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IOWA UTILITIES BOARD**

OFFICE OF CONSUMER ADVOCATE

DIRECT TESTIMONY

OF

SHEILA J. PARKER

**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: Sheila J. Parker, 1375 East Court Avenue, Room 63, Des Moines, Iowa.

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

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

6 **Q: Would you describe your education and work experience?**

7 A: I joined the OCA in June 1988, after receiving a Bachelor of Business
8 Administration degree in Finance with distinction from Iowa State University.
9 My responsibilities include the review of tariff, compliance, price plan, energy
10 efficiency, and merger filings; research; and analysis of public utility issues
11 including the determination of capital structure. I have filed testimony in
12 numerous dockets and have testified before the Iowa Utilities Board (IUB).

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

14 A: I will address and make specific recommendations for the Residential Evaluation
15 Program, the Residential Prescriptive Program, the Residential New
16 Construction Program, and the Nonresidential New Construction Program
17 proposed by Black Hills/Iowa Gas Utility Company, LLC d/b/a Black Hills
18 Energy (BHE or Black Hills Energy) in its Natural Gas Energy-Efficiency Plan
19 2014-2018 (Plan) dated April 1, 2013.

20 **Q: Are there overarching recommendations regarding the programs you are**
21 **reviewing?**

1 A: Development of a technical reference manual, strengthening Evaluation,
2 Monitoring and Verification (EM&V), adequate staffing for program
3 administration and oversight, continued collaboration, and expansion of
4 programs to non-IOU providers are applicable to the Residential Evaluation
5 Program, the Residential Prescriptive Program, the Residential New
6 Construction Program, and the Commercial New Construction Program, in
7 addition to BHE's other programs. These overarching topics are addressed in
8 OCA witness Rebecca Foster's testimony.

9 **Q: Have you prepared an exhibit for presentation in this proceeding?**

10 A: Yes. OCA Exhibit___(SJP-1), Schedules A through E, was prepared by me.
11 Schedule A identifies the individual program's energy efficiency savings and
12 spending as a percent of the entire energy efficiency portfolio. Schedule B
13 compares BHE's actual historical results in these programs to its Plan.
14 Schedule C is a screen shot of an energy efficiency website. Schedule D
15 provides information on the Residential Prescriptive Program's individual
16 measures. Schedule E contains BHE's responses to OCA Data Requests.

17 **OVERARCHING COMMENTS**

18 **Q: What is BHE's stated commitment to development of a Technical Reference**
19 **Manual (TRM), (a/k/a Uniform Methods Project)?**

20 A: At page 6 of the Plan, BHE states:

21 Black Hills Energy will collaborate with other Iowa IOUs and
22 with the Office of Consumer Advocate (OCA), as appropriate, to
23 develop a uniform approach to impact and process evaluation.

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For example, Black Hills Energy will encourage its evaluation, measurement, and verification (EM&V) contractor to follow the methods prescribed in the Uniform Methods Project.

I am pleased that Black Hills Energy is willing to participate and collaborate, and utilize a TRM in the energy efficiency programs.

Q: What is BHE’s stated philosophy regarding establishment of the Plan’s incentive budgets?

A: OCA Data Request No. 47 (OCA Exhibit____(SJP-1), Schedule E) asked for the underlying assumptions BHE relied upon to establish incentive levels on a Plan-wide basis. BHE responded:

Each incentive was looked at individually. Black Hills Energy reviewed historical and regional incentive levels, cost effectiveness, participation and expenditure impacts to determine an appropriate incentive level to encourage customer participation.

Q: Do you have a comment regarding Black Hills Energy’s incentive levels?

A: BHE’s response suggests that its process for setting incentives lacks a cohesive methodological foundation and makes it difficult to assess the appropriateness of the incentive levels. To illustrate this difficulty, I will focus on BHE’s Residential Prescriptive Program’s incentives. The Residential Prescriptive Program’s individual measures are included in OCA Exhibit____(SJP-1), Schedule D and are compared by total cost, societal test, savings, and incentive as a percent of incremental cost, and include the “Dealer + Customer Incentives as % of Incremental Measure Cost.” The metrics in Schedule D demonstrate that of the 33 individual measures in the program, only 15 measures have

1 Societal Cost Test (SCT) ratios greater than 1, and those 15 measures contribute
2 65% of the program savings and account for 54% of the total program budget.
3 The corresponding analysis means that 18 measures are not cost-effective, yet
4 account for nearly half of the budget (46%) while providing only 35% of the
5 energy savings. The “Dealer + Customer Incentives as % of Incremental
6 Measure Cost” for the 15 cost-effective measures range from 27% to 74%.

7 If BHE developed a more cohesive methodology for its incentives, a
8 more complete explanation of the underlying criteria used to establish incentive
9 levels would allow greater understanding of the reasons for setting the incentive
10 levels, and would provide guidance during ongoing Plan review during the 5-
11 year Plan. BHE should continue to review each of the Plan’s measures and
12 make appropriate adjustments based on actual program participation and actual
13 savings achieved as verified through EM&V.

14 **RESIDENTIAL EVALUATION PROGRAM**

15 **Q: Please briefly describe the Residential Evaluation Program.**

16 A: For single family homes, the Residential Evaluation Program offers two free
17 evaluations: online and walkthrough, and two comprehensive evaluations. The
18 program also offers an onsite multifamily evaluation. Through this program,
19 customers receive direct install measures, become eligible for shell measure
20 incentives through BHE’s Residential Prescriptive Program, and receive
21 information about a bonus incentive for installation of three or more measures
22 through the Residential Prescriptive Program. (Plan, p. 24).

1 **Q: What are some of the changes to the 2014-2018 Plan from the current Plan?**

2 A: The online evaluation is a new addition to the Plan. The Tier I comprehensive
3 evaluation is “based on the HPwES [Home Performance with Energy Star] pilot
4 program” and is now available across BHE’s Iowa service territory. The Tier II
5 comprehensive evaluation includes a test-out. (Plan, pp. 24-25). The
6 multifamily evaluation is new to the Plan. (Plan, p. 27).

7 **Q: Did the OCA-led Collaboration address issues related to the Residential
8 Evaluation Program?**

9 A: Yes. The Collaboration addressed issues related to the Residential Evaluation
10 Program (f.k.a. Residential Audit). BHE does work with the other IOUs and
11 noted “[R]epresentatives from the REC’s as well as from municipalities attend
12 the stakeholder meetings and are educated on the IOU programs.” (OCA
13 Exhibit____(SJP-1), Schedule X, OCA Data Request No. 44). I believe that
14 collaboration among stakeholders has been, and would continue to be beneficial
15 to customers in order to share successes and innovations in the delivery of
16 energy efficiency programs.

