**BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION**

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| IN THE MATTER OF THE<br>APPLICATION OF BLACK HILLS<br>NEBRASKA GAS, LLC d/b/a<br>BLACK HILLS ENERGY FOR<br>APPROVAL TO IMPLEMENT A<br>VOLUNTARY RENEWABLE<br>NATURAL GAS AND CARBON<br>OFFSET PROGRAM | )<br>)<br>)<br>)<br>)<br>)<br>)<br>) | Application No. NG-117 |

NOTICE OF FILING OF PUBLIC ADVOCATE'S REVIEW OF THE APPLICATION OF BLACK HILLS ENERGY FOR APPROVAL TO IMPLEMENT A VRNG AND CARBON OFFSET PROGRAM

The Public Advocate, Intervenor in the above-referenced proceeding, does here by give notice of filing his *Review of Black Hills Nebraska Gas, LLC, d/b/a Black Hills Energy Application for a Voluntary Renewable Natural Gas Program* prepared by Blue Ridge Consulting Services on behalf of the Public Advocate. Eight copies of the Review, plus electronic copies in pdf and Microsoft Word format are being submitted herewith in accordance with 291 NAC 9-004.12. Electronic and/or hard copies are being provided, as appropriate, in accordance with the Service List



NPSC Received 09/30/2022

DATED this 30th day of September 2022.

NEBRASKA PUBLIC ADVOCATE

By: ______________________

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NPSC Received 09/30/2022

# CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of Public Advocate's "Review of the Application of Black Hills Energy for Approval to Implement a VRNG and Carbon Offset Program " was served electronically on this 30th day of September 2022, upon the following:

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NPSC Received 09/30/2022

# EXECUTIVE SUMMARY

On August 12, 2022, Black Hills Nebraska Gas, LLC d/b/a Black Hills Energy (BHE or "Company") filed an application with the Nebraska Public Service Commission ("Commission") seeking approval of the Company's proposed Voluntary Renewable Natural Gas and Carbon Offset (VRNG) Program ("Program") to be implemented by January 1, 2023, approval of related Program tariff sheets as to form and content, approval of the deferred accounting mechanism associated with the Program, and allowance for the Company to file the proposed tariffs as a compliance filing on not less than two business days' notice.[1]

The Nebraska Public Advocate retained Blue Ridge Consulting Services, Inc. ("Blue Ridge") to assess the nature, extent, purpose, and implementation of BHE's proposed VRNG Program and the effect on ratepayers. Following our review, we recommend that the Commission accept the Company's request if the Company is able to resolve the concerns (1 through 7) detailed in the section labeled Blue Ridge Conclusions and Recommendation through appropriate modifications to the Company's filing.

# BLACK HILL'S REQUEST

Voluntary carbon markets enable businesses, governments, nonprofits and other organizations, and individuals to purchase, on a voluntary basis, carbon offsets to compensate for emissions caused by something they did (e.g., personal air travel or home energy use). The participants may purchase offsets that were created for carbon markets. Trading and demand in the voluntary market are created only by voluntary buyers.[2]

On August 12, 2022, BHE filed an application with the Commission seeking approval of the Company's proposed VRNG Program, to be implemented by January 1, 2023, related Program tariff sheets, and a deferred accounting mechanism.

The Company's VRNG Program, to commence on January 1, 2023, and continue through 2026, provides residential and commercial retail customers the option to offset the carbon footprint of their natural gas usage through a combination of RNG attributes and carbon offset credits.[3] The Program provides interested residential and commercial retail customers with the choice to buy "blocks" monthly to offset a certain amount of carbon dioxide emissions associated with the customer's natural gas usage. Each "block" represents the offset of 20.5 therms of natural gas emissions,[4] which equates to approximately 33% of the average residential customer's monthly usage, and customers may buy as many blocks as they choose.

