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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF)
INTERMOUNTAIN GAS COMPANY FOR)
THE AUTHORITY TO CHANGE ITS RATES) Case No. INT-G-16-02
AND CHARGES FOR NATURAL GAS)
SERVICE TO NATURAL GAS CUSTOMERS)
IN THE STATE OF IDAHO)
_____)

DIRECT TESTIMONY OF ALLISON SPECTOR

FOR INTERMOUNTAIN GAS COMPANY

August 12, 2016

1 A. I graduated from Goucher College 2005, with a Bachelor of Arts degree in
2 Communications and Media Studies with an emphasis in policy communications; and
3 a Bachelor of Arts degree in Political Science, degree of distinction.

4 I have eight years' experience designing and implementing utility-run energy
5 efficiency programs, and an additional three years in energy policy & advocacy.

6 I am experienced in the design and implementation of viable, cost-effective
7 Demand Side Management (DSM) portfolios. I have performed analysis of the cost
8 effectiveness of DSM portfolios under both the Utility Cost Test and Total Resource
9 Cost Test. I have designed conservation rebate programs at all stages from planning
10 through implementation; designed tariff filings in support of these programs; selected
11 and hired program implementation staff; developed requests for proposals for
12 program delivery and evaluation contractors; and have developed and filed annual
13 program performance reports.

14 I also co-authored a peer-reviewed paper published by the American
15 Association for an Energy Efficient Economy titled, "Natural Selection: The
16 Evolution of DSM Valuation and Use of the UCT" which discusses the importance of
17 natural gas demand side management efforts and optimal methods of program
18 valuation. The paper also addresses the importance of applying a relevant discount
19 rate to any DSM analysis performed.

20 **II. SCOPE AND SUMMARY OF TESTIMONY**

21 **Q. What is the purpose of your testimony in this docket?**

22 A. My testimony will cover four primary areas. First, I will define the purpose of natural
23 gas Demand Side Management and the current conditions influencing Intermountain

1 Gas Company's decision to engage in DSM. Second, I will describe the modeling
2 utilized by the Company to assess its DSM potential and the development of
3 associated targets. The third section will describe how Intermountain's conservation
4 rebate portfolio was designed and how appropriate rebate levels were determined. In
5 the last section I will present Intermountain's targeted approach to program delivery
6 and implementation, as more fully described in the testimony of Ms. Imlach.

7 **Q. Are you sponsoring any exhibits in this proceeding?**

8 A. Yes. I am sponsoring the following exhibits, which are described in my testimony:

9 Exhibit 25 Demand Side Management Potential Assessment

10 Exhibit 26 Portfolio Design Analysis

11 **III. PURPOSE OF NATURAL GAS DEMAND SIDE MANAGEMENT**

12 **Q. What is the purpose of Demand Side Management?**

13 A. Demand Side Management (DSM) is a strategy used by utilities in order to optimize
14 their consumers' energy use. When paired with supply side resources, demand side
15 management helps ensure reliability and affordability of a resource.

16 In the case of a natural gas local distribution company like Intermountain Gas
17 Company, DSM means finding opportunities to purchase through
18 conservation as opposed to purchasing through a natural gas supplier. This transaction
19 considers both commodity and transportation costs and includes encouraging
20 voluntary reductions to natural gas usage by offering conservation incentives to its
21 customers.

22 As stated in the earlier testimony provided by Mr. Kirschner, Natural gas is an
23 abundant, affordable, and clean burning resource. Using this 90% efficient resource

1 directly for space and water heat end use applications in the residential sector is the
2 most efficient application of natural gas. Conservation incentives associated with
3 high-efficiency natural gas space and water heating equipment would provide the
4 Company with the two-fold benefit of acquiring essential DSM resources while
5 allowing natural gas to serve the role it performs best, as a direct space and water
6 heating fuel.

7 Oak Ridge National Laboratories, and others have acknowledged the value of
8 Demand Side Management as a best-cost resource for utilities. Intermountain will be
9 utilizing this resource to operate a program whose ultimate intent is to produce energy
10 savings that result in lower overall rates than if the program were not in place.

