

**FILED WITH
Executive Secretary**

June 27, 2013

IOWA UTILITIES BOARD

OFFICE OF CONSUMER ADVOCATE

DIRECT TESTIMONY

OF

FASIL KEBEDE

**IN RE: BLACK HILLS/IOWA GAS UTILITY COMPANY, LLC
d/b/a BLACK HILLS ENERGY**

DOCKET NO. EEP-2013-0001

June 27, 2013

1 **Q: Please state your name and business address.**

2 A: Fasil Kebede, 1375 East Court Avenue, Room 63, Des Moines, Iowa 50319.

3 **Q: By whom and in what capacity are you employed?**

4 A: I am employed by the Office of Consumer Advocate (OCA) as a Utility
5 Specialist.

6 **Q: What is your educational and professional background?**

7 A: I received a Bachelor of Arts Degree in Business Administration from
8 Wartburg College in 1979. Prior to joining the OCA in June 1989, I had been a
9 Utility Analyst for the Utilities Division of the Iowa Department of Commerce
10 since March 1987.

11 I have attended numerous meetings and seminars sponsored by the
12 National Association of Regulatory Utility Commissioners (NARUC), and the
13 National Association of State Utility Consumer Advocates (NASUCA). I
14 attended the Midwest Energy Efficiency Alliance Seminar in January 2013.

15 **Q: What are your job responsibilities?**

16 A: My duties include reviewing and analyzing rate increase proposals, conducting
17 field audits, and reviewing and investigating other utility matters. I have
18 testified in many electric, gas, telephone, fuel procurement, and complaint
19 proceedings. I was involved in the review of BHE's current non-residential
20 energy efficiency programs and was responsible for the collaboration meetings
21 in 2010 that were devoted to nonresidential energy efficiency programs.

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

1 A: I will address Black Hills/Iowa Gas Utility Company, LLC d/b/a Black Hills
2 Energy's (Black Hills or BHE) proposed energy efficiency programs for
3 commercial and industrial customers. Specifically, I will address issues
4 concerning the Nonresidential Prescriptive Program, Nonresidential Evaluation
5 Program, and Nonresidential Custom Program.

6 **Q: Are you sponsoring any exhibits in the filing?**

7 A: Yes. I sponsor OCA Exhibit __ (FK-1).

8 **Q: Did the OCA-led collaboration process address non-residential energy**
9 **efficiency programs?**

10 A: Yes, these were addressed in 2010. Because of the broad emphasis of non-
11 residential energy efficiency matters, the collaboration stakeholders agreed to
12 focus on strategies to encourage comprehensive energy efficiency projects in
13 commercial buildings. The following strategies were identified through this
14 process:

- 15 • Importance of technical assistance expertise that would be useful to
16 support Key Account Managers (KAM's) who are responsible for
17 helping guide efficiency investments by large utility customers identify
18 ongoing needs and opportunities to cooperatively build technical
19 support, and identify technical assistance resources already available.
- 20 • Continuing delivery of technical training for KAM's, customers, and
21 trade allies, through Iowa Energy Center (IEC), and Partnership for
22 Industrial Energy Efficiency (PIE2).

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

- Strong support for best practices manual, testimonials, and customer profile (data mining results) as support to KAM’s to educate and motivate customers.
- Strong support for coordinating with other industrial efficiency programs and centers serving Iowa, like CIRAS at Iowa State University, and other investor owned utility programs.
- Using compensation incentives to maximize EE savings beyond established goals.
- Keeping utilities open to coordinating with municipal utilities and rural electric cooperatives.

OVERARCHING PROGRAM ISSUES

Q: Please discuss the overarching considerations and issues that should be addressed in BHE’s nonresidential programs.

A: OCA witness Foster recommends that BHE set more aggressive targets and then determine budget levels and innovative program designs to achieve them. BHE should focus on aggressive targets for nonresidential programs over time, as these programs continue to be cost-effective. Spending for BHE’s most cost-effective non-residential programs in the current plan has generally lagged its approved budgets.