Customers wishing to take part voluntarily opt-in to the Program and must be in good standing. Participating customers specify the set number of blocks they wish to purchase each month and may discontinue their participation commencing with their next billing cycle. Through the Program, participating customers directly fund the purchase of renewable natural gas environmental

[1] NG-117 Application (August 8, 2022), page 4.
[2] Direct Testimony of Katie N. Fleming at 9:16–20.
[3] Direct Testimony of Tyler E. Frost at 6:3–6
[4] BHE's Kansas Filing 23-BHCG-037-TAR also uses 20.5 therms per Block.

attributes and carbon offset credits, which represent measurable, verifiable emission reductions from certified climate action projects.[5]

As part of the Program, BHE is seeking approval of deferred accounting treatment to record and defer the revenues and expenses associated with the Program to ensure that only Program participants pay for the costs of the Program and to ensure the Company fully recovers the costs of the Program from only those customers who participate. BHE is also seeking Commission approval of tariffs to establish rates for Program participation.[6]

The Company is proposing to implement the Program for a pilot period of four years, beginning January 1, 2023, through December 31, 2026, to gauge customer interest and monitor Program finances.[7]

# OBSERVATIONS AND ANALYSIS

This section documents Blue Ridge's observations and analysis regarding the Company's request for approval of the proposed VRNG Program, related Program Tariff sheets, and a deferred accounting mechanism.

## CUSTOMER SURVEY AND MARKET RESEARCH

1. BHE conducted an online survey for Nebraska customers in July 2022.
    a. Emails were sent to 153,970 Nebraska customers. Three percent (4,625) of customers submitted a response. [Direct Exhibit KNF-1, page 1]
    b. Fifty-seven percent of respondents expressed interest in participating in a renewable natural gas program. [Direct Exhibit KNF-1, page 2]
    c. Of those that responded favorably to participation, the majority (74%) were willing to pay $5 or $10 dollars per month to offset their natural gas footprint. [Direct Exhibit KNF-1, page 3]
2. Additional market research indicates the following percentages of customers who would fit a profile of the "average green participant" in Nebraska:
    a. An estimated 17% of the customer base fit an income profile
    b. An estimated 29% of the customer base fit the education profile
    c. An estimated 38% of the customer base were more likely to display behaviors that are "green," or environmentally conscious.[8]

<u>Blue Ridge Observation</u>: While the initial (low) percentage response to BHE's survey of Nebraska customers is somewhat concerning, the portion of the customers who responded that would consider a renewable natural gas program is positive. As VRNG programs are a recent concept, the response percentage is encouraging and supports moving forward with a program that does not impact non-participating customers.

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[5] NG-117 Application (August 8, 2022), page 2.
[6] Direct Testimony of Tyler E. Frost at 6:7–13
[7] Direct Testimony of Katie N. Fleming at 12:21–13:1.
[8] Direct Testimony of Katie N. Fleming at 11:3–21.

## PROGRAM DESIGN, STRUCTURE AND MARKETING

The Company described the characteristics of the Program:

1. BHE is not producing RNG, purchasing RNG, or generating other environmental attributes directly through the Program. Instead, the Company is partnering with 3Degrees to purchase environmental attributes through accredited environmental attribute markets.[9]

2. BHE has partnered with 3Degrees, an experienced third-party, for program design, marketing plans, and RNG environmental attribute and carbon credit procurement.[10]
   a. Funds collected under the Program are to be provided to 3Degrees.
   b. 3Degrees purchases environmental attributes from established and accredited environmental attribute markets at then-prevailing market rates.[11]
   c. VRNG Program initially is to be a four-year pilot to gauge customer interest and monitor Program finances.[12]
   d. The pilot would run from January 1, 2023, through December 31, 2026.
   e. The success of the program is to be evaluated throughout the pilot period.[13]

3. The Program uses pricing options or "Blocks."
   a. Blocks represent varying levels of carbon emissions that customers may choose to offset.
   b. Blocks are based on average monthly residential or commercial usage with pricing options based on reducing the carbon emission levels associated with this average monthly usage.[14]
   c. Customers have the option to purchase Blocks at the monthly rate of $5.00 for 20.5 therms.
   d. The average monthly Nebraska residential usage is approximately 63 therms (based on annualized 2018–2020 Company data). An average Nebraska residential customer could choose to offset approximately 33% of emissions associated with personal natural gas usage with one Block at a cost of $5.00 per month.
   e. Customers may enroll in as many Blocks as they choose. If a customer chooses to purchase Blocks that exceed personal individual natural gas usage, that is considered a social benefit. The contracted supplier still provides RNG environmental attributes and carbon offsets to cover all customer enrollments.

