

OFFICE OF CONSUMER ADVOCATE

DIRECT TESTIMONY

OF

BLAKE J. KRUGER

**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, occupation, and business address.**

2 A: My name is Blake J. Kruger, and I am a Utility Analyst with the Office of
3 Consumer Advocate (OCA), a division of the Iowa Department of Justice,
4 which is located at 1375 East Court Avenue, Des Moines, Iowa 50319.

5 **Q: Please explain your educational background and your work experience.**

6 A: I graduated with honors from Northwestern College in May of 2009 with a
7 double major in Finance and Accounting. In June of 2010, I joined the OCA as
8 a Utility Analyst where my primary responsibilities include tariff compliance
9 evaluations, purchased gas adjustment examinations, energy efficiency reviews,
10 and revenue requirement analysis. I have attended numerous conferences and
11 seminars including the NARUC Utility Rate School sponsored by Michigan
12 State University, Institute of Public Utilities.

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

14 A: The purpose of my testimony is to examine the following components of Black
15 Hills/Iowa Gas Utility Company, LLC d/b/a Black Hills Energy's (BHE or
16 Black Hills) filed energy efficiency plan and make recommendations to improve
17 BHE's plan performance in regards to these programs:

- 18 A. Low-Income Weatherization;
- 19 B. Low-Income Energy Education;
- 20 C. Low-Income Multifamily Efficiency Improvement Initiative;
- 21 D. Low-Income Affordable Housing ; and
- 22 E. Multifamily.

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

2 A: Yes. I prepared OCA Exhibit__ (BJK-1), Schedules A and B.

3 **Low-Income Weatherization**

4 **Q: Please describe BHE's Low-Income Weatherization Program.**

5 A: The Low-Income Weatherization Program provides funding to the state's
6 network of Community Action Program (CAP) agencies to cover the full
7 installation costs of approved gas saving measures in low-income homes. Black
8 Hills proposes the following gas measures for its Low-Income Weatherization
9 Program: infiltration, insulation, equipment, and direct install.

10 **Q: Did the collaboration process that OCA led address this program?**

11 A: The collaboration process did not identify this program as a concentration area
12 during the collaborative process. Despite this, BHE acted on suggestions from
13 collaboration participants to increase its weatherization funding to more fully
14 leverage the expanded federal weatherization funding available under the
15 American Recovery and Reinvestment Act (ARRA). ARRA substantially
16 increased funding to states from 2010-2012, and as a result, the program
17 included homeowners and renters whose income is at or below 200% of the
18 Federal Poverty Level (FPL), which increased participation above the levels
19 realized in the previous program years that used a 150% FPL threshold.

20 **Q: Discuss the goals, budget, and benefit-cost ratio for the program.**

21 A: BHE expects 110 customers to participate in the program during 2014 and that
22 the program will increase by three participants each year. Over five years BHE

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expects that 578 customers will participate in this program.

BHE estimates that customers will realize a total of 86,700 therms of energy savings over the five years of the plan.

In order to achieve these savings, BHE plans to spend \$3,143,000 over the five years of the plan.

The societal benefit-cost ratio (B/C) ratio is 0.40. This 0.4 B/C ratio falls below the 1.0 B/C ratio threshold for cost-effectiveness; however, low-income programs are not required to be cost effective. This does not include the impacts of electric efficiency measures that are also delivered through this program.

Q: Do you have any concerns with Black Hills’ Low-Income Weatherization Program?

A: Yes. The table below shows Black Hills’ actual 2009 to 2012 participation and expenditures, as reported in its Annual Report, compared to the participation goals and budget in the proposed plan (2014 to 2018).