In addition to the overarching matters sponsored, I will discuss outreach strategies, performance incentives for implementation contractors, processes to monitor changing efficiency codes and standards, building benchmarking, and

1 behavior-based efficiency approaches. These overarching recommendations,
2 applicable to BHE nonresidential programs in general, will help achieve the
3 markets-based approach and more aggressive savings targets recommended by
4 OCA witness Foster.

5 **Q: Please discuss the outreach strategy for BHE's nonresidential programs.**

6 A: BHE utilizes KAM's for some accounts. The Full Time Employee (FTE) level
7 allocated to all nonresidential programs is 0.46 FTE. The rest of BHE's
8 outreach efforts appears to be either general and delivered through mass media
9 or directed to trade allies, vendors, architects and engineers.

10 **Q: How might BHE improve its nonresidential outreach?**

11 A: An energy efficiency program with a targeted message directed to a specific
12 customer type can be very effective. For example, municipalities, K-12
13 schools, prisons, retirement homes, hospitals, and waste/wastewater plants are
14 all traditionally hard-to-reach customers with significant aggregate savings
15 potentials. Crafting targeted messages to or program initiatives for these
16 customer types can yield good results. In addition, facilitating customer
17 working groups and other opportunities for targeted customers to meet with and
18 learn from their peers is a highly effective means of establishing trust and
19 enthusiasm for energy efficiency. This industry-specific customer outreach
20 also aligns well with the collaboration recommendations for industry-specific
21 trade ally support.

1 **Q: What do you recommend to address the opportunity and need for more**
2 **targeted outreach?**

3 A: BHE should consider developing industry-specific program outreach staffed by
4 account managers that specialize in that customer group. These account
5 managers would be most effective if providing a single point of contact for all
6 BHE programs for customers within the industry. Given the low level of
7 internal staffing that BHE proposes for this program, it may be necessary to
8 conduct this industry-specific outreach in cooperation with other utilities and
9 entities that support industrial energy efficiency training and education. The
10 industry-specific program outreach should include ongoing opportunities for
11 customers within industry groups to interact with and learn from their peers.

12 **Q: Are there steps BHE could take to optimize nonresidential program**
13 **results?**

14 A: Yes. BHE should use incentives to encourage program implementation
15 contractors to meet and exceed stated goals while staying within their budgets.
16 These contracts should have clear metrics defined to measure success, and BHE
17 should regularly check on contractor progress toward those metrics and make
18 changes as necessary. Performance review should occur annually, at a
19 minimum, and BHE will likely need to review the performance metrics at least
20 once during the 5-year plan.

21 **Q: How does BHE plan to monitor changing codes and standards?**

1 A: It is not clear from the plan what process Black Hills uses to monitor and
2 update baselines as codes and standards change. Black Hills should institute a
3 portfolio-wide plan to regularly monitor and update qualifications to keep
4 current with building codes for new construction and ENERGY STAR or CEE
5 specifications for other equipment and appliances.

6 **Q: Are there programmatic strategies that BHE should consider to help**
7 **motivate customer action on comprehensive efficiency projects?**

8 A: Yes, there are two important opportunities that BHE should consider for its
9 2014-2018 plans: behavior-based efficiency and building benchmarking.

10 The next wave in energy efficiency savings is expected to come from
11 behavioral or operations changes. In the non-residential sector, this will likely
12 be in the form of energy performance improvements and management practices.
13 While the programs within the energy education program are designed to
14 educate, inform, and motivate customers to engage in energy efficiency, BHE's
15 plan does not address activities to encourage changes in behavior that directly
16 result in savings mentioned. While behavioral programs are still developing
17 methodologies for calculating savings and persistence, there should be robust
18 options available within the timeframe of this plan for BHE to consider.
19 Therefore, I recommend BHE explore and consider implementing behavioral
20 savings programs during the 5-year planning period.