[9] Direct Testimony of Tyler E. Frost at 11:5–8.
[10] Direct Testimony of Katie N. Fleming at 5:17–19 and 12:14–18.
[11] Direct Testimony of Tyler E. Frost at 10:13–16..
[12] Direct Testimony of Katie N. Fleming at 12:21–13:1.
[13] Direct Testimony of Tyler E. Frost at 7:14–8:2.
[14] Direct Testimony of Katie N. Fleming at 154:14–16.

f. Offerings are not specific to each customer's actual carbon emissions from actual personal natural gas usage but are based on the statewide average residential or commercial carbon emissions.[15]

4. Customer Effect

   a. The VRNG Program is to be offered to residential and commercial, Energy Options, and Choice Gas Program (Residential and Commercial) rate schedule customers (including governmental entities), provided their accounts are in good standing. If a customer falls into arrears greater than 60 days, that customer is removed from the Program.[16]

   b. Participating customers continue to pay the Gas Cost Adjustment (GCA) rates.

   c. Only the customers enrolled in the program are billed for their voluntary participation in the Program.

   d. Customers voluntarily opt-in to the Program. Customers specify the set number of blocks they wish to purchase each month and may discontinue their participation commencing with their next billing cycle.[17]

   e. Program tariff charges are identified on a customer's bill separately from other customer charges.[18]

   f. Participating customers directly fund the purchase of renewable natural gas environmental attributes and carbon offset credits, which represent measurable, verifiable emission reductions from certified climate action projects.[19]

   g. Only customers who wish to participate bear the costs associated with the Program.[20]

5. 3Degrees

   a. BHE and 3Degrees enter into a binding term sheet to cover the duration of the pilot Program.

   b. 3Degrees secures and manages the supply of RNG environmental attributes and carbon offset credits.

   c. There is no minimum purchase requirement.

   d. 3Degree agrees to these responsibilities:

      i. Procuring, managing, arranging offtake contracts, and taking title to the environmental attributes

      ii. Retirement of environmental attributes on behalf of the Program and annual reporting of the retirements (including project description, the volume retired in MT $CO_2$ or MMBtu, and the state of origin)

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[15] Direct Testimony of Katie N. Fleming at 13:8–22.
[16] Direct Testimony of Katie N. Fleming at 14:8–12.
[17] NG-117 Application (August 8, 2022), page 2.
[18] Direct Testimony of Katie N. Fleming at 10:19–11:2.
[19] NG-117 Application (August 8, 2022), page 2.
[20] Direct Testimony of Katie N. Fleming at 5:16–17.

   e. BHE pays 3Degrees on a per therm basis enrolled in the Program.
   f. BHE intends to collaborate with 3Degrees to include RNG supplied from local project sources (if available).
   g. Carbon offset credits are verified against the operating standards agreed upon that lay out the rules and requirements projects must follow to be certified.[21]

6. Marketing
   a. Internal resources and 3Degrees support are used for marketing.
   b. Expenses, including internal and external labor, are allocated to Program participants and not recovered through base rates.[22]
7. Program Management
   a. BHE actively manages the Program design and implementation.
   b. 3Degrees assists as a consultant, undertakes some marketing efforts, and performs the compliance and certification of Program supply.[23]
8. Program Reporting
   a. An annual comprehensive report of the prior year's results includes these items:
      i. Customer enrollment levels and selected Block levels
      ii. Source of carbon reduction supply
      iii. Quantity of total emissions reduced
   b. The report is to be available on the Commission website.
   c. Customers may submit questions or comments related to the Program. [24]
9. Program Economics
   a. BHE anticipates the Program to break even in 2026.
   b. BHE has modeled the financial impact of the Program using these factors:
      i. Customer adoption estimates[25]

[21] Direct Testimony of Katie N. Fleming at 18:22–19:5.
[22] Direct Testimony of Katie N. Fleming at 20:12–15.
[23] Direct Testimony of Katie N. Fleming at 21:4–10.
[24] Direct Testimony of Katie N. Fleming at 21:17–22.
[25] Direct Testimony of Tyler E. Frost at 20:16.