<i>Program Year</i>	<i>Participation</i>	<i>Budget</i>
2009*	178	\$502,361
2010*	154	\$527,185
2011*	140	\$825,895
2012*	163	\$298,633
2014	110	\$598,100
2015	113	\$614,400
2016	116	\$630,600
2017	118	\$641,800
2018	121	\$658,100

*Actual Participation and expenditures

Black Hills purports to set participation goals based on historical

1 performance, sector population within its service territory, and projected
2 population levels based upon a three percent escalation rate. Black Hills
3 indicated that the program saw a bump in participation in 2010-2012 with the
4 support from additional ARRA funding. With the expanded weatherization
5 network resulting from the additional ARRA funding, it should be possible to
6 maintain a similar level of Low-Income Weatherization Program participation
7 beyond the ARRA funding timeframe. Black Hills has not justified its lower
8 participation goals. Therefore, I recommend that BHE's Low-Income
9 Weatherization participation goals and budgets be set using its more recent
10 higher rates of program participation. Black Hills should also cooperate with
11 other low-income weatherization providers in their territory, as appropriate, to
12 sustain current participation levels.

13 **Low-Income Energy Education Program**

14 **Q: Please describe the Low-Income Energy Education Program.**

15 **A:** Through the Low-Income Energy Education Program, Black Hills Energy
16 partners with the Iowa Utility Association (IUA), Iowa Department of Human
17 Rights, and local CAP Agencies to provide energy education materials and kits
18 containing low-cost energy efficiency measures free of charge to customers who
19 qualify for energy assistance. The materials suggest actions customers can take
20 to reduce their energy costs. The kits contain the following low-cost gas
21 efficiency measures: low-flow kitchen and bathroom faucet aerators, hot water
22 pipe insulation, and low-flow showerheads. Interstate Power and Light

1 Company (IPL or Interstate) and MidAmerican Energy Company (MEC or
2 MidAmerican) both operate the same program under the title, EnergyWise
3 Education.

4 **Q: Discuss the goals, budget, and benefit-cost ratio for the program.**

5 **A:** BHE is projecting the distribution of 3,000 kits annually for a five-year program
6 cycle total of 15,000 distributed kits.

7 Based on these participation assumptions, BHE expects to realize 9,690
8 therms of savings each year for a five-year total of 48,450 therms of savings.

9 In order to achieve this level of savings, BHE plans to spend a total
10 \$117,800 over the five years of the plan.

11 The societal B/C ratio is 1.90. This 1.9 B/C ratio exceeds the 1.0 B/C
12 ratio for cost-effectiveness.

13 **Q: Is Black Hills' Energy Education Program similar to IPL's EnergyWise
14 Education program?**

15 **A:** Yes. Black Hills Energy, IPL, and MEC jointly implement the Energy
16 Education (EnergyWise Education) program through the IUA. Local CAP
17 agencies provide energy education workshops free of charge to eligible
18 households with incomes at or below 200 percent of the FPL. It does not appear
19 that BHE conducted an evaluation of this program in its current plan, so it is
20 reasonable to consider the findings from IPL's monitoring and evaluation
21 contractor, KEMA, for this joint program.

22 **Q: Please discuss KEMA's findings and recommendations regarding the**

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program.

A: The evaluation of IPL’s EnergyWise Education Kits performed by IPL’s consultant KEMA (IPL 2011 Annual Report, App. F, Group 2, pp. 76 through 96 of 417) disclosed many findings and recommendations regarding the measurement of impacts, consistencies in tracking and reporting of kit distributions in installation data, and assumptions for deriving savings in IPL’s EnergyWise Education Program. KEMA evaluated the program implementer’s (Cadmus Group) use of participant surveys to estimate measure program savings impacts. With respect to customers responding to the survey, Cadmus Group estimated the installation rate based upon the number of respondents who installed each measure. KEMA found evidence to suggest that the respondent installation rate is biased. Cadmus assumed that non-respondents installed each measure at a rate of one-half that of respondents. KEMA found that there is no support for the assumption that non-respondents install measures at half the rate of respondents.

KEMA made several significant recommendations to improve the reliability of claimed impacts for this program. Specifically, KEMA recommended that, instead of assuming that non-respondents are installing at half the rate of respondents, “the program should increase the survey response rate ... and assume that non-respondents are not installing any measures.” (IPL 2011 Annual Report, App. F, Group 2, p. 90 of 417).

