

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO**

**PROCEEDING NO. 20A–0477G**

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**IN THE MATTER OF THE VERIFIED APPLICATION OF BLACK HILLS COLORADO GAS, INC. D/B/A BLACK HILLS ENERGY FOR APPROVAL OF A NEW GAS METER SAMPLING PROGRAM AND RELATED TARIFF CHANGES.**

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**SETTLEMENT AGREEMENT**

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Pursuant to Rule 1408 of the Commission’s Rules of Practice and Procedure, 4 CCR 723-1-1408, Black Hills Colorado Gas, Inc. (“BHCG” or “the Company”), Trial Staff of the Colorado Public Utilities Commission (“Staff”), and the Colorado Office of Consumer Counsel (“OCC”) (collectively, “Settling Parties”), by their undersigned counsel, and for good and valuable consideration, enter into this Settlement Agreement (“Settlement Agreement”) to resolve all disputes that have arisen between them related to the Verified Application that commenced the instant Proceeding No. 20A–0477G (the “Proceeding”).

**I. BACKGROUND**

1. On November 5, 2020, the Company filed a Verified Application (“Application”) for approval of a new Gas Meter Sampling Program, supporting testimony and proposed tariffs. In the Application, BHCG states that it currently has Commission approved gas meter sampling programs for each legacy local distribution company. Those gas meter sampling programs are similar but contain slight differences. Through this Application and supporting testimony and attachments, the Company requested the Commission approve a consolidated Gas Meter Sampling Program.

2. This Settlement Agreement represents the comprehensive agreement of all Settling Parties to resolve the issues in this Proceeding No. 20A-0477G that were raised, or could have been raised, by the Settling Parties. The Settling Parties agree that the Settlement Agreement is in the public interest and should be approved without modification.

## **II. SETTLEMENT TERMS**

The Settling Parties hereby stipulate and agree as follows:

### **A. Amended Gas Meter Sampling Program**

3. The Settling Parties agree that it is appropriate to revise the Gas Meter Sampling Program to reflect the settlement reached. Attachment 1 to the Settlement Agreement is the Amended Gas Meter Sampling Program with changes in redline to reflect the modifications to the proposed Gas Meter Sampling Program filed as Hearing Exhibit 101, Attachment SVA-1.

4. The Settling Parties further agree that the Amended Gas Meter Sampling Program is reasonable, in the public interest and recommends approval by the Commission.

### **B. Homogenous Lots**

5. The Settling Parties agree that the homogeneity of lots is key in meeting the ANSI/ASQ Z1.9 standard.

6. The Settling Parties further agree BHCG will use “Manufactured Year” methodology to determine the homogeneity of lots in the Company’s Amended Gas Meter Sampling Program. The use of “Manufactured Year” allows for consistency and clarity in creating homogenous lots that lead to statistically sound results.

7. The Settling Parties further agree that BHCG's Amended Gas Meter Sampling Program will be allowed to have the "Manufactured Year" updated to correspond to the year of refurbishment ("Refurbished Year"). Allowing refurbished meters to use "Refurbished Year" in lieu of "Manufactured Year" acknowledges that refurbished meters are fundamentally different from non-refurbished meters. See Attachment 1, Section C.

8. For the Company's legacy gas meters<sup>1</sup>, the Settling Parties agree the Company may create homogeneous lots using their manufacturer, model type, and capacity, as well as either "Purchase Year" or "Installation Year." See Attachment 1, Section C.

9. The Settling Parties agree that moving forward, homogenous lots will be determined by meter manufacturer, model type, capacity, Manufactured Year and/or Refurbished Year.

### **C. Failed Lot Removal Period**

10. The Settling Parties agree to the following failed lot removal process: Sampled meters will undergo normal inspection based on the meter attributes used to create homogenous lots. Once a meter lot fails under normal inspection, the Company will adopt a tightened inspection process based on the meter attributes that were used to create homogeneous lots.<sup>2</sup> The initial tightened inspection should take place no later than one year following the date of the initial failure under normal inspection. If that meter lot (or sub lot if applicable) fails tightened inspection, it will continue to be inspected and will be removed over the next five years. See Attachment 1, Section E(3).