11 **Q. Does the Company intend to file for approval to recover the costs associated with**
12 **a natural gas Demand Side Management Program with the Idaho Public Utilities**
13 **Commission?**

14 A. Yes. The Company is seeking approval of a new Energy Efficiency Rebate Program
15 in support of its DSM efforts, and has submitted proposed Original Tariff Sheet No.
16 16 (DSM Tariff), which is supported by the testimony of Company witness Imlach.
17 This proposed DSM Tariff sheet is part of Exhibits 30 and 31 sponsored by Company
18 witness Michael McGrath.

19 The Company is simultaneously seeking recovery in the form of a fixed cost
20 collection mechanism (FCCM), which will accompany its Demand Side Management
21 program. More information regarding this mechanism can be found in the testimony
22 of Mr. McGrath.

1 **Q. What does the Company anticipate as the benefits of engaging in natural gas**
2 **DSM at this time?**

3 A. The Company sees natural gas DSM as a natural fit for the utility, its customers, and
4 the surrounding community. A conservation incentive program utilizing rebates for
5 high-efficiency natural gas equipment offers an environmentally beneficial, cost-
6 effective supplement to supply side resources, while optimizing regional energy
7 usage through the direct use of natural gas.

8 With Idaho regulators now accepting the Utility Cost Test (UCT) as a viable
9 method of program valuation, and with growing in-house expertise in this area, the
10 Company is positioned to offer cost-effective rebates to its customers.

11 Ultimately, everyone benefits when utilities acknowledge the environmental
12 and economic importance of allowing natural gas to do what it does best—provide a
13 fuel for space and water heat directly in customers’ homes— as efficiently as
14 possible. The full benefit of using natural gas directly for space and water heat is
15 described in detail in the testimony of Mr. Kirschner.

16 **Q. Are there any rate impacts associated with the operation of a DSM program?**

17 A. A Demand Side Management program operated through rebates for energy efficient
18 space and water heat equipment is a strategic investment in energy resources that
19 would otherwise be wasted through inefficiency. As described earlier, the direct use
20 of natural gas for space and water heating is an efficient application of this resource.
21 Achieving DSM in combination with direct use increases the value of the Company’s
22 investment in this effort. The Company’s DSM program is designed to maximize the

1 potential of the natural gas on its system to serve as many homes as possible as cost
2 effectively as possible.

3 It is Intermountain’s goal to cost-effectively acquire demand side resources
4 based on Intermountain’s most recently acknowledged avoided costs. This provides
5 value to both the Company and its ratepayers. Rates will be influenced by two factors
6 associated with the program: the recovery of fixed costs, and the recovery of
7 administrative program expenses.

8 Rate impacts associated with the recovery of fixed costs will be carefully
9 designed as to make the Company whole for reductions to usage associated with the
10 implementation of a DSM program.

11 Administrative program expenses related to the operation of the Company’s
12 DSM effort have been designed as not to exceed the threshold past which such an
13 investment would not be cost-effective to the Company and its customers.

14 **Q. Can you please elaborate on what you mean by “fixed cost recovery?”**

15 A. Gladly. In this case Intermountain is filing for fixed cost recovery to mitigate losses
16 to margin resulting from its conservation efforts. This mechanism will allow the
17 Company to remain whole as it actively pursues cost-effective forms of conservation
18 to maximize natural gas efficiency and bring value to its customers.

19 **Q. Can you elaborate on what you mean by “administrative program expenses?”**

20 A. There will be reasonable costs associated with the operation of Intermountain’s DSM
21 program. The Company anticipates an initial budget of approximately \$225,000,
22 which will include funding for program outreach; and for the hiring of a dedicated
23 staff for program support and implementation. The Company will also leverage

1 existing staff resources, which will not be included as part of its program delivery
2 budget. Intermountain's rebate portfolio has been designed to shoulder these costs
3 while still maintaining cost effectiveness under the Utility Cost Test (UCT). The
4 Company anticipates that rebate payments will be in the range of \$200,000 -
5 \$600,000 in the first program year based on customer interest and the effectiveness of
6 its program outreach efforts.

7 As stated earlier, it is the Company's intention that DSM effort procure
8 therms through investment in natural gas molecules and their associated
9 transportation costs at a cost lower than that of alternative resources. Therefore, the
10 program design will ensure that energy efficiency purchased by the utility through
11 DSM efforts will result in lower overall rates to customers than would be experienced
12 if the program was not in operation.