The KEMA report includes the following Survey Response rates:

1	2005-2006	21%
2	2007-2008	7%
3	2009	4%
4	2010	14%

5 KEMA noted the response rate for the IPL’s program is varied and often
6 very low. To address the shortcomings in Cadmus’s process for tracking kit
7 distributions, KEMA recommended that IPL ask CAP organizations to provide a
8 list of all the participants that receive a kit and to account for kits that are not
9 distributed to qualified participants. However, the process implemented by
10 Cadmus in 2011 only collected the data on the number of kits in storage at the
11 end of each year from CAP agencies

12 While this program does not comprise a significant portion of Black
13 Hills’ planned energy efficiency budget, KEMA has identified some serious
14 issues with this relatively mature program that Black Hills should consider and
15 address.

16 **Q: Do you recommend that Black Hills continue offering this program?**

17 A: No, based on the absence of sufficient data to verify that measures were
18 installed or that the measures generated the savings that have been claimed, as
19 noted by KEMA I conclude that the funds allocated to this program would be
20 more effectively used toward other program approaches that utilize a direct
21 installation approach to implement low-cost efficiency and weatherization
22 measures in low-income households. Green Iowa AmeriCorps uses this direct
23 install approach

24 **Q: What is Green Iowa AmeriCorps?**

1 A: The Green Iowa AmeriCorps Program is a national service program, with which
2 AmeriCorps members serve ten months of full-time service providing home
3 energy audits and weatherization services to under-served populations. Green
4 Iowa AmeriCorps Program serves those who may not qualify for utility
5 sponsored low-income energy efficiency programming. The AmeriCorps
6 members also provide conservation and energy saving tips to customers and
7 train community volunteers on weatherization and other environmental
8 sustainability techniques. AmeriCorps provides a more hands-on service as
9 opposed to energy kits which must be installed by low-income homeowners.

10 In 2010, America's Service Commissions and Innovations in Civic
11 Participation listed Green Iowa AmeriCorps as one of the most innovative
12 AmeriCorps programs. Green Iowa AmeriCorps received the award for its
13 efforts in weatherization and energy audit services. The publication noted that
14 the weatherization and energy audit services provide lasting impacts by
15 "providing residents with reduced utility bills and the education to become more
16 conscious of energy use. This will enable Iowans to reduce overall demand for
17 power and promote an energy-independent state"¹ as shown on OCA
18 Exhibit____ (BJK-1), Schedule A, page 50.

19 The program is currently funded by the University of Northern Iowa, the
20 Iowa Power Fund, the Corporation for National and Community Service, the
21 Iowa Commission on Volunteer Service, several municipalities, local

¹ "Transforming Communities through Service: A Collection of 52 of the Most Innovative AmeriCorps Programs in the United States" by Americas Service Commissions and Innovations in Civic Participation.

1 businesses, and financial institutions including the City of Cedar Falls, Rockwell
2 Collins, and MidAmerican Energy Company, as shown on OCA
3 Exhibit____(BJK-1), Schedule A, page 3.

4 **Q: Why should BHE explore with Green Iowa AmeriCorps further**
5 **collaborative opportunities for low-income weatherization?**

6 A: Iowa Code Section 15H.6 encourages this type of collaborative approach,
7 directing that “the Iowa commission on volunteer service shall work with the
8 collaborating agencies and nonprofit agencies in developing a strategy for
9 attracting additional financial resources for the program from other sources
10 which may include but are not limited to utilities, private sector, and local, state,
11 and federal government funding sources.” Additionally, according to Green
12 Iowa AmeriCorps, in 2010-2011 alone, members weatherized 365 homes
13 resulting in a 12.5% reduction in infiltration and over \$72,500 in estimated
14 energy savings per year. The program offered 250 education programs in a
15 variety of community settings affecting 17,000 residents. During 2011 and
16 2012, Green Iowa AmeriCorps completed 723 energy audits and weatherized
17 404 homes (of which 263 were low-income households) resulting in a 13% air
18 infiltration reduction and the provision of \$1,269,500 in long-term energy
19 savings as shown on OCA Exhibit____(BJK-1), Schedule A, page 133.