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<sup>1</sup> BHCG currently has legacy gas meters acquired through multiple acquisitions that do not have confirmed "Manufactured Year" or "Refurbished Year" data.

<sup>2</sup> Normal and tightened inspection will be based on ANSI/ASQ A1.9-2008 Table B-3 included in the Settlement Testimony of Ms. Atoyan.

11. The Settling Parties agree that a failed lot that passes tightened inspection will be returned to service and normal inspection.

12. The Settling Parties agree that all American AC250 meters manufactured in 2004 will be removed in 2021 for Colorado.

#### **D. Accuracy of Testing**

13. The Settling Parties agree the Company will continue using the Weighted Average Test methodology. See Attachment 1, Section E(1).

#### **E. Acceptable Quality Limit (“AQL”)**

14. The Settling Parties agree that the Company’s previously approved AQL of 6.5 is reasonable at this time, but may be reviewed again in future proceedings. See Attachment 1, Section E(2).

#### **F. Exemption Period**

15. The Settling Parties agree the Company will sample meters based on the meter attributes used to create homogenous lots as described in Section B (Manufactured Year, Refurbished Year, Purchase Year, or Installation Year). The Company will continue sampling meters using the intervals previously approved (beginning the fifteenth year for domestic meters and the tenth year for intermediate meters).<sup>3</sup> See Attachment 1, Section B.

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<sup>3</sup> Moving forward, manufactured year or refurbished year will be used to start the exemption periods for all non-Legacy meters.

16. The Settling Parties agree that pursuant to Commission Rule 4304(a), the Company will test meters in accordance with the Amended Gas Meter Sampling Program approved by the Commission in this Proceeding.

17. The Settling Parties agree that the Company will, as part of this sampling program, maintain all records concerning vendor test results on new meters installed in Colorado during the entire service lives of these meters. The Company agrees to maintain records of vendor testing of (1) meters already in service; and (2) purchased meters not yet in service. Records must be maintained for the entire service lives of meters.

18. Any issue not directly addressed herein should be determined consistent with the Verified Application, the Amended Gas Meter Sampling Program, associated testimonies and attachments, and this Settlement Agreement.

### **III. GENERAL TERMS AND CONDITIONS**

19. The Settling Parties agree that this Settlement Agreement is in the public interest and will be supported by the Settling Parties' testimony and/or statements of counsel in this Proceeding. The Settling Parties agree to support this Settlement Agreement as being in the public interest and to advocate in good faith that the Commission approve this Settlement Agreement in its entirety.

20. The Settling Parties agree that this Settlement Agreement represents a compromise in the positions of all Settling Parties and has been negotiated as a comprehensive settlement. As such, the Settling Parties acknowledge that their support and advocacy of the Settlement Agreement is based upon the Settlement Agreement as a whole and not based upon its individual components viewed in isolation. Additionally, evidence of conduct or statements made in the

negotiation and discussion phases of this Settlement Agreement will not be admissible as evidence in any proceeding before the Commission or any court.

21. The Settling Parties agree that all negotiations relating to this Settlement Agreement are privileged and confidential, and that no party will be bound by any position asserted in the negotiations, except to the extent expressly stated in this Settlement Agreement.

22. The Settling Parties agree that except as otherwise expressly noted in this Settlement Agreement: (a) the execution of this Settlement Agreement will not be deemed to constitute an acknowledgment of any Settling Party of the validity or invalidity of any particular method, theory or principle of ratemaking or regulation, and no Settling Party will be deemed to have agreed that any principle, method or theory of regulation employed in arriving at this Settlement Agreement is appropriate for resolving any issue in any other proceeding; (b) the execution of the Settlement Agreement will not constitute the basis of estoppel or waiver in future proceedings by any Settling Party; and (c) no Settling Party will be deemed to be bound by any position asserted by any other Settling Party, and no finding of fact or conclusion of law other than those expressly stated will be deemed to be implicit in this Settlement Agreement. Any specific reservation of future litigation rights contained in the Settlement Agreement should not be deemed to waive the applicability of this general reservation of litigation rights in future proceedings as to all matters contained in the Settlement Agreement.