13 **Q. Does the Company intend to file a follow-on application to seek recovery of**
14 **program expenses?**

15 A. Yes. It is the Company's intention to file a follow-on application to seek recovery of
16 all rebate costs associated with its DSM effort, as well as its program delivery budget
17 and the salaries of staff that would have not otherwise been hired without the
18 presence of the Company's Demand Side Management rebate program. Program
19 expenses have been balanced against the associated therm savings of the rebate
20 portfolio and have been assessed as cost effective under Exhibit 26 associated with
21 this filing.

22 **Q. Have you prepared an exhibit summarizing the fixed cost collection mechanism**
23 **accompanying the design of your DSM program?**

1 A. Yes. Details and exhibits supporting the FCCM can be found in the testimony of Mr.
2 McGrath.

3 **Q. What are the benefits to ratepayers if the Commission approves this recovery of**
4 **programmatically expenses, including the staff positions you describe?**

5 A. A well-designed DSM program, like the one the Company is proposing, results in
6 both electric and natural gas savings. Electric savings comes from the customers'
7 decision to use natural gas directly for space and water heating, as opposed to the
8 reduced efficiency of using natural gas to generate the electricity to power equipment
9 for the same end use. As the testimony of Mr. Kirschner has indicated, by the time a
10 customer turns on an electric appliance, up to 62% of the energy from the original
11 fuel has been lost. The full fuel cycle efficiency of natural gas equipment is about
12 92%. Therefore using natural gas space and water heating equipment directly, as
13 opposed to using electricity for these end uses, results in meaningful conservation of
14 energy resources. Natural gas savings is then achieved through Intermountain's
15 program by providing rebates for extremely energy-efficient models of natural gas
16 space and water heating equipment. The installation of high-performance natural gas
17 equipment and proliferation of ENERGY Star natural gas homes results in a carbon
18 footprint reduction, which is good for the environment, and the entire community.

19 The program is beneficial to all ratepayers because it secures a long-term
20 supply (16-30 years) of demand side resources in the form of quantifiable natural gas
21 conservation. This resource helps supplement traditional supply side resources at a
22 cost equal to or lower than traditional supply when factoring for both the avoided

1 molecule cost and the transportation to deliver the resource. It also helps mitigate
2 future capacity constraints to ensure ongoing reliability.

3 Intermountain’s program is beneficial from a customer standpoint, because it
4 helps mitigate the upfront cost of high-efficiency equipment run on natural gas— a
5 clean-burning, reliable, and affordable resource. By incentivizing for high
6 performance natural gas equipment and ENERGY Star Homes, the Company is
7 working to ensure that natural gas is being used as efficiently as possible within that
8 customer’s home. This provides economic savings for the customer.

9 **IV. DMS POTENTIAL ASSESSMENT**

10 **Q. Could you please describe the contents of Exhibit 25 “Demand Side
11 Management Potential Assessment” of your testimony?**

12 A. Absolutely. Exhibit 25 provides an examination of the total demand side
13 management potential available to Intermountain’s residential sector. This was
14 modeled through an analysis tool called TEAPot, which was developed by Nexant for
15 IGC’s sister company, Cascade Natural Gas Corporation in 2014. TEAPot refers to
16 the acronym, Technical, Economic, and Achievable Potential. The model
17 incorporates an analysis of available technologies, climate zone, load forecasts, and
18 market segments.

19 Intermountain utilized the TEAPot tool in order to better understand the DSM
20 potential in its service area under both the Utility Cost Test (UCT) and the Total
21 Resource Cost (TRC) test.

22 Based from Intermountain’s data for both usage and premise counts, the
23 TEAPot was first run with the following assumptions: 3.69% discount rate; 1.0 cost

1 benefit ratio; 2.60% inflation rate. Two separate scenarios were modeled, gauging
2 potential under both the Utility Cost Test (UCT) and Total Resource Cost (TRC) test.

3 All scenarios were operated using a portfolio of energy efficient natural gas
4 DSM measures. The resulting analysis provides the Company with a range of therm
5 savings under the lens of Technical, Economic, and Achievable potential. This has
6 allowed the Company to better understand the total conservation potential associated
7 with its proposed portfolio of high-efficiency residential equipment measures.