17 **Q: What progress has BHE made in securing additional coordination efforts in
18 this program?**

19 A: BHE explained that it “signed an agreement with WED [Winneshiek Energy
20 District] in June 2012 for a one year pilot to determine how a local presence
21 could potentially affect the participation in the energy efficiency plans.” (OCA
22 Exhibit____(SJP-1), Schedule E, OCA Data Request No. 44). I am encouraged

1 that BHE is partnering with WED in an attempt to reach more customers and
2 provide a more comprehensive energy efficiency program. Such collaboration is
3 critical, especially in light of the low participation rate for the Home
4 Performance with Energy Star (HPwES) program. It is encouraging that BHE's
5 plan will allow such collaborative relationships to continue through its plans to
6 work with qualified evaluators to provide customers with on-site evaluation
7 services. (Plan, p. 28).

8 BHE should continue efforts to reach additional customers, and
9 adjustments in terms of administrative budgets and employee time may be
10 required. To address the plight of customers in mixed service situations who
11 cannot access comprehensive evaluations and incentives from electric providers,
12 BHE should consider expanding its efforts to coordinate with municipalities and
13 other entities in the mixed service settings.

14 **Q: How does the Residential Evaluation Program contribute to overall EE**
15 **savings and what budget level is BHE proposing for this program?**

16 A: The Residential Evaluation program accounts for 5% of the savings and 11% of
17 the budget in the energy-efficiency portfolio. (OCA Exhibit____(SJP-1),
18 Schedule A, pp. 1-2).

19 **Q: How do the budgeted dollars per therm savings for the 2014-2018 Plan**
20 **compare to the actual spending during 2009 through 2012?**

21 A: The Residential Evaluation Program's proposed budget is nearly double
22 previous actual spending and the number of Evaluations in the 2014-2018 Plan

1 is expected to also nearly double. As shown in OCA Exhibit____(SJP-1),
2 Schedule B, page 2, BHE proposes to spend \$12/therm on average in the New
3 Plan, which is higher than the \$9/therm it spent to achieve savings in 2009
4 through 2011 (excluding the outlier of 2012 spending).

5 **Q: Please describe the range of incentives for the Residential Evaluation**
6 **Program shown in BHE’s Excel workbook “BHE IA-DR 5” filed with the**
7 **IUB on May 15, 2013.**

8 A: BHE provides a “Dealer + Customer Incentives as Percent of Inc. Measure Cost”
9 for each of its measures. The incentive/cost ratios range from 21% to 100%.

10 **Q: Has BHE adopted some stakeholder suggestions in the Residential**
11 **Evaluation Program to encourage participation and to better encourage**
12 **customers to implement comprehensive projects?**

13 A: Yes. BHE’s Plan at page 24: “[C]ustomers who participate in the Residential
14 Evaluation Program are informed of a 10% bonus incentive for those who install
15 three or more measures during the program year.” I am hopeful that this effort is
16 effective in supporting participation in energy efficiency programs, and it is
17 encouraging to see that BHE is implementing stakeholders’ suggestions.

18 **Q: What is your recommendation regarding incentives, budgets, and savings?**

19 A: BHE should review its proposed incentive levels to consider the incentive dollar
20 per therm savings, and review the link between Residential Evaluation Program
21 participation and measures installed under the Residential Prescriptive Program.
22 The Plan appears to presume that the on-site evaluations will lead to an increase

1 in Residential Prescriptive Program participation, and BHE has indicated,
2 “Tracking occurs between on-site evaluation and submission of prescriptive
3 rebate applications.” (OCA Exhibit____(SJP-1), Schedule E, OCA Data
4 Request No. 9). BHE should closely monitor the take-rate of the comprehensive
5 evaluations to ensure the incentive levels are appropriate (\$100 customer cost
6 and \$300 incentive for Tier I Evaluation; \$200 customer cost and \$400 incentive
7 for Tier II Evaluation). (Plan p. 29).

8 **Q: What are your comments regarding the Residential Evaluation Program’s**
9 **benefit-cost (B/C) ratio?**

10 A: The gas Societal B/C ratio is 0.58 (Plan, Appendix G) and reflects only direct
11 install measures. The evaluation program is a prerequisite for customer adoption
12 of other measures that are cost-effective. In assessing the cost-effectiveness of
13 the evaluation program, it would be acceptable and perhaps even more accurate
14 to also consider the energy efficiency impacts of measures that are promoted
15 primarily or exclusively through the evaluation program. It’s important to keep
16 in mind the cost-effectiveness of measures installed as a result of an evaluation.
17 Focusing only on the program’s stand-alone B/C ratio could misrepresent the
18 importance of the Residential Evaluation Program. BHE should monitor the
19 B/C ratio to ensure and/or increase the cost-effectiveness of existing offerings
20 and evaluate whether additional follow-up by BHE is necessary to encourage
21 customers to install the recommended measures and BHE should verify the
22 resulting savings. BHE should also continue to monitor and evaluate emerging

1 technologies throughout the five-year plan to offer any additional
2 measures/technologies that could become cost-effective to its customers.

3 **Q: How could BHE improve education and outreach efforts for the Residential**
4 **Evaluation Program?**

5 A: BHE should partner with other organizations and focus on more marketing
6 throughout the five-year Plan in order to reach more customers and achieve
7 greater savings. This is especially important because the Residential Evaluation
8 Program accounts for 11% of the total budget (the third highest spending
9 program in the Plan). In addition, BHE only expects 75 Tier I Evaluations and
10 only 5 Tier II Evaluations during each year of the Plan (BHE's May 13, 2013
11 Information Filing with IUB, Recommendation Nine). BHE should make a
12 concerted effort to achieve and preferably exceed these participation goals.

13 **Q: Does BHE have a QA/QC plan in place for this program, considering the**
14 **role contractors/evaluators play in this program?**

15 A: BHE describes its QA/QC requirements for assessors in its responses to OCA
16 Data Request No. 11 (OCA Exhibit____(SJP-1), Schedule E) stating: "Black
17 Hills Energy will continue to modify agreements with any contractors providing
18 evaluation services to ensure customers receive high-quality services. Contracts
19 related to installation are between the customer and contractor." BHE states,
20 "Evaluators are required to have BPI Building Analyst certification."