**Table 1: Estimated Program Enrollees**

| Year | Cumulative |
|---|---|
| 2023 | 402 |
| 2024 | 1,076 |
| 2025 | 2,383 |
| 2026 | 3,780 |
| 2027 | 5,380 |
| 2028 | 7,065 |
| 2029 | 8,985 |
| 2030 | 11,006 |
| 2031 | 13,137 |
| 2032 | 15,390 |

ii. Price per Block of $5.00, which is 33% of $CO_2$ emissions associated with average residential customer's gas usage (The amount is fixed through the pilot period.[26])

iii. Terms of negotiated supply costs and product content label offered by 3Degrees (Costs are variable, changing with the Blocks enrolled in the program. Amounts are uncertain, but as technology advances, RNG and carbon offset market developments and other factors may bring expenses down from costs modeled for years 2027 and beyond. [27])

iv. Anticipated marketing costs, including customer education, email outreach, and selective direct mailing as well as heavy use of digital marketing, including social media, web, and other channels[28]

v. Program management costs, including internal staffing to manage the program as a certified program through a carbon registry oversight body (One full-time BHE employee is to manage the Program with a portion of the Program manager allocated to Nebraska. A unique accounting code block is to be used for revenues and expenses associated with the Program.[29])

c. Cumulative Program costs are expected to be fully recovered by 2029. [30]

d. Less than half the revenue collected during the initial four-year period supports offsets, with the remainder covering Program expenses.[31]

Blue Ridge Observation: The Program focuses directly on offering offsets for a specific amount of natural gas. A high-level search of renewable natural gas and utility programs found a range of programs and pricing. These programs include some other methodologies:

- $CO_2$ offset in terms of tons of $CO_2$
- A percentage of usage

[26] Direct Testimony of Tyler E. Frost at 22:1 and 23:13–14.
[27] Direct Testimony of Tyler E. Frost at 23:8–17.
[28] Direct Testimony of Tyler E. Frost at 23:18–24:14.
[29] Direct Testimony of Tyler E. Frost at 26:2–27:15.
[30] Direct Testimony of Tyler E. Frost at 19:23.
[31] CONFIDENTIAL Direct Exhibit TEF-3

- Purchase of actual renewable natural gas (such as landfill, sewage digester gas, or agricultural methane capture)

Each of these program methodologies may have differing impacts on marketing, pricing and eventually the ability of a specific utility's program to break even.

### DEFERRED ACCOUNTING MECHANISM

The Company seeks approval of a deferred accounting mechanism to capture the revenues and expenses associated with the Program.

1. Customers who participate in the Program see a new line item on their customer bills identifying the charges associated with enrollment.
2. Revenues are booked to a deferred balance sheet account separate from base revenues, GCA revenues, SSIR revenues, and all other revenue streams.
3. All expenses of the Program, whether internal expenses or expenses attributable to third parties, are booked to the same deferred balance sheet account as the revenues.
4. Expenses are deferred in the year incurred, with the opportunity to recover those deferred expenses in the future as the program matures and participation increases.
5. As the Program matures, forecasted increased enrollees should result in Program revenues exceeding Program expenses, creating a regulatory liability. The balance is to be used to benefit Program participants by acquiring higher percentages of RNG environmental attributes and/or higher premium carbon offset credits, subject to Commission approval.[32]

Blue Ridge Observation: The proposed deferred accounting mechanism is not unreasonable if the Company is able to resolve the concerns (1 through 7) detailed below through appropriate modifications to the Company's filing.

## BLUE RIDGE CONCLUSIONS AND RECOMMENDATION

### POSITIVES

1. The Program is well defined as to its structure and intent.
2. The Program uses primarily outside non-BHE marketing and procurement resources, which are alleged to have relevant expertise.
3. Program costs and revenues are tracked and segregated to avoid any impact on non-participating customers.
4. The Program offers participating customers a means to offset their perceived GHG emissions.
5. The Program bolsters BHE's image among the portions of the public, customers, and investors who are concerned about GHG emissions.
6. BHE's promotion of this program provides customers a measure of consumer confidence compared to other possible GHG emissions offset programs.