8 **Q. What data was input by the Company in order to operate the TEAPot model?**

9 A. Intermountain specific assumptions programmed into the TEAPot modeling tool can
10 be found on Exhibit 25.

11 **Q. Who ran the TEAPot model and from where were the inputs derived?**

12 A. The TEAPot modeling tool was operated by Intermountain staff for the purposes of
13 assessing the Company's DSM potential and assisting in the design of the measures
14 comprising the proposed conservation rebate portfolio. Inputs were derived from
15 Intermountain's data as described above.

16 **Q. Can you please describe the difference between Technical, Economic,
17 Achievable, and Program Potential?**

18 A. Technical Potential refers to the savings that could be achieved if all homes
19 theoretically eligible to receive high-efficiency natural gas equipment did so without
20 regards to economics or personal preference. If the Company could make all qualified
21 homes upgrade to all possible measures, the Technical Potential would be the result.
22 The only limitation is technical feasibility and the applicability of the measure to be
23 installed.

1 Economic Potential examines the savings that could be achieved through
2 measures that pass a cost effectiveness test. It considers what would be achieved if
3 everyone who could *theoretically* afford to install pre-screened high-efficiency
4 natural gas equipment did so without regards to personal preference or alternative
5 priorities. In other words, economic potential looks at a high-level cost-effectiveness
6 under current economic conditions, but does not consider customer interest, priorities,
7 or perceptions of energy conservation.

8 Achievable Potential further refines the Company’s understanding of DSM
9 potential by examining it under the lens of economic and social realities. It asks
10 “how much savings will result from *this* portfolio of utility rebate measures based on
11 real-world conditions in Intermountain’s service area, and customer awareness?”

12 There is also a fourth level of potential, which is not directly modeled under
13 TEAPot, but has been considered by the Company, called Programmatic Potential.
14 Programmatic Potential further refines Achievable Potential by examining what level
15 of savings can be realistically accomplished within the current staffing, budgetary,
16 and regulatory parameters of the utility operating the program.

17 While the model is unable to examine this final level of potential, Nexant, the
18 architects of the TEAPot model, recognized its significance. In the written narrative
19 provided for the study that was performed for Cascade in 2014, they stated that
20 “Program Potential reflects the realistic quantity of energy savings the utility can
21 realize through DSM programs during the horizon defined in the study. Savings
22 delivered by program potential is often less than achievable potential, due to real-
23 world constraints, such as utility program budgets, cost-effectiveness thresholds,

1 regulatory and policy statements, and decisions on which subset of cost-effective
2 measures a utility ultimately decides to include in its portfolio” (Assessment of
3 Achievable Potential & Program Evaluation, V2, Section 2.2, p15).

4 Intermountain has therefore developed initial programmatic targets as a
5 number blended between the Achievable Potential estimates modeled in its analysis,
6 and further refined by in-depth discussions with IGC district staff regarding the on-
7 the-ground realities of Intermountain’s service area.

8 **Q. What measures were included in your analysis, and why were these selected?**

9 A. Intermountain’s analysis included a range of high-efficiency residential sector
10 measures including ENERGY Star certified homes, energy efficient natural gas
11 furnaces, fireplace inserts (an important air-quality and woodstove replacement
12 measure), and water heaters. The Company examined several efficiency ranges,
13 eventually narrowing in on the highest tiers available within the market in which
14 Intermountain operates and for which it had valid data.

15 The Company examined the viability, and associated energy savings potential,
16 of portfolio measures under several conditions including: (1) conversions from non-
17 gas to high-efficiency natural gas equipment, as well as installations in the new
18 construction sector; (2) replacement of broken lower-efficiency natural gas equipment
19 with high efficiency natural gas equipment; and (3) replacement of functioning lower-
20 efficiency natural gas equipment with high-efficiency natural gas equipment before
21 the end of the measure’s useful life. Analysis concentrated on space and water heating
22 applications in new and existing construction, as well as on the viability of rebates for
23 ENERGY Star homes.

1 **Q. Could this analysis be further refined or expanded to other measures at a later**
2 **date, if warranted?**

3 A. Absolutely. The Company intends to explore a range of conservation options on an
4 ongoing basis, continuing to expand and refine its analysis based on available
5 resources.

6 **V. CONSERVATION REBATE PORTFOLIO**

7 **Q. What circumstances have changed that has resulted in the Company's interest**
8 **and ability to develop a conservation rebate program?**

9 A. Three primary factors have precipitated the Company's interest in achieving demand
10 side management through the use of a conservation rebate program.