21 **Q: Who is responsible for QA/QC in this program?**

1 A: BHE states, “Internal QA/QC is embedded in the administrative budget and is
2 not separate. Black Hills Energy provides oversight of the evaluation program
3 including quarterly meetings with the implementation firm...” (OCA
4 Exhibit____(SJP-1), Schedule E, OCA Data Request No. 11). BHE should
5 develop a complete QA/QC plan to be sure that contractors satisfactorily
6 complete work, and that the evaluations do not overlook opportunities. To
7 ensure the success of this program, BHE should establish specific procedures to
8 address training and mentoring, site inspection scoring, probation status, and
9 grounds for outright dismissal from the program.

10 **Q: BHE’s Plan at page 26 notes that the Residential Evaluation Program “will**
11 **be delivered by selected energy professionals.” Do you have comments**
12 **regarding this delivery approach?**

13 A: Yes. In response to OCA Data Request No. 12, (OCA Exhibit____(SJP-1),
14 Schedule E) BHE stated “Any qualified contractor may be eligible to participate
15 under a contractual agreement and oversight from the implementation
16 contractor.” BHE should adopt Tetra Tech’s recommendation to “Develop a list
17 of participating contractors.” (Tetra Tech’s Black Hills Energy 2010
18 Comprehensive Process and Impact Evaluations—Iowa Gas Territory, April 13,
19 2011, at page 8, filed with BHE’s 2011 Annual Report, Docket EEP-2008-
20 0003).

21 BHE should also be sure it has adequate staffing and budget to provide
22 oversight to this program to assure effective delivery by implementers. In

1 addition, I recommend that BHE set follow-through goals for residential
2 evaluations and monitor the conversion rates from the walk through audit to
3 installation of recommended measures to assess the effectiveness of the
4 evaluator's work.

5 **Q: Do you have comments regarding BHE's decision to discontinue the Home**
6 **Performance with Energy Star (HPwES) comprehensive evaluation pilot**
7 **but offer a similar program in its Tier I Evaluation?**

8 A: Yes. BHE reveals in response to OCA Data Request No. 8 that its 2010
9 Evaluation Report found "that there is perceived cost barrier to completing
10 actions by customers and low value to completion." (OCA Exhibit____(SJP-1),
11 Schedule E). While the data response also indicates that BHE has conducted
12 some education and outreach, it is not clear if these efforts will be effective in
13 increasing participation and follow-up installations of the recommendations
14 made in the Residential Evaluation Program. Due to the loss of name
15 recognition associated with the ENERGY STAR label, BHE should consider a
16 home scoring and labeling initiative to provide value-added recognition to
17 improved homes. This action could motivate additional customers to participate
18 in the program.

19 As mentioned previously in my testimony, BHE should consider the
20 results of its partnership with the Winneshiek Energy District to deliver Home
21 Energy Evaluations to gain insight into successful strategies for delivery of a
22 comprehensive energy Evaluation to BHE's customers.

1 **Q: Would you comment on BHE's third party EM&V report on the Audit**
2 **(n.k.a Evaluation) and HPwES program?**

3 A: Yes. The Tetra Tech 2010 Comprehensive report at pages 7 through 8 made the
4 following recommendations:

- 5 1. Establish metrics for how soon customers should expect to have
6 an audit scheduled.
- 7 2. Close the loop with Home Performance participants and make
8 sure they are follow-up with regarding the test-out phase of the audit.
- 9 3. Trade Ally Engagement:
 - 10 a. Enlist the assistance of contractors to promote the BHE
 - 11 programs and rebates – possibly in the form of testimonials or quotes.
 - 12 b. Develop a list of participating contractors.
 - 13 c. Hold annual meetings with auditors and contractors.

14 (Tetra Tech's Black Hills Energy 2010 Comprehensive Process and Impact
15 Evaluations—Iowa Gas Territory, April 13, 2011, filed with BHE's 2011
16 Annual Report, Docket EEP-2008-0003).

17 I recommend that BHE continue to review recommendations made in its
18 EM&V reports and consider implementing recommendations that will strengthen
19 the program.

20 **Q: Are there steps that BHE should take to improve EM&V?**

21 A: Yes. The EM&V review-period must be timely to allow BHE the ability to
22 implement new technologies timely and design changes as appropriate during
23 the 2014-2018 Plan.

24 **RESIDENTIAL PRESCRIPTIVE PROGRAM**

25 **Q: Please briefly describe the Residential Prescriptive Program.**

1 A: This program “provides incentives to customers who improve the efficiency of
2 their home” through install of measures such as furnaces, boilers, water heaters,
3 and envelope measures such as “roof, wall, and foundations insulation and
4 infiltrations.” (Plan, p. 31). In order to be eligible for envelope measure
5 incentives, customers are required to participate in the on-site evaluation through
6 the Residential Evaluation Program. (Plan, p. 31).

7 **Q: What are some of the changes to the 2014-2018 Plan from the current Plan?**

8 A: BHE has added WiFi programmable thermostats and gas fireplace measures and
9 removed clothes dryers and dishwasher measures in this new Plan. (BHE’s
10 May 13, 2013 Information Filing with IUB, Recommendation Four).

11 **Q: How does the Residential Prescriptive Program contribute to overall EE
12 savings and what budget level is BHE proposing for this program?**

13 A: The Residential Prescriptive Program accounts for 53% of the savings and 43%
14 of the budget in the energy efficiency portfolio. (OCA Exhibit____(SJP-1),
15 Schedule A, pp. 1-2).

16 **Q: How do the budgeted dollars per therm savings for the 2014-2018 Plan
17 compare to the actual spending during 2009 through 2012?**

18 A: The Residential Prescriptive Program’s proposed budget is similar to previous
19 actual spending and expected participation is nearly identical. The Plan’s
20 proposed dollar per therm spending is slightly higher than actual dollar per
21 therm spending results during 2009-2012. As shown in OCA Exhibit____(SJP-
22 1), Schedule B, page 1, BHE proposed to spend, on average, \$4.45/therm in the

1 New Plan compared to the \$3.20/therm spent to achieve savings in 2009 through
2 2012.

3 **Q: Please describe the range of incentives for the Residential Prescriptive**
4 **Program shown in BHE’s Excel workbook “BHE IA-DR 5” filed with the**
5 **IUB on May 15, 2013.**

6 A: BHE provides a “Dealer + Customer Incentives as Percent of Inc. Measure Cost”
7 for each of its measures. The incentive/cost ratios range from 14% to 74%.