21 The second area of emerging opportunity is building benchmarking.
22 Building benchmarking is considered to be one of the most effective ways to

1 support comprehensive moves toward efficient buildings. Building
2 benchmarking uses baselines as an integral part of understanding what can be
3 achieved through comprehensive, strategic planning for undertaking energy
4 efficiency projects. Benchmarking of all non-residential buildings is quickly
5 becoming a part of innovative energy efficiency programs. The public building
6 benchmarking project underway at the Iowa Energy Center will help guide and
7 possibly facilitate expansion of benchmarking to additional public buildings and
8 to the private commercial sector.

9 **NONRESIDENTIAL PRESCRIPTIVE PROGRAM**

10 **Q: Please describe BHE's Nonresidential Prescriptive Program.**

11 A: The purpose of this program is primarily designed for small commercial
12 customers who are making purchases because an existing piece of equipment
13 has failed or as part of a new construction project. Eligible equipment includes
14 insulation, cooking equipment, heating and hot water equipment, thermostats,
15 and other envelope measures such as air sealing and doors. Dealer incentives
16 are being offered for kitchen and space heating equipment. Heating equipment
17 incentives for dealers is contingent upon documentation of proper sizing and
18 installation or completion of a training course. This program is promoted
19 through vendors and trade allies, as well as through bill inserts and the
20 Nonresidential Evaluation Program.

21 In 2011 the actual spending for this program was \$284,000 and the
22 savings claimed was 171,240 therms, averaging a cost of saved energy of

1 \$1.66/therm. This was the second-most cost-effective program in BHE's whole
2 portfolio during 2011 after the Nonresidential Custom Program. The current
3 plan increases the budget drastically to an average of \$909,820 annually; a
4 laudable increase in investment. However, anticipated savings do not increase
5 at the same rate – savings average 244,000 therms per year. This results in an
6 anticipated cost of saved energy of \$3.73/therm, more than double the 2011
7 performance of saved energy cost/therm.

8 **Q: Why don't savings increase in the same proportion as the budget increase**
9 **in the 2014-2018 plan of the Nonresidential Prescriptive Program?**

10 A: In response to OCA Data Request No. 41 as shown on Exhibit __ (FK-1),
11 Schedule A, BHE explains that participation for some measures is only expected
12 to occur in later years. As the federal water heater standard goes into effect, the
13 savings per measure decreases. In addition, BHE also anticipated participation
14 increases in dealer spiff program over the plan period.

15 **Q: Do you have recommendations on how BHE can improve the impacts and**
16 **cost of saved energy in its new plan?**

17 A: Yes. Many of the measures listed in spreadsheet "BHE IA DR5 Measure Level
18 Data" filed by BHE on May 13th 2013 indicate BHE anticipates that only a
19 single measure to be installed each year. This is true of all the commercial
20 kitchen equipment listed. To improve these low participation rates, BHE should
21 consider a targeted outreach effort to restaurants, the hospitality industry, and

1 other customers with commercial kitchens (prisons, schools, retirement homes,
2 and education institutions) to increase participation.

3 Another means by which BHE could reduce the cost of its savings is by
4 phasing out or eliminating Quality Installations (QI) spiffs. Current plans focus
5 on training trade allies on QI with a view toward making QI a prerequisite for
6 measure rebates in future plans. While QI spiffs may be appropriate during a
7 training phase, BHE should phase out spiffs after a reasonable training period.

8 **Q: What is BHE's procedure for updating to keep up with changing codes?**

9 A: In response to OCA Data Request No. 42 as shown on Exhibit __ (FK-1),
10 Schedule B, BHE explains that the known updates to standards impact of the
11 changing baseline is accounted for in the 2014-2018 planning estimates. For the
12 codes/standards that will come into effect in the upcoming plan-period Black
13 Hills states simply that it intends to make changes to savings and incentive
14 levels as needed.