11 First, I read the Commission's Order No. 33444 in Avista's 2015 general rate
12 case as sanctioning Avista's proposal to adopt the Utility Cost Test (UCT) as a
13 reasonable method of valuation of natural gas DSM. Following that lead,
14 Intermountain has utilized the UTC alongside other tests, which has allowed the
15 Company to assess the viability of natural gas DSM options, identify multiple cost-
16 effective measures that would attain greater DSM value clarity, and result in a more
17 viable DSM portfolio under the Utility Cost Test (UCT). The UCT reflects the
18 Company's perspective as an investor-owned LDC, and results in the identification of
19 a robust portfolio of natural gas DSM measures.

20 Second, conservation is an issue of public importance. This means conserving
21 electricity through the direct use of natural gas for space and water heat, as well as
22 maximizing the efficiency of natural gas equipment used in residential customers'

1 homes. The Company continues to promote the direct use of natural gas and supports
2 the adoption of energy conservation and DSM programs.

3 Third, Intermountain has the opportunity to positively influence the energy
4 mix in its service area to ensure that natural gas is being used with maximum
5 efficiency as a space and water heating fuel in the residential sector. Pairing direct use
6 with high-efficiency natural gas equipment is a win-win for the Company, the
7 environment, and ratepayers. Intermountain is glad to have the opportunity to pursue
8 a program to encourage responsible use at this time.

9 In light of the above, the Company has developed in-house expertise
10 necessary to fully assess its DSM potential, viable conservation measures, and to
11 support the design and implementation of a fully articulated energy-efficiency
12 residential rebate program. Company staff will continue to perform this work and will
13 be actively engaged in supporting this program on an ongoing basis and ramping up
14 additional staffing resources as cost-effective and appropriate.

15 **Q. Could you please further elaborate on how a rebate program results in DSM and**
16 **the efficient use of natural gas directly for space and water heat applications?**

17 A. Rebates will result in the efficient use of natural gas directly for space and water
18 heating applications by driving the sales of high-efficiency natural gas equipment and
19 ENERGY Star natural gas homes. Natural gas fired energy efficiency upgrades from
20 standard efficiency (code level) equipment results in a reduction to the amount of
21 therms utilized for a given end use. This savings will then be recorded as energy
22 conservation attributable to this program. The direct use of natural gas further reduces

1 the strain on electric load which could better be applied to alternative end uses in a
2 home.

3 **Q. Has Intermountain developed an exhibit detailing the rebate program portfolio**
4 **it has developed?**

5 A. Yes. A full summary of Intermountain’s rebate portfolio and associated details can be
6 found in Exhibit 26: “DSM Rebate Program Analysis,” which offers the full cost
7 analysis that went into the Company’s program design.

8 **Q. Can you please further describe how your rebate program will operate?**

9 A. Gladly. As explained in greater detail in the testimony of Ms. Imlach, the Company’s
10 conservation rebate program will be open to all customers on its residential rate
11 schedule. Intermountain will be providing rebates for a range of cost-effective natural
12 gas high-efficiency HVAC and water heat equipment, as well as for ENERGY Star
13 natural gas homes.

14 There will be two tiers of rebates—one for upgrades from standard efficiency
15 to high-efficiency natural gas equipment. The second tier will provide incentives for
16 natural gas ENERGY Star homes, and for upgrades from standard electric to high-
17 efficiency natural gas equipment. Rebates will be administered by the Company and
18 issued in the form of a check following receipt of a completed and valid rebate
19 application; which includes proof of sale and installation of associated equipment, or
20 certification documentation in the case of Energy Star homes. Rebates will be
21 advertised via bill inserts, through education to area contractors, via programmatic
22 and district staff, and through other media as appropriate.

1 An annual report of expenditures, activities, therm savings, and overall cost
2 effectiveness will be provided at the end of each program year.