8 **Q: What is your recommendation regarding incentives, budgets, and savings?**

9 A: BHE should review its proposed incentive levels to consider the incentive dollar
10 per therm savings, and provide higher relative incentives to those measures that
11 provide better savings. When possible, incentives should be tiered to drive
12 customer selection of higher efficiency achieving equipment. In the future, a
13 TRM would help provide guidance in determining appropriate incentive levels.
14 I provided a more complete discussion and identification of additional issues
15 regarding the Residential Prescriptive Program’s incentives, budgets, and
16 savings previously in this testimony.

17 **Q: Are there additional program aspects that BHE should consider?**

18 A: Yes. BHE should consider implementing a sliding-scale incentive based on
19 actual performance of installed measures to encourage customers to install the
20 measures that provide the most savings. This action would reduce customer
21 “cherry-picking” the measures with the highest incentive, and encourage
22 customers to consider the measures that generate the most savings. Second,

1 BHE should consider bundling infiltration measures with insulation measures to
2 encourage more comprehensive savings levels.

3 **Q: What are your comments regarding the Residential Prescriptive Program’s**
4 **benefit-cost ratio?**

5 A: The societal B/C ratio is 1.10 (Plan, Appendix G). BHE should focus on
6 promoting cost-effective measures and include more measures that are cost-
7 effective, and consider eliminating or reducing incentives for measures that are
8 not cost-effective. BHE should also continue to monitor and evaluate emerging
9 technologies throughout the five-year plan to offer any additional
10 measures/technologies that could become cost-effective to its customers.

11 **Q: While the program overall is cost-effective, why do you recommend that**
12 **BHE can and should focus on improving the cost-effectiveness of this**
13 **program?**

14 A: As noted previously in this testimony, BHE provided the individual Societal
15 Cost Test (SCT) Ratio for each measure in the Residential Prescriptive Program
16 in its response to OCA Data Request No. 68 (OCA Exhibit____(SJP-1),
17 Schedule E). Of the 33 measures included in the program, 15 measures have a
18 SCT ratio greater than 1, and 18 measures have a SCT ratio less than 1. The
19 main reason given by BHE for the inclusion of these non-cost-effective
20 measures is “To provide a comprehensive package of relevant natural gas
21 measures.” (OCA Exhibit____(SJP-1), OCA Data Request No. 72).

1 **Q: Please comment on the cost-effective measures that BHE did not include in**
2 **the Residential Prescriptive Program.**

3 A: BHE should consider including some of the cost-effective measures identified in
4 its response to OCA Data Request No. 43 (OCA Exhibit____(SJP-1),
5 Schedule E). The response identifies measures that pass the SCT but are not
6 included in the Plan. However, it is not entirely clear if the response is correct
7 because the response states that Thermal Doors were not included, but Thermal
8 Doors are included at page 34 of the Plan, in response to OCA Data Request No.
9 68, and in BHE’s Excel workbook “BHE IA-DR 5” filed with the IUB on
10 May 15, 2013.

11 BHE should review the assumptions underlying its decision to include or
12 exclude measures and BHE should report the assumptions in a transparent way
13 to allow review and verification. As part of the review of assumptions, BHE
14 should also identify specific market barriers to participation and determine if
15 additional education or inclusion of incentives in a market-based program would
16 overcome those barriers. In addition, BHE should review the cost-effectiveness
17 of measures due to changing Federal standards throughout the new five-year
18 plan.

19 **Q: Do you have an additional recommendation for the Residential Prescriptive**
20 **Program in terms of measures?**

21 A: Yes. Another option for BHE to consider would be to offer incentives for higher
22 efficiency tiers, for example CEE Tiers 2 and 3, ENERGY STAR Most

1 Efficient, and “Top Ten” (www.toptenusa.org). OCA Exhibit____(SJP-1),
2 Schedule C, is a screen print of the “Top Ten” website. The website provides
3 information about a variety of high-efficiency products such as water heaters,
4 clothes washers, and dishwashers. BHE did not consider any of these higher
5 efficiency tiers as stated in its response to OCA Data Request No. 43 (OCA
6 Exhibit____(SJP-1), Schedule E).

7 **Q: Are there emerging measures that warrant further consideration for**
8 **inclusion in BHE’s plan?**

9 A: Yes. Emerging technologies such as, but not limited to home energy
10 management systems and water heater thermostat setbacks should be monitored
11 for inclusion in this program. Incentives should target high efficiency tiers, as
12 applicable.

13 **Q: How would inclusion of such higher efficiency measures enhance the**
14 **program?**

15 A: The inclusion of higher efficiency measures will support the continued
16 improvement of these markets, and allow more measures to be available to
17 consumers. Such higher efficiency tiered incentives should be considered for
18 measures that have been offered in the previous plan, such as dishwasher
19 incentives which are not included in the 2014-2018 Plan.

20 **Q: Could BHE’s review of Residential Prescriptive Program delivery lead to**
21 **greater savings?**

1 A: Yes. I have recommended the other IOUs pursue innovative program delivery
2 models to help achieve more aggressive targets, such as market-based programs
3 that leverage the bargaining power of upstream programs and involve all the
4 market actors with influence over consumers' energy efficiency choices,
5 including retailers. Rather than pay dealer spiffs on all efficiency products, a
6 market lift program can help focus and control such expenditures by setting a
7 baseline sale volume for retailers based on market data and providing incentive
8 to the retailer for any sales above the baseline. To be most effective, these
9 market-based programs should be cooperatively developed and administered by
10 the IOUs. BHE should monitor such efforts for HVAC measures and be
11 prepared to move forward with complementary efforts.

12 **Q: Should BHE review the Residential Prescriptive Program's administrative**
13 **budget?**

14 A: Yes. As noted previously in my testimony, the Residential Prescriptive Program
15 realizes the most energy savings and incurs the highest level of spending of any
16 program in the entire Plan. The Plan at page 36 notes, "No outside services are
17 required for implementing this program." As such, it is crucial that BHE is able
18 to devote adequate funds for administration of the program. In the current Plan,
19 BHE has budgeted administrative costs of approximately \$29,000 annually to
20 this program that provides over \$2 million in customer incentives. I recommend
21 that BHE review its administrative budget for this program to be sure that the
22 budget and staffing levels are appropriate for effective program delivery.