23. The Settling Parties acknowledge that their support and advocacy of the Settlement Agreement may be compromised by material alterations thereto. In the event the Commission rejects or materially alters the Settlement Agreement, the Settling Parties agree that within seven days of such Commission Decision any Settling Party may provide notice to the other Settling Parties of its objection to the Settlement Agreement as revised. Upon such objection, the Settling

Parties will no longer be bound by its terms and will not be deemed to have waived any of their respective procedural or due process rights under Colorado law. If a Settling Party objects to the Settlement Agreement as revised, it may withdraw from the Settlement Agreement and request a hearing.

24. If the Commission chooses to adopt and approve the Settlement Agreement, this Settlement Agreement resolves all disputed matters relative to this proceeding between the Settling Parties. Any disputed matters will be deemed resolved to the extent that the Settlement Agreement is not compromised by material alterations.

25. Except as otherwise expressly provided in this Settlement Agreement, the issuance of a Decision approving this Settlement Agreement will not be deemed to work as an estoppel upon the Settling Parties or the Commission, or otherwise establish, or create any limitation on or precedent of the Commission, in future proceedings.

26. This Settlement Agreement will not become effective and will be given no force and effect until the issuance of a final written Commission decision that accepts and approves this Settlement Agreement.

27. This Settlement Agreement may be executed in one or more counterparts and each counterpart will have the same force and effect as an original document and as if all the Settling Parties had signed the same document. Any signature page of this Settlement Agreement may be detached from any counterpart of this Settlement Agreement without impairing the legal effect of any signatures thereon, and may be attached to another counterpart of the Settlement Agreement identical in form hereto but having attached to it one or more signature page(s). The Settling Parties agree that “pdf” signature pages exchanged by e-mail will satisfy the requirements for execution.

#### **IV. CONCLUSION**

For the reasons stated above, the Settling Parties respectfully request that the Commission enter an order approving the Amended Gas Meter Sampling Program consistent with this Settlement Agreement, with the finding that the Commission's approval of this Settlement Agreement represents a fair, just, and reasonable resolution of any and all disputes in this Proceeding as to those issues.

Date: March 15, 2021.

**BLACK HILLS COLORADO GAS, INC.  
D/B/A BLACK HILLS ENERGY**

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### **CERTIFICATE OF SERVICE**

I hereby certify that on March 15, 2020, the foregoing **SETTLEMENT AGREEMENT** was served via electronic filing with the Commission and served on those parties shown on the Commission's Certificate of Service accompanying such filing.

/s/ Elaine Hegler

**BLACK HILLS COLORADO GAS, INC.**

**D/B/A BLACK HILLS ENERGY**

**GAS METER SAMPLING PROGRAM**

Public Utilities Commission of the State of Colorado ("Commission") Rules provide regulatory requirements and parameters for gas meter sampling programs. A gas meter sampling program is required to be at least as effective as the schedule set forth in Commission Rules. This Black Hills Colorado Gas, Inc. d/b/a Black Hills Energy ("BHCG" or "Company") Gas Meter Sampling Program ("Sampling Program") satisfies applicable Commission requirements while maintaining accuracy levels at a reasonable cost. This Sampling Program sets forth the minimum sampling protocols.

**A. Types of Meters Subject to the Sampling Program**

Only the following diaphragm meters are subject to the Sampling Program, classified as follows:

Diaphragm Meter Definition	Capacity (cf/hour)
Domestic Diaphragm Meter	0 – 500 cf/hour
Intermediate Diaphragm Meter	501 – 1000 cf/hour

**B. Frequency of Testing Meters Subject to the Sampling Program**

Diaphragm meters will be subject to testing on the frequency set forth in the table below. However, this is the minimum testing frequency protocol and the Company may choose to test on a shorter frequency.

