sales in Colorado totaled 1,969,683 MWh in 2018. Therefore, Black Hills' 2018 applicable Renewable Energy Standard pursuant to § 40-2-124(1)(c)(I)(D) was 393,937 MWh, or 20% of the 2018 MWh sales. In addition, 39,394 MWh or 2% of the total retail electricity sales were required to be renewable distributed generation and one-half of the renewable DG (19,697 MWh) were required to be retail renewable DG. Black Hills complied with Rule 3662(a)(I) by actually generating 284,063 RECs during 2018 and carrying forward 109,874 RECs from previous years, as highlighted in Attachment A.

Pursuant to Rules 3662(a)(II) and 3662(a)(III), Black Hills reports that it acquired a total of 358,449 RECs in 2018. For wholesale distributed generation energy, the Busch Ranch Wind Project produced 95,531 MWh of wind energy in 2018. This equates to 119,414 RECs after applying the 25% Colorado in-state credit. The Company also acquired 212,652 RECs from the Peak View Wind Project. These RECs are considered non-distributed generation. The total amount of QRU-owned eligible energy production equals the sum of Busch Ranch and Peak View production, or 308,183 MWh. The Company did not purchase any stand-alone RECs in order to meet 2018 compliance. No RECs from biomass or biodiesel were produced in 2018 and production of these RECs is not projected to occur in the future. Please see Attachment A.2 – “Busch Ranch Wind”, Attachment A.3 – “Peak View Wind”, Attachment A.8 – “REC Purchases & Sales”, Attachment A.9 – “Biomass Resources”, Attachment A.10 – “Biodiesel – Pueblo” and Attachment A.11 – “Biodiesel – Rocky Ford”, which are attached to this report and incorporated herein.

Also pursuant to Rules 3662(a)(II) and 3662(a)(III), the total of the Retail DG RECs acquired in 2018 was 26,383 RECs from participants in Black Hills' Standard Rebate Offer program, Performance Based Incentive programs, Community Solar Garden program, and by a Non-Solar Retail DG resource. Please see Attachment A.4 – “Onsite Solar <10kW”, Attachment A.5 – “Onsite Solar >10kW”, Attachment A.6 – “Community Solar Gardens” and Attachment A.7 – “Non-Solar Retail DG”.

Pursuant to Rule 3662(a)(IV), Black Hills reports that no Eligible Energy and RECs were borrowed forward, pursuant to Rule 3654 from previous compliance years, and thus no Eligible Energy and RECs were made up during the 2018 compliance year. See Attachment A.1 – “RES Compliance Summary.”

Pursuant to Rule 3662(a)(V), Black Hills reports that no Eligible Energy and RECs will be borrowed forward from future compliance years, pursuant to Rule 3654. See Attachment A.1 – “RES Compliance Summary”.

Pursuant to Rule 3662(a)(VI), Black Hills reports that no Eligible Energy and RECs will be carried back from 2019 Eligible Energy and RECs produced prior to July 1, under Rule 3654(h)(I). See Attachment A.1 – “RES Compliance Summary”.

Pursuant to Rule 3662(a)(VII), Black Hills reports that, under Rule 3654(h)(III), a total of 121,048 RECs were carried forward from calendar years prior to 2018. Of these, a total of

109,874 were used for 2018 Compliance. For 2018 RES Compliance, the following carried forward RECs were used to meet compliance:

- 73,463 RECs from Busch Ranch Wind Project production in 2017 (Attachment A.2 – “Busch Ranch Wind”).
- 1 REC from Solar <10kW (DG) production in 2014 (Attachment A.4 – “Onsite Solar <10kW”).
- 7,512 RECs from Solar <10kW (DG) production in 2015 (Attachment A.4 – “Onsite Solar <10kW”).
- 8,527 RECs from Solar <10kW (DG) production in 2016 (Attachment A.4 – “Onsite Solar <10kW”).
- 3,657 RECs from Solar <10kW (DG) production in 2017 (Attachment A.4 – “Onsite Solar <10kW”).
- 1,383 RECs from Solar >10kW (Retail DG) production in 2016 (Attachment A.5 – “Onsite Solar >10kW”).
- 6,089 RECs from Solar >10kW (Retail DG) production in 2017 (Attachment A.5 – “Onsite Solar >10kW”).
- 2,751 RECs from Non-Solar Retail DG (Vestas) production in 2015 (Attachment A.7 – “Non-Solar Retail DG”).
- 3,378 RECs from Non-Solar Retail DG (Vestas) production in 2016 (Attachment A.7 – “Non-Solar Retail DG”).
- 3,113 RECs from Non-Solar Retail DG (Vestas) production in 2017 (Attachment A.7 – “Non-Solar Retail DG”).

Pursuant to Rule 3662(a)(VIII), Black Hills reports that, under Rule 3654(h)(III), 74,386 RECs that were acquired in 2017 will be carried forward from the 2017 compliance year for future REC requirements. See Attachment A.1 – “RES Compliance Summary”.

Pursuant to Rule 3662(a)(IX), Black Hills reports that the following renewable energy resources were counted toward compliance with the 2018 RES:

- Wind (Non-DG) RECs = 281,080. See Attachments A.2 – “Busch Ranch Wind” and A.3 – “Peak View Wind” for monthly contribution detail.
- Non-Solar Retail DG (Vestas) = 2,983. See Attachment A.7 – Non-Solar Retail DG for monthly contribution detail.