3 **Q. What measures will be included in the Company's rebate portfolio and how**
4 **were they selected?**

5 A. The Company is proposing a rebate portfolio comprised of the following measures:

6 ENERGY Star Certified Natural Gas Homes

7 (\$1,200 rebate)

8 95%+ AFUE Natural Gas Furnace

9 Tier 1: (\$350 rebate), Tier 2: (\$500 rebate)

10 High Efficiency 90%+ Natural Gas Combo Radiant Heat System

11 Tier 1: (\$1,000 rebate), Tier 2: (\$1,200 rebate)

12 80%+ AFUE Natural Gas Fireplace Insert

13 Tier 1: (\$200 rebate) Tier 2: (\$250 rebate)

14 70%+ FE Natural Gas Fireplace Insert

15 Tier 1: (\$100 rebate), Tier 2: (\$200 rebate)

16 .67+ Energy Factor Natural Gas Water Heater

17 Tier 1: (\$50 rebate), Tier 2: (\$75 rebate)

18 .91+ Energy Factor Natural Gas Tankless Water Heater

19 Tier 1: (\$150 rebate) Tier 2, (\$200 rebate)

20 These measures were selected based on the following factors: (1) identified viability
21 in the TEAPot modeling tool; (2) overall cost effectiveness when modeled in the
22 conservation portfolio development tool; (3) general availability of these measures in
23 Intermountain's service area and an (4) opportunity for greater penetration of these

1 measures within IGC's service territory as demonstrated through both TEAPot and
2 observed directly by the Company's staff operating the field at the district level and;
3 (5) the presence of similar measures in established natural gas conservation programs
4 in the Northwest.

5 **Q. Why is the Company proposing two levels of rebates?**

6 A. Intermountain is proposing two cost-effective tiers of rebates: one for converting
7 from standard to high efficiency natural gas equipment, and one for converting from
8 standard electric to high efficiency natural gas equipment. A higher incentive will be
9 provided for electric-to-gas equipment upgrades in acknowledgement of the higher
10 up-front equipment costs and logistical costs of conversion. The program will begin
11 with the baseline assumption of a 25% cost increase between gas and electric
12 equipment measures of the same end use. Rebates will be set at as close to 30% of
13 incremental cost as possible without exceeding levelized cost thresholds.

14 Intermountain agrees with the testimony of Mr. Kirschner that the direct use of
15 natural gas for space and water heating is the best application of this fuel source. The
16 higher-level rebate acknowledges this value, while helping a small increase in rebate
17 amount to further bridge the incremental cost difference between electric and natural
18 gas equipment.

19 **Q. Can you please describe the assumptions utilized in the development of your
20 rebate portfolio?**

21 A. Yes. A description of each assumption used to model the viability of Intermountain's
22 conservation portfolio has been outlined in detail below:

1 pre-screened from program cost effectiveness and modeled under the associated
2 spreadsheets.

3 Rebate Levels: Rebate levels were based on similar natural gas offerings and
4 equivalent electric measures within IGC's service areas and surrounding regions.
5 Rebate levels have been set to be as close to 30% of incremental cost as possible, and
6 higher where cost-effective, in order to ensure that they are sufficient to attracting
7 customer interest and avoiding free ridership. Thoughtfully constructed incentive
8 levels will help kick-start natural gas DSM efforts in Intermountain's service area and
9 drive customers towards environmentally beneficial equipment choices while
10 mitigating the risk of free ridership.

11 Incremental Costs: Incremental cost levels were shaped by the baseline market
12 assumptions developed during the design of the TEAPot model, and refined with on-
13 the-ground market research performed by the Company. Intermountain will be
14 monitoring installed measure costs on an ongoing basis and will make adjustments to
15 these assumptions as appropriate.

16 Measure Life: Measure life assumptions were based from the figures utilized
17 by Nexant in its modeling tool, engineering best practices, and the standard measure
18 life assumed for the same piece of equipment in comparable utility programs.

19 Discount Rate: The model utilizes a 20-year mortgage rate reflecting the
20 averaged lifespan of the measures within Intermountain's rebate portfolio with an
21 APR of 3.69%. This approach acknowledges the low-risk, long-term value, and
22 reliability of home-based energy efficiency investments. It likewise acknowledges the

1 utility's investment in demand side resources through a long-lived energy efficiency
2 portfolio as a viable supplement to supply side resources.

3 The Company shall regularly monitor, and update program variables on an
4 annual basis, in order to make adjustments, as appropriate to the program design.

5 **Q. Is the Company considering cost effectiveness at the individual measure level,
6 the portfolio, or both, and why was this approach taken?**

7 A. The Company is considering cost-effectiveness at the portfolio level. In addition, the
8 discrete measures within the Company's proposed conservation portfolio are
9 generally viable at the individual level, with minor variations in cost effectiveness
10 taking place from measure to measure.