15 **Q: Do you have any recommendations regarding BHE's process for**
16 **monitoring codes and standards?**

17 A: Yes. Black Hills should:
18 • Establish a very clear and frequent process for reviewing and updating
19 baselines and adjusting savings accordingly,
20 • Be more specific about the levels of insulation required by various parts
21 of the envelope (roof, walls, etc.) for different types of construction

1 methods (attic versus insulation above deck, or wood versus metal
2 framing).

- 3 • Be more specific about the ENERGY STAR version of the standard that
4 meets the criteria for an incentive.

5 **NONRESIDENCIAL EVALUATION PROGRAM**

6 **Q: Please describe BHE's Nonresidential Evaluation Program.**

7 A: The purpose of this program is to offer low-cost energy evaluations to small and
8 large commercial customers and free evaluations for medium to large industrial
9 customers. Small commercial customers are defined as being less than 25,000
10 square feet, and the focus is on space and water heating measures, thermal
11 envelope, and commercial cooking. Large commercial are defined as being
12 larger than 25,000 square feet, and are eligible for the same kinds of measures as
13 small commercial. Industrial evaluations are performed by the Iowa State
14 University Industrial Assessment Center for facilities that incur between
15 \$100,000 and \$2.5 million in energy costs. The cost for small commercial
16 customers is \$50, and the cost for large commercial customers is \$500.
17 Commercial customers can receive free direct install pipe insulation,
18 showerheads, faucet aerators, and dishwashing pre-rinse spray nozzles. BHE
19 promotes this program through its website; bill inserts, and targeted marketing
20 to specific commercial segments (such as restaurants).

21 **Q: Why is the nonresidential evaluation program cost so high?**

1 A: Black Hills Energy plan filing Table 32, NR.1 Nonresidential Evaluation
2 program provides the savings goals for this program in Dekatherms, and Table
3 33 of the same filing outlines the commercial budget. Dividing the budgeted
4 money by the expected therm yields an average expected cost per therm of
5 \$30.18. In response to OCA Data Request No. 49 as shown on Exhibit __ (FK-
6 1), Schedule C, BHE explains that the claimed savings are solely from leave-
7 behind measures (namely, aerators, water heater pipe insulation, showerheads).
8 While these do result in limited savings, BHE asserts that the primary purpose
9 of the evaluation is to funnel the participants to the Prescriptive or Custom
10 Measures Programs, where more significant savings are garnered.

11 **Q: Is there any follow up after an evaluation?**

12 A: In response to OCA Data Request No. 52 as shown on Exhibit __ (FK-1),
13 Schedule D, BHE explains that a list of the recent commercial evaluations are
14 given to the account managers for follow up. BHE indicates that it currently
15 does not track the rate of conversion of recommendation of additional projects
16 done through the evaluation program for these customers.

17 To better assure the evaluation program is meeting its intended purpose
18 (funneling participants to prescriptive or custom programs), I recommend that
19 BHE contact the customer after an evaluation to ask about additional identified
20 projects, answer customer questions, and facilitate moving forward. In addition,
21 BHE needs to track rates of conversion, and set program performance targets
22 based on these conversion rates.

1 **Q: Do you have any comment on BHE's proposed budget for this program?**

2 A: Yes, it is unclear what budget is available or used for the direct installation
3 measures and Key Account Manager follow-up. BHE should provide more
4 clarity as to the budget for these items.

5 **Q: Are there budget amounts or goals for industrial customers in BHE 2014-
6 2018 five-year plan?**

7 A: In response to OCA Data Request No. 53 as shown on Exhibit __ (FK-1),
8 Schedule E, BHE explains that industrial customers are eligible to participate in
9 the nonresidential evaluation program and are included in the commercial and
10 industrial nonresidential evaluation program customer eligibility parameter.
11 The goals and budgets were not separated by customer class as commercial and
12 industrial.