20 **Q: Is this program a satisfactory replacement for the Energy Education**
21 **Program?**

22 A: Yes. While the Energy Education Program provides benefits to customers who

1 install the kit measures, the program is not supported by credible information
2 about impacts and cost-effectiveness; therefore, the Energy Education Program
3 results are dubious. The Green Iowa AmeriCorps Program, with proper
4 collaboration with BHE, presents a more promising model for delivering direct
5 install measures to low-income customers in the BHE service territory.

6 **Low-Income Multifamily Efficiency Improvement Initiative Program**

7 **Q: Please describe the Low-Income Multifamily Efficiency Improvement**
8 **Initiative Program.**

9 A: Through the Low-Income Multifamily Efficiency Improvement Initiative
10 Program (MIEI), Black Hills Energy offers low-cost measures and enhanced
11 incentives to owners and developers of low-income multifamily housing. Black
12 Hills offers an incentive equaling 40% of installed costs when projects are
13 determined to be cost-effective. If BHE determines that a project is not cost-
14 effective, it provides an incentive up to five times the annual savings estimate.
15 In addition, BHE also provides energy-efficient direct installation kits for
16 participating rental units. The kits contain low-flow faucet aerators, hot water
17 pipe insulation, and low-flow showerheads.

18 **Q: Discuss the goals, budget, and benefit-cost ratio for the program.**

19 A: In 2011 and 2012 Black Hills did not realize any participation in this program.
20 BHE is anticipating one participant in 2014 and 2015 and two participants in
21 each year from 2016 to 2018.

22 Based upon these participation estimates, BHE projects savings of 20

1 therms/year during 2014 and 2015, and 40 therms/year during 2016, 2017 and
2 2018.

3 Black Hills plans to spend a total of \$110,500 over the five-year course
4 of the plan.

5 The program's societal B/C ratio is 0.00, which is apparently due to the
6 lack of participation.

7 **Q: Do you have any comments or concerns regarding this program?**

8 A: Yes. The chart below illustrates the historical performance of this program.

<i>Program Year</i>	<i>Participation</i>	<i>Spending</i>	<i>% of Budget</i>
2009	2	\$13,674	68%
2010	0	\$4,361	21%
2011	0	\$2,685	12%
2012	0	\$231	1%
2014*	1	\$14,700	TBD

9 *2014-2018 Plan figures

10 As reflected in the chart above, the BHE MIEI Program has shown
11 dismal results. Black Hills has seen no participation in the past three years and
12 spent only 11% of its budget on the program. In its 2014-2018 Plan, BHE has
13 not identified any strategies to improve the performance of this program that has
14 not seen any participants since 2009. Black Hills must devote more resources to
15 outreach and marketing efforts to low-income multifamily owners in order to
16 raise awareness and participation in the program. Black Hills should closely
17 monitor performance results in the new plan in order to make corrective
18 adjustments in a timely manner.

19

Low-Income Affordable Housing Program

Q: Please describe the Low-Income Affordable Housing Program.

A: Black Hills offers the Low-Income Affordable Housing Program to provide enhanced incentives for residential homes. These homes are built by non-profit organizations such as Habitat for Humanity, Community Housing Initiatives, and Community Action Corporations.

Q: Discuss the goals, budget, and benefit-cost ratio for the program.

A: BHE expects three participants to enroll in the program each year for five years totaling 15 participants.

Based on this level of anticipated participation, BHE expects participants of this program to realize 370 therms of natural gas savings each year for five years totaling 1,860 therms.

In order to attain these savings goals, BHE expects to spend a five-year total \$18,100.

The program is operating cost effectively with a 1.32 societal B/C ratio.

Q: Do you have any comments or concerns regarding this program?

A: Yes. The chart below displays the planned and actual participation of the affordable housing program.