11 All measures within the portfolio developed by the Company have strong
12 UCT results and were screened via the TEAPot model. The Company is confident
13 that the real world application of its rebate portfolio is cost effective.

14 **Q. Under what cost test/s are these measures deemed to be cost effective and
15 what were the underlying inputs that lead to that conclusion?**

16 A. The proposed conservation program portfolio as designed is cost-effective to the
17 Company under the Utility Cost Test.

18 The main drivers of cost-effectiveness of the Utility Cost Test are utility
19 rebate payment levels and administrative expenses which are balanced out against
20 total energy savings. This approach treats supply and demand side resources as
21 equally valuable. Under the UCT, the customer is seen as a supplier from which the
22 Company is purchasing natural gas. The Company "purchases" unused therms and
23 their associated transportation costs from customers resulting from the use of

1 Company-driven purchases of energy-efficient natural gas equipment. A cost
2 effective DSM rebate program under the UCT must ensure that the Company pays the
3 same amount or less for demand side resources as it does for supply side resources. In
4 the case of Intermountain’s proposed portfolio, the UCT result is below the \$0.531
5 levelized cost threshold, meaning that the portfolio is cost effective since it cost the
6 same or less to “purchase” unused therms, with their associated transportation costs,
7 from the customer via IGC’s conservation portfolio than it does to purchase energy
8 from traditional suppliers.

9 The Company also performed analysis of its proposed conservation portfolio
10 under the Total Resource Cost Test. The main drivers of the TRC are the cost of the
11 energy savings equipment purchased by the customer and the Company’s associated
12 administrative costs, balanced against the total energy savings. The test scrutinizes
13 the customer’s purchasing decision, focusing on whether the investment in energy
14 savings yields adequate payment to the customer under current energy prices.
15 However, this level of analysis is not typically conducted when assessing a supplier
16 from which natural gas will be purchased. And the customer from which DSM is
17 purchased may see additional benefits and value beyond energy savings that, when
18 paired with the rebate offered by the utility, may motivate them to purchase high-
19 efficiency natural gas equipment.

20 Furthermore, lower natural gas costs today will not necessarily translate into
21 lower natural gas costs in the future. It is when natural gas is the lowest priced that
22 consumers are more likely to be driven towards use of the product. Encouraging
23 conservation during lower natural gas costs by providing an additional economic

1 motivation through rebates, is essential to proper management of this precious natural
2 resource and to maintain reliability for the Company. Therefore, even though the
3 TRC result does exceed the Company's levelized cost threshold, Intermountain
4 believes that portfolio is still cost effective, and worth pursuing.

5 **Q. Will the Company be utilizing the same discount rate for the development of its**
6 **conservation portfolio as it did for its DSM potential analysis?**

7 A. Yes. Intermountain's program design was informed by its TEAPot DSM analysis and
8 all inputs have been synchronized accordingly.

9 **Q. Does the Company intend to calculate total annual therm savings achievements**
10 **on a net or gross basis?**

11 A. The Company intends to calculate savings on a gross basis, based on the program's
12 deemed therm savings.

13 **Q. Please describe the ways the Company intends to mitigate free ridership as part**
14 **of this program?**

15 A. The Company will be working to mitigate free ridership in several ways through the
16 development and implementation phases of its program.

17 First, Intermountain has taken free ridership risks into account in the
18 development of its program portfolio. For example, the Company had initially
19 considered lower efficiency levels for furnace and water heat incentives. However,
20 after consulting with district staff throughout IGC's service area, Intermountain's
21 DSM development team learned these measures were already being sold without the
22 need for further incentive. The Company took this feedback seriously as measures
23 were selected.

1 for providing home space and water heating. The Department of Energy recognizes
2 source efficiency as the optimal measure of efficiency, and therefore electric savings
3 resulting from the use of energy-efficient natural gas equipment should be considered
4 when evaluating the merits of a natural gas DSM program.

5 **Q. What actions will the Company take to help ensure the program operates as**
6 **anticipated?**

7 A. Intermountain has developed a cost-effective, low risk conservation portfolio. The
8 Company has selected proven measures with known therm savings values and has
9 estimated program participation levels via the TEAPot model which has been updated
10 with Intermountain specific inputs. Intermountain further refined this figure with
11 direct input from district staff to provide the most realistic estimate possible for therm
12 savings achieved during its ramp-up phase. In addition, IGC developed a modest, but
13 realistic budget, minimizing sunk costs to two FTE employees in order to balance
14 having adequate staff to deliver the rebate program, and cautiously managing
15 program expenditures prior to demonstrated performance.