Pursuant to Rule 3662(a)(X), Black Hills reports that in 2018 it acquired 21,879 RECs through the Standard Rebate Offer and Performance Based Incentive programs. Please see Attachment A.4 – “Onsite Solar <10kW” and Attachment A.5 – “Onsite Solar >10kW” for monthly contribution detail.

Pursuant to Rule 3662(a)(XI), Black Hills reports that it did not retire any RECs during the compliance year pursuant to a voluntary green pricing program.

Pursuant to Rule 3662(a)(XII), Black Hills reports that it did not sell RECs during the compliance year. Additionally, Black Hills did not purchase any RECs for 2018 Compliance.

Pursuant to Rule 3662(a)(XIII), on June 23, 2017, Black Hills issued two Request for Proposals (“RFP”) – the Eligible Energy Resources (“EER”) RFP and the Request for Proposal for Renewable Energy Credits in Conjunction with Eligible Energy Resource Bid. Through the EER RFP, Black Hills sought to acquire up to 60 MW of eligible energy resources necessary for compliance with the RES as identified in Black Hills’ 2016 ERP and the 2018-2021 RES

Compliance Plan. Black Hills filed its 120-Day Report on February 9, 2018. Black Hills' evaluation determined that the bid that offered a power purchase agreement for a 60 MW wind project ("Busch Ranch II Wind Project"), was the most competitive based upon the standard set forth in Decision No. R17-0039. The winning bid ranked the highest in both economic and non-economic evaluation criteria, had the lowest Net Present Value of Revenue Requirements, and provided the most net incremental cost savings of all the bids that Black Hills evaluated. On April 25, 2018, the Commission issued Decision No. C18-0462 authorizing Black Hills to pursue the cost-effective resource plan with further due diligence and contract negotiations. Black Hills entered into an Energy Purchase Agreement with Black Hills Electric Generation, LLC on September 25, 2018 where Black Hills Electric Generation, LLC will design, develop, and construct the Busch Ranch II Wind Project. The Commercial Operation Date is set forth as December 31, 2019.

Pursuant to Rule 3662(a)(XIV), Black Hills reports that it spent a total of \$5,626,621 RESA funds in 2018 to acquire Eligible Energy and its associated REC's during the compliance year.

2018 Retail Rate Impact	
2018 RESA Revenue (2% Renewable Energy Standard Adjustment)	\$4,992,829
Costs of REC's Acquired in 2018	\$5,626,621
Funds Applied to Existing Negative RESA Balance	\$(633,792)
Retail Rate Impact	2%

Pursuant to Rule 3662(a)(XV), Black Hills reports that during 2018, a 2% surcharge was collected from customers to fund the acquisition of Eligible Energy. The funds collected through this adjustment clause were used to pay for Commission approved Performance Based Incentive payments, administration costs, interest expenses, incremental costs of renewable resources, and the remaining balance was applied to the existing negative RESA balance.

Pursuant to Rule 3662(a)(XVI), Black Hills does not have any plans for new Eligible Energy Resources coming online prior to the end of the following compliance year that have not been proposed to be locked down pursuant to an investor owned QRU's compliance plan filing.

Pursuant to Rule 3662(a)(XVII), Black Hills reports that its 2018 total RESA revenue was \$4,992,829 and its total cost of 2018 compliance was \$5,626,621, and therefore, no funds were advanced during the 2018 compliance year to augment the amounts collected from retail customers through the RESA.

Pursuant to Rule 3662(a)(XVIII), the average hourly incremental cost of electricity during the compliance year and paid to net metering customers in January of 2019 was \$.02082 per kWh. The \$.02082 per kWh represents the average hourly incremental cost of electricity currently on file with the Commission per Proceeding No. 18AL-0841E that became effective January 1, 2019 and was calculated based on October 1, 2017 – September 30, 2018 data. The average hourly incremental cost of electricity on file with the Commission during the compliance year (effective January 1, 2018) was \$.02496 per kWh per Proceeding No. 17AL-0805E.

Also pursuant to Rule 3662(a)(XVIII), there was 1.69 MWh of unsubscribed CSG capacity at the end of 2018. CSG subscriptions during 2018 produced 228 MWh for residential customers, 459 MWh for small commercial customers, 749 MWh for large commercial customers, and 85 MWh for irrigation customers. During 2018, residential CSG subscription customers received

\$24,849.39 in bill credits, small commercial customers received \$52,923.53 in bill credits, large commercial customers received \$79,627.11 in bill credits, and irrigation customers received \$10,829.61 in bill credits.

Pursuant to Rule 3662(b), Black Hills reports that it achieved compliance with each component of the RES in 2018. Please see Attachment A.1 – “RES Compliance Summary”.

Conclusion

Black Hills achieved compliance with Colorado’s RES for the 2018 compliance year in accordance with the Commission Rules using RECs produced from a combination of wind and solar resources. A vast majority of the requirement was met through wind RECs produced from the Busch Ranch I Wind Project and the Peak View Wind Project. In addition, a portion of the requirement was met as a result of carry forward RECs obtained from the Busch Ranch Wind Project, On-site Solar program production, and Vestas production in program years 2014, 2015, 2016, and 2017. With the addition of Busch Ranch II in 2019, the Company is positioned to comply with future RES requirements.