<i>Program Year</i>	<i>Planned Participation</i>	<i>Actual Participation</i>
2009	7	1
2010	7	2
2011	7	3
2012	7	1
2014*	3	TBD

*Projected figure from 2014-2018 Plan

1 As reflected in the chart, the BHE Affordable Housing Program has
2 consistently underperformed relative to its plan. Instead of enhancing marketing
3 efforts to increase participation, BHE's only adjustment is to **decrease** the
4 rebate offered for incremental measure costs. BHE alluded that this decrease
5 was due to fewer measure requirements in the new Affordable Housing
6 Program. In recognition of sluggish participation figures resulting from the
7 previous plan, BHE reduced program participation goals to three participants
8 per year. BHE has not addressed the reasons for the lower participation rates
9 from the previous four years in which a total of seven customers participated.
10 While the program has great potential to provide savings, this program, which
11 has averaged 1.75 participants over the previous four years, should be closely
12 reviewed for strategic improvements and monitored to assess performance in
13 order to implement corrective actions on a timely basis, if necessary. In
14 addition, Black Hills consistently underspent its budget. Considering Black
15 Hills' plans to continue the program and increase participation, at a minimum it
16 should increase its coordination and marketing efforts to low-income housing
17 developers and organizations that seek to meet low-income housing needs.

18 **Low-Income Weatherization Team**

19 **Q: Please discuss the Low-Income Weatherization Team Program.**

20 A: Black Hills coordinates with volunteers from BHE staff, the Iowa Utilities
21 Board staff, and members of the community to weatherize low-income homes in
22 Iowa. Black Hills offers free energy evaluations of each home and identifies

1 needed weatherization and safety improvements prior to volunteer work efforts.
2 BHE provides, at no charge, caulking around doors and windows, weather-
3 stripping around doors and windows, door sweep installations, plastic window
4 film installation, and sidewall and foundation hole sealing. Additionally, BHE
5 provides, at no charge, hot water heater blankets, hot water pipe insulation,
6 furnace filter replacements, low-flow showerheads, programmable thermostats,
7 and low-flow faucet aerators.

8 **Q: Discuss the goals, budget, and benefit-cost ratio for the program.**

9 **A:** BHE expects 110 participants to enroll in the program during each of the five
10 years of the program totaling 550 participants.

11 Based on the anticipated participation levels, BHE expects the
12 participants to realize 7,790 therms of natural gas savings each year totaling
13 38,950 therms over five years.

14 In order to attain these savings goals, BHE expects to spend a five-year
15 total \$78,900.

16 The program societal B/C ratio of 7.20 suggests that the program is cost
17 effective if it is delivering the savings that are anticipated. Unfortunately,
18 program spending levels would suggest that the program is not fully realizing
19 the anticipated impacts. BHE does not report conducting any formal monitoring
20 and evaluation of this program.

21 **Q: Do you have any comments or concerns regarding this program?**

22 **A:** Yes. Black Hills indicated it does not have any specific screening criteria for

1 the Weatherization Team Program. Black Hills should direct high-use
 2 customers and customers whose homes need significant thermal improvements
 3 to participate in the Low-Income Weatherization Program. Black Hills should
 4 direct only customers who do not need measures such as insulation and
 5 significant air sealing to the Weatherization Team.

6 The following chart illustrates the past performance of the plan.

<i>Program Year</i>	<i>Planned Participation</i>	<i>Actual Participation</i>	<i>Spending</i>	<i>% of Budget</i>
2009	45	136	\$17,718	89%
2010	45	124	\$12,366	59%
2011	45	122	\$1,176	5%
2012	45	103	\$2,243	10%
2014*	110	TBD	\$15,700	TBD

7 *2014 planned participation from 2014-2018 Plan.