13 **NONRESIDENTIAL CUSTOM PROGRAM**

14 **Q: Please describe BHE's Nonresidential Custom Program.**

15 A: The Nonresidential Custom Program provides incentives for equipment not
16 covered by the Prescriptive Program. In most cases, analysis is required to
17 calculate savings, costs, and other project details in the nonresidential custom
18 program. Black Hills provides funding to support this analysis. This program is
19 promoted through Black Hills account managers, vendors, engineers and trade
20 allies. Incentives are designed to cover one half of the incremental cost or
21 reduce payback to two years, whichever is less. There is an incentive cap of

1 \$3000. BHE expects most projects to involve boilers and other heating
2 equipment, heat recovery measures, or process heating.

3 There are only twelve to fifteen participants expected each year.
4 Program costs are an extremely low at \$0.88/therm saved. BHE anticipates
5 average savings of 65,500 therms/year, which is well short of the actual 2011
6 savings of 79,000 therms/year. In 2011, Black Hills spent \$100,400, whereas
7 the average budget for the current plan is \$57,900. In 2011, this program was
8 the most cost-effective program in BHE's whole portfolio. The actual 2012
9 savings was 132,210 therms, while company spent \$125,229 for 12 participants.
10 The program was still cost effective.

11 **Q: Why is BHE cutting budgeted costs, expected savings, and participation in**
12 **this program?**

13 A: In response to OCA Data Request No. 54 as shown on Exhibit __ (FK-1),
14 Schedule F, BHE explains that resources were allocated based on recent
15 historical participation levels, and Black Hills Energy will continue to conduct
16 outreach to engage customers.

17 Even though the participation goal in the new plan reflects the actual
18 participation in 2011 and 2012, BHE cut the budget for this program by half of
19 the actual cost for 2011 and 2012. Cutting the annual budget for custom
20 program by half does not reflect Black Hill's assertion that the new plan budget
21 is based on recent historical level.

1 I recommend that BHE increase funding to take advantage of
2 nonresidential custom program which is one of BHE's most cost-effective
3 programs. In order to increase participation by large industrial in this program,
4 BHE needs to increase the cap for larger projects.

5 Outreach to this important customer base is critical. Account
6 management can be a highly effective means to target customers through
7 building relationships, understanding their needs, and driving participation.

8 **Q: How many account managers are there to work on this program?**

9 A: In response to OCA Data Request No. 55 as shown on Exhibit __ (FK-1),
10 Schedule G, BHE states that it has two account managers currently and an
11 additional one is planned to be hired in 2013. The annual budget allocated for
12 administration and program delivery, which includes account management for
13 nonresidential custom program, is about \$12,000 to \$15,000 a year. This means
14 that BHE spreads the cost for account management across its portfolio. It is not
15 clear how much of a significant role account managers play in this program.

16 The collaboration meeting in 2009 and 2010 noted the importance of the
17 key account managers in executing the strategies to mitigate market barriers. I
18 think the better practice is not to cut the budget on this program, and instead
19 invest in the internal support channels that are known to be critical in motivating
20 demand for and participation in this program.

21 **Q: Does this conclude your testimony?**

22 A: Yes, it does.

STATE OF IOWA)
)
COUNTY OF POLK)

SS: AFFIDAVIT OF FASIL KEBEDE

I, Fasil Kebede, being first duly sworn on oath, depose and state that I am the same Fasil Kebede identified in the foregoing Direct Testimony; that I have caused the foregoing Direct Testimony to be prepared and am familiar with the contents thereof, and that the foregoing Direct Testimony as identified therein is true and correct to the best of my knowledge, information and belief as of the date of this Affidavit.

/s/ Fasil Kebede
Fasil Kebede

Subscribed and sworn to before me, A Notary Public, in and for said County and State, this 27th day of June, 2013.

/s/ Craig Graziano
Notary Public

My Commission expires: June 14, 2014.