[32] Direct Testimony of Tyler E. Frost at 8:8–9:20.

7. The enrolled price per Block is fixed for the first four years of the Program.
8. 3Degrees has a continuing relationship with Pacific Power over a period of 15 years supporting and evolving Pacific Power's renewable energy program.

## CONCERNS

1. Due to the expected long period until the Program is revenue positive and the new nature of this type of program, BHE should provide the Commission with a semi-annual report of marketing efforts (number of customer contacts), participation (number of participating customers and purchased Blocks), the deferred balance of the Program, and the ratio of contacts received through the Company's website and contact center compared to the system developed and operated by 3Degrees.
2. Beginning in year three of the Program, BHE should report to the Commission its efforts to spur development of RNG and other renewable energy projects within Nebraska and the greater BHE system.[33]
3. BHE has estimated a total cost of $4,500 annually for maintenance and updates to the customer information systems, the Company's website, and the online customer portal. Depending on the degree of integration among BHE's affiliates, this cost estimate may be low.
4. BHE has not defined how Program costs, including the full-time employee, program compliance, and verification and audits, and customer contact expenses are to be allocated across all appropriate jurisdictions in the states BHE serves. Possible methodologies include number of Program participants, number of customers, number of regulated customers, revenue, etc.
    a. If BHE Nebraska becomes the first BHE affiliate to receive approval, the initial year cost allocation should be carefully examined to ensure that costs are allocated across all affiliates over a reasonable start-up period.
5. The proposed tariff sheet for the VRNG Program should include these items:
    a. Spell out RNG as Renewable Natural Gas
    b. Indicate that customers who chose to participate still must purchase gas commodity
6. If the program is not successful and the Program is discontinued, BHE has not defined how any unrecovered deferred balance would be resolved, although in correspondence they have offered a "ring fence."
7. BHE has offered (in recent correspondence) to provide Nebraska with a most-favored clause to ensure that its Nebraska Program is at least as advantageous as other affiliates' programs that may be approved later.

[33] DTE offers a RNG program and one of the sources noted is "… wastewater treatment facilities in Grand Rapids, Michigan and Nebraska."

## RECOMMENDATION

Blue Ridge recommends BHE's VRNG Program be approved and implemented subject to BHE resolving the concerns (1 through 7) listed above.

BHE has apparently explored a potential Program contractors and methodologies and selected 3Degrees and the block concept. A rigorous review of the Program involving technical sessions and discovery could dive deeply into the genesis of the Program, at the expense of time and associated consulting fees. However, if BHE accepts the risk of the Program's unrecovered deferred balance, then an extensive investigation may not be necessary as existing, non-participating customers would be protected. As BHE will benefit from positive response from various stakeholders and BHE has designed and will manage the Program, absorbing the risk of program failure may be a reasonable tradeoff for a settlement leading to rapid approval in Nebraska.

## APPENDIX A: ABBREVIATIONS AND ACRONYMS

The following abbreviations and acronyms may be used in this report.

| | |
|---|---|
| Block | Represents 20.5 therms of natural gas or approximately 33% of the average Nebraska residential customer's monthly usage |
| CCP | Core Carbon Principles |
| CO2e | Carbon Dioxide Equivalent |
| CO2 | Carbon Dioxide |
| CRS | Center for Resource Solutions |
| Environmental attributes | Environmental attributes are credits issued by established RNG environmental attribute markets for production, capture, and refinement of RNG as a transportation fuel and for reducing GHG |
| EPA | U.S. Environmental Protection Agency |
| ESG | Environmental, Social and Governance |
| GCA | Gas Cost Adjustment |
| GHG | Greenhouse Gas |
| IFM | Improved Forestry Management |
| Integrity Council | Integrity Council for the Voluntary Carbon Market |
| mtCO2 | Metric Tons of Carbon Dioxide |
| MMBtu | Million British thermal unit |
| RNG | Renewable Natural Gas |
| VRNG | Voluntary Renewable Natural Gas |