Diaphragm Meter	Testing Frequency	Testing Type
Domestic Diaphragm Meter	Sampling beginning <u>after</u> 15 years <u>based on Homogenous Lot determination<sup>1</sup></u> <del>after Base Date</del>	Statistical sampling
Intermediate Diaphragm Meter	Sampling beginning <u>after</u> 10 years <u>based on Homogenous Lot determination<sup>2</sup></u> <del>after Base Date</del>	Statistical sampling

<sup>1</sup> Going forward, Homogenous Lot determination for purposes of testing frequency is based on Manufactured Year or Refurbished Year except for legacy gas meters, in which case determination will be based on either Purchase Year or Installation Year.

<sup>2</sup> Going forward, Homogenous Lot determination for purposes of testing frequency is based on Manufactured Year or Refurbished Year except for legacy gas meters, in which case determination will be based on either Purchase Year or Installation Year.

### C. Sampling Procedures

The procedures to be used for the sampling under the Sampling Program are as follows:

Topic	Standard
Statistical Sampling Procedure	ANSI/ASQ Z1.9: Sampling Procedures and Tables for Inspection by Variables For Percent Nonconforming, Double Specification Limit, Variable Unknown, and Standard Deviation Method, Normal Inspection: Level II, and Acceptance Quality Limit (AQL) 6.5 for upper and lower specification (Tables A2, B3 and B5)
Minimum Lot Size	Minimum lot size is 3 meters; Minimum sample size is 3 meters except for rejected lots
Homogenous Lots <sup>3</sup>	<p>Determined by: <del>meter manufacturer, model (type and capacity), base date, and any other meter attribute(s) that may be needed for analysis.</del></p> <p><del>Base date is the most recent of the following dates:</del></p> <ul style="list-style-type: none"> <li><del>• meter installation date;</del></li> <li><del>• last meter test date;</del></li> <li><del>• refurbished date</del></li> <li><del>• received date; and</del></li> <li><del>• the meter manufactured year.</del></li> </ul> <p><del>If, during sampling, a meter pulled as part of a homogenous lot is identified as not belonging in that lot, it will be placed in the appropriate homogenous lot.</del></p> <ul style="list-style-type: none"> <li>• <a href="#">Manufacturer</a></li> <li>• <a href="#">Model Type and Capacity</a></li> <li>• <a href="#">Manufactured Year</a></li> <li>• <a href="#">Refurbished Year</a></li> </ul>
Exclusions	Damaged or inoperative meters; Meters tested outside of the Sampling Program

<sup>3</sup> [Homogeneous lots for legacy gas meters will be determined by using manufacturer, model type and capacity, as well as either Purchase Year or Installation Year.](#)



#### D. Meter Test Method

The following meter test method is used under the Sampling Program:

Topic	Standard
Testing Standard - Domestic	Applicable ANSI standard. Currently generally conforms to ANSI B109.1 – Diaphragm-Type Gas Displacement Meters (Under 500 Cubic Feet Per Hour Capacity), Part IV In-Service Performance and Part VII Test Methods and Equipment
Testing Standard – Intermediate	Applicable ANSI standard. Currently generally conforms to ANSI B109.2 – Diaphragm-Type Gas Displacement Meters (500 Cubic Feet per Hour Capacity and Over), Part IV In-Service Performance and Part VII Test Methods and Equipment
Testing Method	Open rate (approx. 100% of the rated ½” water column differential capacity de-rated for air) and check rate (approximately 20% of the rated ½” water column differential capacity de-rated for air)
Testing Location	Either physically removed from the meter set and transported to a meter shop location for testing or tested in the field

#### E. Accuracy of Testing and of the Sampling Program

##### 1. Accuracy Parameters

Under the Sampling Program, meters are tested to the following accuracy levels:

Topic	Standard
Calculated Accuracy	Open rate (approx. 100% of the rated ½” water column differential capacity de-rated for air) and check rate (approximately 20% of the rated ½” water column differential capacity de-rated for air), and the average test.  <del>Average Test = (Open Test + (check test/2))</del> Weighted Average Test = ((Open Test x 4) + Check Test)/5
Specification Limit	+/- 2% average error or 102% / 98% accuracy

##### 2. Determining Failed Lots

Based upon the above accuracy parameters, an AQL of 6.5 will be applied to determine whether a lot passes or fails. If a lot fails, the entire lot will be subject to removal ~~over a seven year period,~~ as described in Section 3 below.