1 **Q: What is your recommendation regarding the furnace measures?**

2 A: BHE should set the furnace requirement consistent with the minimum criteria for
3 ENERGY STAR ($\geq 95\%$ AFUE), given the federal standard mandate has been
4 delayed. I would like to clarify that, while the Plan at page 33 indicates that
5 BHE was proposing an incentive of \$1,350 for furnace “Replacement before end
6 of life,” the response to OCA Data Request No. 66 (OCA Exhibit____(SJP-1),
7 Schedule E) indicates that the Plan incorrectly lists the measure, and that the
8 early replacement measure will not be included in the program.

9 **Q: BHE includes quality installation of furnaces and boilers in its Residential**
10 **Prescriptive Program by offering dealer spiffs of \$150. Do you recommend**
11 **BHE continue to provide an incentive for quality installations?**

12 A: No. BHE notes in response to OCA Data Request No. 72 that these measures,
13 which are not cost-effective on an individual basis, are “included to continue to
14 encourage market transformation and ensure customers receive the full benefits
15 of efficient units.” (OCA Exhibit____(SJP-1), Schedule E). While the dealer
16 spiff for quality installations was included in BHE’s 2009-2013 Plan, it should
17 only be a temporary incentive to help build awareness and transition to quality
18 installation being a standard prerequisite for any HVAC units that are eligible for
19 ratepayer funded incentives.

20 In BHE’s proposed 2014-2018 Plan, the number of furnace quality
21 installs grows from 180 during the first year to 930 during the last year of the
22 Plan, and the number of boiler quality installs grows from 7.50 during the first

1 year of the Plan to 45.73 during the last year of the Plan. The furnace quality
2 install measure has a SCT of 0.16, and is budgeted at \$415,000 total cost over
3 the 5-year Plan. The boiler quality install measure has a SCT of 0.49, and is
4 budgeted at \$19,000 total cost over the 5-year Plan. (OCA Exhibit ____ (SJP-1),
5 Schedule E, OCA Data Request No. 68 identifies SCT. BHE's Excel workbook
6 "BHE IA-DR 5" filed with the IUB on May 15, 2013 provides the cost
7 information).

8 **Q: What do you recommend for the furnace and boiler quality install**
9 **measures?**

10 A: I have two recommendations. First, quality installation should be a requirement
11 for any furnace or boiler rebate, and second, any quality installation rebate
12 should go to the customer, not the installation contractor to help drive demand
13 for HVAC installation by certified contractors. Past energy efficiency programs
14 have provided financial support for quality installation training and contractor
15 incentives for quality installation. Now that training has been completed and
16 contractors are aware of such requirements, quality installation should be a
17 standard expectation and not a continuing incentive for contractors. I agree with
18 BHE's response that the quality install measures should be included to "ensure
19 customers receive the full benefits of efficient units" (OCA Data Request
20 No. 72). However, I am concerned that the proposed Plan is paying incentives
21 for furnace and/or boiler units not accompanied with a quality installation. A
22 review of BHE's Excel workbook "BHE IA-DR 5" filed with the IUB on

1 May 15, 2013 reveals that the number of expected furnace measures far exceeds
2 the number of “Furnace Quality Install,” and the same situation is applicable for
3 boiler measures.

	Black Hills Energy Residential Prescriptive Program	Total 5-year Participants
1	Furnace Quality Install	2,763
2	Furnace 94%-95.9%	7,500
3	Furnace 96%+ AFUE	1,658
4	Boiler Quality Install	129
5	Boiler 95%+ AFUE	415

(OCA Exhibit ____ (SJP-1), Schedule D)

4 **Q: How does BHE propose to verify quality installation of furnaces and**
5 **boilers?**

6 A: BHE requires that “contractors submitting applications for quality installation
7 spiffs must either use the SAVE software or be North American Technician
8 Excellence (NATE) certified.” BHE further explains that to receive the quality
9 installation spiff, dealers must provide:

10 [D]ocumentation showing proper installation practice and/or
11 proof that the contractor completed a training course.

12 A third party vendor performs onsite verification of five percent
13 of installed measures. If the verification determines that a
14 contractor’s installations are sub-standard then a higher
15 percentage of installs are verified. (OCA Exhibit ____ (SJP-1),
16 Schedule E, OCA Data Request No. 17).

17 **Q: What is your recommendation regarding quality assurance/quality control**
18 **(QA/QC) for furnace and boiler quality installations?**

1 A: BHE should establish a process to address QA/QC for quality installations
2 directly. Depending on the number of contractors involved it may be necessary
3 to increase the percent of onsite verification or otherwise assure that
4 verifications are performed for all contractors/firms performing this quality
5 install work. Increasing the percentage of installations verified when sub-
6 standard work has occurred does not sufficiently address the issue. To ensure
7 the success of this measure, BHE should establish specific site inspection
8 scoring, probation status, and grounds for outright dismissal from participation
9 in the program.

10 In addition, I recommend that BHE's EM&V process require a review of
11 the savings assumptions for quality installations to confirm achieved savings.

12 **Q: Is BHE's quality assurance (QA) process for this portion of the Residential**
13 **Prescriptive Program clear?**

14 A: No. It is not clear how BHE will implement the QA process. The information
15 provided in the Response to OCA Data Request No. 17 discussed previously
16 identifies a third party vendor, but the Plan at page 36 states: "No outside
17 services are required for implementing this program."

18 **Q: Do you have any recommendations for the Residential Prescriptive**
19 **Program in terms of individual measure's lives?**

20 A: Yes. BHE relied on a twenty-year life for insulation measures, an eleven-year
21 life for infiltration reduction measures, and a fifteen-year life for setback
22 thermostats. (BHE's Excel workbook "BHE IA-DR 5" filed with the IUB on

1 May 15, 2013 and OCA Exhibit____(SJP-1), Schedule E, OCA Data Request
2 No. 14). BHE should review the assumptions underlying the savings claims and
3 report the assumptions in a transparent way to allow review and verification.
4 Use of a TRM would be beneficial in program design and would provide an
5 opportunity for review of these, and other measures' lives, compared to industry
6 standards.