16 Quite simply, the Company has planned its portfolio design to ensure
17 customers are offered an attractive, well-staffed, and successful program. Rebates
18 have been set at levels designed to drive customer interest, while balancing against
19 the law of diminishing returns. If the program does not perform as anticipated,
20 Intermountain will examine the root cause of this underperformance and will adjust.
21 The Company is confident that in the event of unforeseen problems, the program
22 could withstand lower than anticipated participation, or the need for additional
23 expenditures if absolutely necessary.

1 **Q. What impact will failing to achieve annual therm savings targets have on**
2 **program cost effectiveness and operation?**

3 A. If the Company fails to achieve its annual therm savings targets, the overall cost
4 effectiveness of its program portfolio will be lowered. However, the conservation
5 portfolio was designed to withstand lower participation levels if necessary. This was
6 done by prudently budgeting program ramp-up costs, while maintaining rebates at
7 levels comparable to other natural gas utility programs. In the event that program
8 participation was low enough to result in cost-effectiveness below Intermountain's
9 \$.531 threshold, the Company would reexamine its rebate levels, portfolio design,
10 and outreach strategy for following years.

11 **Q. What impact will exceeding annual therm savings targets have on program cost**
12 **effectiveness and operation?**

13 A. If the Company were to exceed its annual therm savings targets, the portfolio as a
14 whole would become even more cost effective than anticipated since more therms
15 would be saved for the same budgeted level of investment. In such a case, the
16 Company would assess if participation levels were sustainable, and if so, would work
17 within the parameters of its TEAPot analysis and feedback from district staff, to
18 expand its program and raise associated targets as appropriate.

19 **VI. PROGRAM DELIEVERY AND IMPLEMENTATION**

20 **Q. Can you describe how the conservation/DSM program proposed by the**
21 **Company will be implemented?**

22 A. Absolutely. With this general rate case, the Company seeks to implement its first ever
23 Demand Side Management Program (DSM) for the residential sector with a request

1 for cost recovery to be filed pending approval of the DSM program. This program
2 will be implemented in-house, and led by Intermountain's Manager of Energy
3 Utilization. The Company anticipates that two additional positions will be developed
4 in association with this program. This includes an FTE position designed to process
5 and verify rebates, perform all required data tracking and reporting, and to serve as an
6 energy advisor to IGC customers. The second anticipated position would provide
7 deeper analysis of energy conservation measures and potential and would support
8 training and technical assistance to area HVAC contractors in regards to
9 Intermountain's program, and would perform quality control inspections as needed.
10 The Company will also leverage existing staff resources such as its Consumer Sales
11 Representatives who are positioned to reach out directly to customers to encourage
12 program participation.

13 The Company also intends to reach out to local builders and contractors to
14 introduce them to high-efficiency natural gas equipment options and increase the
15 proliferation of these technologies in the communities served by IGC.
16 Intermountain's goal will be to build a robust Trade Ally network comprised of
17 carefully screened equipment dealers and installers whom it will work with to
18 encourage greater participation in this program.

19 Additional detail regarding program structure and delivery can be found in the
20 testimony of Ms. Imlach.

21 **Q. How will the Company publicize and promote its DSM rebate program?**

22 A. The Company intends to publicize and promote its DSM program through as many
23 channels as possible, which may include: bill inserts; utility newsletter messaging;

1 information on the Company's website; word-of-mouth by existing Consumer Sales
2 Representatives; flyers and brochures; co-op advertising with local contractors;
3 billboards; home and garden shows; home builder association meetings; radio, print,
4 and television ads; and other media and methods as cost-effective and appropriate.

5 **Q. Will the Company consider expanding its program, or adding additional**
6 **measures following program ramp-up?**

7 A. Yes. As stated earlier, it is the Company's intention to explore additional DSM
8 opportunities following its initial ramp-up. Program changes and expansions will be
9 based from the on-the-ground results of its DSM program, as well as ongoing
10 feedback from district staff, area contractors, and Intermountain's customers.

11 **Q. Does this conclude your testimony?**

12 A. Yes it does.