8 Black Hills averaged 121 participants in the program during 2009 to
 9 2012, and reports a 7.20 societal benefit-cost ratio. However, as noted, BHE
 10 does not conduct a formal evaluation of this program. Instead of leveraging the
 11 high benefit-cost ratio and aggressively pursuing higher goals, Black Hills
 12 decreased its planned participation goal for the program by 11 participants less
 13 than its previous four-year average. Additionally, Black Hills has set its
 14 participation at 110 participants for each of the five years. For a program that is
 15 supposedly very cost-effective, Black Hills has not pursued aggressive savings
 16 targets. From 2009 to 2012, Black Hills spent just over half of its budget for
 17 this program and less than 10% of its budget in 2011 and 2012. While the
 18 proposed new plan participation goals reflect a significant expansion over the
 19 past plan, the proposed budget is much less than proposed in the current plan. It

1 is unclear how BHE can achieve planned per unit impacts with this lower level
2 of investment. If Black Hills continues this program, it should commit more
3 resources to this program, including monitoring and evaluation, and establish
4 more aggressive savings goals. Additionally, Black Hills should explore some
5 expansion of this program through collaboration with Green Iowa AmeriCorps,
6 a reputable weatherization organization that I introduced on pages seven through
7 ten.

8 **Multifamily Programs**

9 **Q: Please describe BHE's Multifamily Program.**

10 A: During the implementation of the previous plan, Black Hills states that it
11 examined the efforts of other utilities throughout the country in order to identify
12 innovative program and incentive strategies that could help achieve greater
13 participation and savings. BHE's review led to it including a new multifamily
14 evaluation component in the Residential Evaluation Program. The program will
15 provide an energy professional evaluation of on-site common areas to landlords
16 of rental properties for a modest co-payment. In addition to a high-level report,
17 landlords will also receive free direct install kits for each tenant unit.

18 **Q: Did the collaboration process that OCA led address this program?**

19 A: Yes. Due to the pervasive barriers associated with achieving energy efficiency
20 in rented and leased facilities, stakeholders identified multifamily energy
21 efficiency programs as a priority collaboration topic in 2011. Collaboration
22 stakeholders examined MidAmerican's achievements with its stand-alone

1 multifamily program and recommended that Interstate Power and Light
2 Company and Black Hills adopt a similar approach for multifamily buildings
3 beyond and apart from their multifamily low-income programs. IPL and BHE
4 both indicated that they would implement multifamily programs in their
5 upcoming plans. The collaboration also served as a sounding board for
6 identifying program challenges and for brainstorming strategies to overcome
7 market barriers.

8 **Q: Discuss the goals, budget, and benefit-cost ratio for the program.**

9 A: BHE anticipates participation from five multifamily buildings in 2014 and
10 2015, and six multifamily buildings for 2016, 2017, and 2018. In total BHE
11 seeks participation from 28 buildings over the course of five years. BHE also
12 plans to distribute energy savings kits to individual units. In total, BHE plans to
13 distribute 331 kits over the five-year course of the plan.

14 Based on these participation figures, BHE estimates that participants will
15 save a total of 7,340 natural gas therms from 2014 to 2018.

16 In order to attain these savings goals, BHE plans to spend \$22,103 on
17 multifamily evaluations and \$3,290 on energy savings kits totaling \$25,693 over
18 five years.

19 Due to the fact that Black Hills' multifamily evaluation is part of the
20 overall residential evaluation program, the societal benefit-cost ratio is not
21 separately available for this program.

22 **Q: Do you have any comments regarding the program's goals, budget, or**

1 **benefit-cost ratios?**

2 A: Yes, it is commendable that Black Hills has launched a multifamily evaluation
3 program. However, its budget and goals are rather low and do not tap into the
4 full savings potential of this market sector. Despite the fact that its service
5 territory may not provide BHE with the same leveraging power as other utilities,
6 the potential for substantial savings exists for Black Hills' consumers in the
7 multifamily sector. For example, MidAmerican Energy Company, albeit in a
8 larger and more urban service territory, spent just over \$1 million in 2012 on its
9 multifamily gas programs. MEC's spending resulted in over 100,000 therms of
10 customer savings. Black Hills is proposing to spend less than one half of one
11 percent of MidAmerican Energy's budget for multifamily gas programs.
12 MidAmerican's actual expenditures and savings were much higher than budget,
13 and it proposes even more aggressive budget and savings targets for 2014 to
14 2018. Black Hills' proposed budget and savings estimates are extremely modest
15 in comparison to MidAmerican's aggressive push and recent success in the area
16 of multifamily gas programs.