7 **Q: Do you have any recommendations regarding the EM&V process for the**
8 **Residential Prescriptive Program?**

9 A: Yes. The EM&V process should give particular attention to the furnace and
10 boiler quality installation measure. In addition, as part of the EM&V conducted,
11 BHE should review and verify the impact and cost-effectiveness of the \$100
12 incentive for bundled prescriptive measures. Allocating adequate time to the
13 review period is necessary to enable BHE to implement new technologies and
14 program changes as appropriate during the 2014-2018 Plan.

15 **RESIDENTIAL NEW CONSTRUCTION PROGRAM**

16 **Q: Please briefly describe the Residential New Construction Program.**

17 A: The Residential New Construction Program “promote[s] the construction of
18 energy-efficient single and multifamily homes by providing incentives to new
19 home builders for installing high-efficiency, natural gas-fired space and water
20 heating equipment and more robust thermal envelope measures.” BHE states
21 that it has “simplified the program,” and offers a \$1,000 rebate for homes
22 through a single prescriptive path with five equipment measures. (Plan, pp. 38-

1 39). Changes to the program include offering incentives to customers for drain
2 water heat recovery, removal of window measures, and insulation and furnace
3 requirements. (Dillon Testimony, p. 7).

4 **Q: The Plan, at pages 38 and 39, indicates that duplex and triplex homes are**
5 **eligible for participation. What participation rates does BHE estimate from**
6 **customers in two and three-unit homes?**

7 A: BHE's responses to OCA Data Request Nos. 64 and 65 (OCA Exhibit ____ (SJP-
8 1), Schedule E) indicate that the participation level of these type of units is
9 expected to be so minimal that Cadmus did not include them in modeling.

10 **Q: What is the most significant change to the 2014-2018 Plan from the current**
11 **Plan?**

12 A: The most significant change to the Residential New Construction Program is the
13 abrupt departure from previous program delivery paths. Black Hills now offers
14 a single prescriptive path, with only five required measures, for residential new
15 construction. During the 2009-2013 Plan, BHE offered four new construction
16 program paths: a prescriptive Builder Option Plan (BOP), an Advanced BOP
17 that combined prescriptive measures and HERS rating, and two performance
18 tiers.

19 BHE identified the following significant change:

20 The New Construction Program was reduced from two
21 performance tiers and a prescriptive tier in the former
22 program to a single prescriptive option in the new
23 program. (Dillon p. 7).

1 I am concerned that only offering a single prescriptive option will result in lost
2 long-lasting opportunities for comprehensive savings.

3 Another significant change is that multifamily new construction will no
4 longer be eligible for the Residential New Construction Program. This sector,
5 which represented a significant portion of participation in 2012 and likely high
6 participation in previous years, will only be eligible for BHE's nonresidential
7 new construction rebates. Notably, even though this segment played a
8 significant role in BHE's current plan, no multifamily complexes are included in
9 BHE's 2014-2018 program projections. (OCA Exhibit____(SJP-1), Schedule E,
10 OCA Data Request No. 76).

11 **Q: Did the OCA-led Collaboration address issues related to the Residential**
12 **New Construction Program?**

13 A: Yes. The OCA collaborated with stakeholders and IOUs to discuss several
14 aspects of the new construction program. Topics included: 1) the changing and
15 more challenging Energy Star requirements; 2) quality assurance of HERS
16 raters; and 3) code compliance, including the Department of Energy's (DOE)
17 Iowa code study. In addition, a stakeholder-working group collaborated to
18 develop the ABOP as an alternative program offered by BHE, Interstate Power
19 and Light Company, and MidAmerican Energy Company. The ABOP was
20 designed to fill gaps between the Builder Option Package, and the more stringent
21 ENERGY STAR HOME option. ENERGY STAR implemented new, more
22 stringent changes during 2012 which were anticipated to be met with much

1 builder resistance. Because of the working relationships created and enhanced
2 through the collaborative, the work group was able to identify this challenge to
3 the existing new construction programs, and be proactive in developing a
4 solution.

5 **Q: What is your concern regarding BHE’s decision to remove the ABOP path**
6 **from the Residential New Construction Program in the 2014-2018 Plan?**

7 A: I am concerned that without the ABOP, builders will not be encouraged to
8 include comprehensive energy efficiency measures in newly constructed homes.
9 In addition, removal of ABOP is at odds with Tetra Tech’s findings.

10 In Tetra Tech’s 2012 Comprehensive Process and Impact Evaluation –
11 Iowa Gas Territory, April 3, 2013, at page 3-7, (filed with BHE’s 2012 Annual
12 Report, Docket EEP-2008-0003) it found that the ABOP savings were
13 “consistent with current or proposed code requirements, program assumptions,
14 and engineering fundamentals.” Notably, BHE’s impact evaluation for this
15 program appears to have focused exclusively on the ABOP option. OCA Data
16 Request No. 62 asked why BHE eliminated this fundamentally sound program
17 path. BHE responded that it had eliminated the ABOP because it had few
18 participants, and because many of the ABOP requirements “would be met or
19 exceeded by 2012 IECC.” (OCA Exhibit___(SJP-1), Schedule E, OCA Data
20 Request No. 62). Removal of the ABOP path based on BHE’s assumption of
21 IECC 2012 will likely result in a loss of efficiency savings opportunities in new
22 home construction. I further address code issues later in my testimony.

1 **Q: Do you have a suggestion as to how BHE could increase the effectiveness of**
2 **its Residential New Construction Program?**

3 A: Yes. BHE should consider offering a program component similar to Interstate
4 Power and Light's (IPL) Builder Training Program. This IPL program includes
5 experts in building sciences, a HERS rater and provider, and a code official. The
6 outreach and technical knowledge shared through these workshops provides
7 valuable information to builders and contractors. By implementing energy
8 efficiency measures and building techniques during construction, it is much less
9 expensive and less difficult to implement the strategies than it would be to
10 retrofit a home. Encouraging builders to build energy efficient homes would
11 minimize lost opportunities for long-lasting energy savings.

12 **Q: How does the Residential New Construction Program contribute to overall**
13 **EE savings and what budget level is BHE proposing for this program?**

14 A: The Residential New Construction Program accounts for 9% of the savings and
15 9% of the budget in the energy-efficiency portfolio. (OCA Exhibit____(SJP-1),
16 Schedule A, pp. 1-2).