### 3. Seven Year Removal Process for Failed Lots

If a lot fails under the Sampling Program, the subsequent testing and removal process will proceed as follows:<sup>4</sup>

FAILED LOT REMOVAL PROCESS				
Sampling Year	Inspection Level	Inspection Procedure	Meters Tested or Removed	Status under Sampling Program
Evaluation	Inspection level II	Normal	Tested = Lot at level II	Failed
Year 1	Inspection level III	Tightened	Tested = Remaining lot at Level III	Failed
Year 2	Removal/Inspection	Tightened	Removed = Remaining lot / 5	Failed
Year 3	Removal/Inspection	Tightened	Removed = Remaining lot / 4	Failed
Year 4	Removal/Inspection	Tightened	Removed = Remaining lot / 3	Failed
Year 5	Removal/Inspection	Tightened	Removed = Remaining lot / 2	Failed
Year 6	Removal/Inspection	Tightened	Removed = Remaining lot	Failed

Meters in failed lots will continue to be tested as part of the Sampling Program. At any point a failed lot passes tightened inspection, it will be returned to normal inspection. Additionally, the removal process during tightened inspection may be accelerated at the Company's discretion. New sampling lots will be formed when this Meter Sampling Plan becomes effective resulting in all meters undergoing evaluation under the new program.

FAILED LOTS – SEVEN YEAR REMOVAL PROCESS		
Time Period	Status under Sampling Program	Result/Removal
First calendar year following lot failure	Lot failed prior calendar year	Removal = failed lot / 7

<sup>4</sup> ~~Meters in failed lots will continue to be tested as part of the Sampling Program as well. In addition, the removal process may be accelerated at the Company's discretion.~~

Second calendar year following continued lot failure	If under Sampling Program during first calendar year following lot failure:	<i>Lot fails again:-</i> Approximate removal = remaining lot / 6
		<i>Lot passes:-</i> None removed; lot returned to Sampling Program
Third calendar year following continued lot failure	If under Sampling Program during second calendar year following lot failure:	<i>Lot fails again:-</i> Approximate removal = remaining lot / 5
		<i>Lot passes:-</i> None removed; lot returned to Sampling Program
Fourth calendar year following continued lot failure	If under Sampling Program during third calendar year following lot failure:	<i>Lot fails again:-</i> Approximate removal = remaining lot / 4
		<i>Lot passes:-</i> None removed; lot returned to Sampling Program
Fifth calendar year following continued lot failure	If under Sampling Program during fourth calendar year during lot failure:	<i>Lot fails again:-</i> Approximate removal = remaining lot / 3
		<i>Lot passes:-</i> None removed; lot returned to Sampling Program
Sixth calendar year following continued lot failure	If under Sampling Program during fifth calendar year during lot failure:	<i>Lot fails again:-</i> Approximate removal = remaining lot / 2
		<i>Lot passes:-</i> None removed; lot returned to Sampling Program
Seventh calendar year following continued lot failure	If under Sampling Program during sixth calendar year during lot failure:	<i>Lot fails again:-</i> Remove remainder of lot
		<i>Lot passes:-</i> None removed; lot returned to Sampling Program



## **F. Records and Reporting**

BHCG will maintain records of gas meter tests under this Sampling Program as required. In addition, no later than April 30 of each year, BHCG will file an annual report with the Commission including narrative and tables which will include, but not be limited to, identification and test results of each lot, evaluation and analysis of the data, and any corrective action taken ("Annual Meter Sampling Program Report"). A courtesy copy of the Annual Meter Sampling Program Report will be provided to Commission Trial Staff ("Staff") and the Office of Consumer Counsel. If requested by Staff, BHCG agrees to meet to discuss each Annual Meter Sampling Program Report.