17 **Q: Does BHE's planned use of residential energy efficiency kits for its**
18 **Multifamily Program raise any concerns?**

19 A: Yes. To the extent BHE will be relying on tenants to install the kit measures, it
20 will be very important to conduct appropriate monitoring and evaluation to
21 confirm what level of implementation is actually resulting from the leave-behind
22 kits. These issues are discussed above regarding BHE's use of kits for low-

1 income energy efficiency efforts.

2 **Q: Does Black Hills' Multifamily Program sufficiently address the needs of**
3 **multifamily property managers and owners?**

4 A: No. While the creation of a multifamily program is a step in the right direction,
5 BHE should look to the more robust program offered by MidAmerican Energy
6 and recently launched program by Interstate Power and Light Company. BHE's
7 multifamily evaluation represents a relatively small slice of BHE's larger
8 residential evaluation and does not effectively address the unique needs of
9 multifamily property managers and landlords.

10 **Q: Please explain some of the market barriers associated with the Multifamily**
11 **Program.**

12 A: Multifamily programs can often run into several barriers to implementation.
13 Throughout the collaborative process stakeholders identified the following
14 market barriers:

- 15 • High incremental cost of efficient equipment,
- 16 • Limited time and information to consider efficiency in emergency
17 replacement,
- 18 • Lack of building owner and dealer awareness,
- 19 • Building owners don't trust energy savings calculations,
- 20 • Energy is a small part of overall operating costs,
- 21 • Building owners often choose to use their limited resources to make
22 capital improvements to items seen by their tenants, such as paint, floor

1 coverings, decorations, etc...

- 2 • Large amount of variation in building types and configurations, and
- 3 • Split-incentive barrier.

4 **Q: What is the split-incentive market barrier?**

5 A: The split-incentive market barrier occurs when property owners do not
6 recognize any immediate benefit from the making energy efficient upgrades
7 because their tenants are responsible for paying the utility bills and realize the
8 benefits and the savings from the upgrades. In order to successfully overcome
9 this barrier, utilities must focus building owners' attention on design programs
10 that realign building owners' motivations to support energy efficiency. Building
11 owners must be convinced that investments in energy efficiency make financial
12 sense in order to better compete with investments in landscaping improvements,
13 pest control, and other general building maintenance upgrades.

14 **Q: Has Black Hills addressed any of these market barriers in their filing?**

15 A: No. Black Hills' plan does not specifically address these multifamily energy
16 efficiency barriers.

17 **Q: Why do multifamily property owners deserve special attention in energy
18 efficiency programs?**

19 A: Owners of multifamily properties have unique needs that are not satisfied by
20 Black Hills' other programs. These multifamily programs hold many
21 opportunities for energy savings and present a key opportunity for property
22 owners to improve their bottom lines.

1 **Q: How does energy efficiency improve the bottom line for a multifamily**
2 **building?**

3 A: In the March 2013 report, *Engaging as Partners in Energy Efficiency: A Primer*
4 *for Utilities on the Energy Efficiency Needs of Multifamily Buildings and Their*
5 *Owners*², the American Council for an Energy-Efficient Economy (ACEEE) and
6 Anne McKibbin of CNT Energy (OCA Exhibit____(BJK-1), Schedule B, pages
7 11-14), examine factors that contribute to effective program designs for
8 effective energy efficiency in multifamily buildings and recommend strategies
9 that help utilities see the benefit in implementing such programs that attract
10 building owners and achieve high levels of energy savings. The report indicates
11 that energy efficiency improves the bottom line and appeals to the multifamily
12 building owner in four ways:

- 13 1) Direct energy savings,
- 14 2) Lower maintenance and equipment costs,
- 15 3) Lower tenant turnover, and
- 16 4) Improved building comfort and savings attract tenants who are
17 learning to expect energy efficiency because of greater awareness of
18 green building practices and the recent increase in municipal disclosure
19 ordinances and green community labeling schemes. (OCA Exhibit____
20 (BJK-1), Schedule B, page 12).

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

² McKibbin, Anne; *Engaging as Partners in Energy Efficiency*.

1 A: Yes, it does.

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