17 **Q: How do the budgeted dollars per therm savings for the 2014-2018 Plan**
18 **compare to the actual dollars per therm spent during 2009 through 2012?**

19 A: The Residential New Construction Program's proposed budget has significantly
20 decreased, while BHE expects the number of participants to remain steady. In
21 addition, the Plan's proposed dollar per therm spending is much lower. As
22 shown on OCA Exhibit____(SJP-1), Schedule B, page 3, BHE proposes to

1 spend \$5.22/therm in the New Plan, and BHE spent \$12/therm to achieve
2 savings in 2009 through 2012.

3 **Q: Please describe the range of incentives for the Residential New Construction**
4 **Program shown in BHE’s Excel workbook “BHE IA-DR 5” filed with the**
5 **IUB on May 15, 2013.**

6 A: BHE provides a “Dealer + Customer Incentives as Percent of Inc. Measure Cost”
7 for each of its measures. The incentive/cost ratio is 21%.

8 **Q: What is your recommendation regarding incentives, budgets, and savings?**

9 A: BHE should do more to assure that spending (and the associated incentive) is
10 balanced with the level of associated savings. In response to OCA Data Request
11 No. 72 (OCA Exhibit____(SJP-1), Schedule E), BHE stated that none of the five
12 measures in the Residential New Construction Program is cost-effective. I
13 recommend that BHE review the cost and savings assumptions, consider the
14 incentive dollar per therm savings, and provide higher relative incentives for
15 homes with measures that provide better and more comprehensive savings. In
16 the future, a TRM would help provide guidance in determining appropriate
17 incentive levels.

18 Regarding savings estimates determination, BHE based savings on
19 REMRate models and savings for the drain-water heat recovery were based on
20 the Joint Assessment of Potential. BHE also noted, “for the measures that can
21 be modeled within REMrate, the software accounts for interactive effects.”
22 (OCA Exhibit____(SJP-1), Schedule E, OCA Data Request No. 28).

1 I will provide additional recommendations later in this testimony
2 regarding an additional aspect of Residential New Construction incentives.

3 **Q: What are your comments regarding the Residential New Construction**
4 **Program benefit-cost ratio?**

5 A: The Societal B/C ratio is 0.71 according to BHE's calculations and underlying
6 assumptions (Plan, Appendix G). BHE should take steps to ensure and/or
7 increase the cost-effectiveness of existing offerings, and BHE should timely
8 verify the resulting savings. BHE should also continue to monitor and evaluate
9 emerging technologies throughout the five-year plan in order to offer any
10 additional measures/technologies that could become cost-effective to its
11 customers.

12 **Q: Do you have any concerns with the Residential New Construction Program**
13 **in terms of building code?**

14 A: Yes. According to its response to OCA Data Request No. 46 (OCA
15 Exhibit___SJP-1), Schedule E), BHE assumed IECC 2012 as the baseline
16 throughout the five-year Plan period and if "the code changes, the baseline
17 assumptions would be reviewed." The response went on to disclose that
18 regarding assumed code compliance rates, "The savings estimates assume full
19 compliance for participants in the program."

20 I am concerned that the assumption of IECC 2012 as the baseline for
21 savings claims is overly conservative in that it assumes this Code will be
22 adopted and fully met. While BHE identified that "Builders are required to

1 submit a proof of code compliance to be eligible for program participation”
2 (Plan, page 38), it also explained, “Code compliance is a matter of City and state
3 regulation.” (OCA Exhibit____(SJP-1), Schedule E, OCA Data Request
4 No. 46).

5 **Q: Do you agree with BHE’s Evaluation of baseline building practice?**

6 A: No, I disagree because the Joint Evaluation did not include a current baseline
7 study of building practices. The utilities jointly undertook an Evaluation of
8 actual baseline practices in Iowa as part of the Evaluation of potential supporting
9 the current plan (EEP-2008-0003). This study was never formally published.
10 The utilities had an opportunity to gather information on new construction
11 baseline in Iowa as part of the Evaluation of potential for the new plan, but
12 elected not to do this.

13 **Q: What do you recommend in light of the changes to the IECC and the**
14 **Residential New Construction Program?**

15 A: A statewide program for enforcing building energy code (implemented by an
16 agency having authority in this area) would likely be the best and most cost-
17 effective means for assuring that all new homes in Iowa are in compliance with
18 code and realizing associated energy savings. The American Recovery and
19 Reinvestment Act (ARRA) require the State of Iowa to demonstrate that 90% of
20 homes are built to code by 2017. Until this enforcement system is implemented
21 and there is more consistent enforcement of building code throughout the state,
22 new construction energy efficiency programs will be an important means for

1 assuring code compliance. Ideally, the utilities’ baseline assumptions should be
2 developed from a baseline study that reflects actual building practices rather than
3 assume builders are building to IECC 2009 (until and unless the State of Iowa
4 recognizes a different code). This would enable the use of a Codes and
5 Standards Initiative to capture additional savings and still support new
6 construction programs. Absent a baseline study, it will be necessary to assure
7 that the utilities’ new construction programs are reliably satisfying code
8 requirements for homes that receive ratepayer funded incentives.

9 **Q: How does BHE plan to support code in its program?**

10 A: In its response to OCA Data Request No. 19 (OCA Exhibit____(SJP-1),
11 Schedule E), BHE stated:

12 Builders are required to submit a proof of code
13 compliance to be eligible for program participation.

14 The Plan, at page 38, also notes this requirement. However, it is not clear from
15 the Plan filing what a proof of code compliance entails. Because it is critical that
16 utilities pay incentives only for those measures and building practices that
17 exceed code, BHE should establish a specific process to confirm code
18 compliance. This could be accomplished by BHE’s use of the ABOP package,
19 which is consistent with current and proposed code requirements, and
20 appropriate field verification.

21 **Q: How could offering sliding incentives increase energy efficiency savings in**
22 **the Residential New Construction Program?**

1 A: If BHE were to offer sliding incentives, it would encourage builders to choose
2 higher efficiency measures for new homes and to participate in the Residential
3 New Construction Program rather than builders deciding to simply choose
4 eligible measures from the Residential Prescriptive Program (albeit potentially at
5 a slightly less level of incentives).

6 **Q: Do you have any recommendations regarding EM&V for the Residential**
7 **New Construction Program?**

8 A: Yes. The EM&V process should include the verification review of individual
9 component requirements of the Residential New Construction Program. In
10 response to OCA Data Request No. 19, BHE identified that while builders would
11 submit proof of code compliance, “HERS raters will inspect participating
12 homes.” (OCA Exhibit____(SJP-1), Schedule E). However, the Plan at page 40
13 notes, “No outside services are required for implementing this program.” The
14 EM&V process should confirm effective program delivery and verification of
15 savings. In addition, the timing of the EM&V review period must be adequate to
16 allow BHE to implement new technologies and program changes as appropriate
17 during the 2014-2018 Plan.

18 **NONRESIDENTIAL NEW CONSTRUCTION**

19 **Q: Please briefly describe the Nonresidential New Construction Program.**

20 A: The Nonresidential New Construction Program “encourages builders of
21 nonresidential facilities to build with energy-efficiency in mind.” (Plan, p. 60).

1 A third-party service provider delivers the program that mainly covers new
2 construction and major renovations.

3 **Q: Did the OCA-led Collaboration address issues related to the Nonresidential**
4 **New Construction Program?**

5 A: Yes. As I stated in my testimony filed in Interstate Power and Light, Docket No.
6 EEP-2012-0001 (p. 33), IPL, BHE, and MidAmerican Energy have collaborated
7 and use the same firm to deliver the program. I commend the IOUs for this
8 collaborative effort.

9 **Q: How does the Nonresidential New Construction Program contribute to**
10 **overall EE savings and what budget level is BHE proposing for this**
11 **program?**

12 A: The Nonresidential New Construction Program accounts for 2% of savings and
13 less than 1% of the budget in the energy-efficiency portfolio. (OCA
14 Exhibit____(SJP-1), Schedule A, pp. 1-2).

15 **Q: How do the budgeted dollars spent per therm savings for the 2014-2018**
16 **Plan compare to the actual dollars spent per therm savings during 2009**
17 **through 2012?**

18 A: The Nonresidential New Construction Program's proposed budget is less than
19 prior years' actual spending. As shown on OCA Exhibit____(SJP-1),
20 Schedule B, page 4, BHE proposes to spend \$2.07/therm saved in the New Plan
21 as compared to spending of \$3.89/therm saved and \$10.81/therm saved in 2011
22 and 2012, respectively.

1 **Q: What are your comments regarding the Nonresidential New Construction**
2 **Program benefit-cost ratio?**

3 A: The gas Societal B/C ratio is 2.51 (Plan, Appendix G). BHE should monitor the
4 B/C ratios to ensure the cost-effectiveness of existing offerings and evaluate
5 whether there is additional cost-effective potential to acquire. BHE should also
6 continue to monitor and evaluate emerging technologies throughout the five-year
7 plan to offer any additional measures/technologies that could become cost-
8 effective to its customers. BHE's EM&V process should review the savings
9 assumptions in this program to confirm achieved savings, and thereby support
10 the calculation of the B/C ratios.

11 **Q: Do you have any comments regarding the Nonresidential New Construction**
12 **Program in terms of eligibility?**

13 A: Yes. There may be occasions when a contractor for a new nonresidential
14 building may not be aware of BHE's Nonresidential New Construction Program.
15 New construction/major renovations represent a significant lost opportunity for
16 long-term energy efficiency. It is critical for BHE to identify projects early
17 enough to impact the energy efficiency of the project. BHE should provide
18 outreach to its trade allies and establish a process to actively monitor or subscribe
19 to publications and websites that provide notice of new construction projects.
20 BHE should follow up on all leads.

21 **Q: Do you have any recommendations regarding the budget for this program?**

1 A: Yes. As previously stated in this testimony, new construction/major renovations
2 represent a significant lost opportunity for long-term energy efficiency and
3 should be supported to the fullest extent possible. BHE should conduct periodic
4 and timely review of the program to be sure that the budget and staffing is
5 adequate to support increased participation.

6 In addition to stronger outreach for this program, BHE may need to
7 reconsider its incentive structure to assure that it is motivating new construction
8 participants. BHE is projecting only 2 participants per year, which is rather low
9 considering that the Nonresidential New Construction Program will now also be
10 serving multifamily construction projects. The Nonresidential New
11 Construction Program had 3 participants in 2011, and 4 participants in 2012.

12 **Q: Do you have a recommendation for BHE regarding the Nonresidential New**
13 **Construction Program and changing energy codes?**

14 A: Yes. As suggested by Tetra Tech (Tetra Tech's 2012 Comprehensive Process
15 and Impact Evaluation – Iowa Gas Territory Draft April 5, 2013, page 4-5, filed
16 with BHE's 2012 Annual Report, Docket EEP-2008-0003) BHE should review
17 the Nonresidential New Construction Program in order to make any changes
18 necessary to the program due to changes to the energy code (based on
19 ASHRAE-90.1-2007). BHE should implement a process to update baselines to
20 reflect changes to the applicable code throughout the Plan's duration. In
21 addition, BHE should review program processes to better estimate savings based
22 on the timing of the project and the applicable code at that time.

1 **Q: Do you have any EM&V recommendations for the Nonresidential New**
2 **Construction Program?**

3 A: Yes. BHE should consider offering an incentive for third-party commissioning
4 of the building after construction to ensure that systems are installed and
5 working properly and that anticipated savings are accurate. This is a particularly
6 useful measure because it will: (1) Facilitate the creation of an operation and
7 maintenance manual for the building; (2) Encourage the establishment of a
8 maintenance contract to ensure the building continues to work correctly; and (3)
9 Encourage the establishment of a regular maintenance and training schedule.

10 **RECOMMENDATIONS**

11 **Q: Please summarize your recommendations.**

12 A: I recommend that BHE focus its program delivery on measures that capture
13 deeper and more sustainable savings. With respect to incentives, BHE should
14 consider basing incentives on the incentive dollar per therm savings, providing
15 higher relative incentives to those measures that provide better savings, and
16 implementing tiered incentives for higher efficiency achieving equipment. BHE
17 should also remain open to mid-Plan modifications to add incentives for
18 emerging technologies that become cost-effective during the Plan. In addition,
19 BHE should work on strengthening EM&V and conducting EM&V in a timely
20 manner, and continue to collaborate in establishing a statewide technical
21 reference manual for all utilities.

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

1 A: Yes.

STATE OF IOWA)
)
COUNTY OF POLK)

SS: AFFIDAVIT OF SHEILA PARKER

I, Sheila Parker, being first duly sworn on oath, depose and state that I am the same Sheila Parker 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/ Sheila Parker
Sheila Parker

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

/s/ Craig F. Graziano
Notary Public

My Commission expires: June 14, 2014.