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October 30, 2017

Ms. Gwen R. Pinson, Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, KY 40601

RE: Request to extend Demand Side Management Program and Cost Recovery Mechanism

Dear Ms. Pinson:

Atmos Energy Corporation (Company) herewith submits an original and three (3) copies of an application and supporting schedules to request to extend the Company's current Demand Side Management (DSM) program. Per the Commission's order in Case No. 2014-00382, the Company's next DSM application was to be filed no later than October 31, 2017. The Company requests to renew its modified program for a period of three (3) years.

The Company's current DSM program and cost recovery mechanism was last approved and modified by Commission Order in Case No. 2014-00382 on April 29, 2015.

The Company's initial program was designed to provide annual funding for weatherization services to eligible, low-income households served by the Company. Day to day administration of the program (applicant screening, energy audits, contractor hiring, etc.) is conducted by various community action agencies and invoiced back to the Company on a per household basis. The Company then reimburses the agency from the funds it has collected under tariffs for this purpose. The Company's weatherization program has been in effect for approximately seventeen (17) years.

In 2008, the Company proposed to continue the weatherization component, and to include a rebate component and an education component which were approved in Case No. 2008-00499 on September 2, 2009. In 2011, the Company proposed to expand its

rebate component to its commercial class as well as the inclusion of commercial cooking rebates which were approved in Case No. 2011-00395 on April 27, 2012.

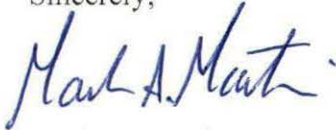
The Company proposes to continue all existing programs. Also, the Company proposes to continue a lost sales component as well as an incentive component.

Included in this filing, the Company is submitting supporting schedules for the cost recovery, and the proposed Second Revised Sheet No. 30 cancelling First Revised Sheet No. 30, the proposed Second Revised Sheet No. 33 cancelling the First Revised Sheet No. 33, the proposed First Revised Sheet No. 34 cancelling the Original Sheet No. 34, and the proposed Fifth Revised Sheet No. 36 cancelling the Fourth Revised Sheet No. 36.

If the Commission is unable to render approval by the current expiration date of April 30, 2018, the Company respectfully requests the Commission to allow the current benefits and funding of the DSM program to continue until final action by the Commission on this request.

Please contact myself at 270.685.8024 if the Commission or Staff has any questions regarding this matter.

Sincerely,

A handwritten signature in blue ink that reads "Mark A. Martin". The signature is written in a cursive style with a small flourish at the end.

Mark A. Martin
Vice President, Rates & Regulatory Affairs

Enclosures

cc: Larry Cook
Mr. Mark R. Hutchinson
Mr. Bill Greer
Ms. Liza Philip

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

APPLICATION OF ATMOS ENERGY CORPORATION)
TO EXTEND ITS DEMAND-SIDE MANAGEMENT PROGRAM,) Case No. 2017-00424
AS AMENDED, AND COST RECOVERY MECHANISM,)
AS AMENDED FOR THREE (3) YEARS)

APPLICATION

Atmos Energy Corporation ("Atmos"/"Company") or ("Applicant") by counsel, hereby applies to the Kentucky Public Service Commission ("Commission") for an Order authorizing it to extend its Demand-Side Management Program ("DSM Program") and its DSM Cost Recovery Mechanism ("DSMCR") for three (3) years, through April 30, 2021.

In support of this application, Atmos states as follows:

1. Atmos is a corporation duly qualified under the laws of the Commonwealth of Kentucky to carry on its business in the Commonwealth.
2. Atmos is an operating public utility engaged in the business of supplying natural gas to the public in numerous cities, towns, and communities in Western and South Central Kentucky.
3. A certified copy of Applicant's Amended and Restated Articles of Incorporation is already on file with the Commission in the Matter of: The Application of Atmos Enemy Corporation for An Adjustment of Rates and Tariff Modifications, Case No. 2013-00148.
4. This Application is filed pursuant to KRS 278.285 which authorizes the Commission to determine the reasonableness of demand-side management plans proposed by utilities subject to its jurisdiction.
5. Atmos' DSM Program and Cost Recovery Mechanism were initially approved as a three (3) year pilot program, to run through 2002, as part of Atmos' general rate case proceeding in Case No. 1999-

00070. In Case No. 2002-00405, the program was approved for an additional three (3) years, to run through 2005. Additionally, in Case No. 2005-00515, the program, as modified, was approved for three (3) more years to run through December 31, 2008. In Case No. 2008-00499, the program, as modified, was approved for three (3) more years to run through December 31, 2011. In Case No. 2010-00305, the Commission approved a settlement between Atmos and the Attorney General's office, but the settlement did not alter the termination date. In Case No. 2011-00395, the program, as modified, was approved for three (3) more years to run through April 30, 2015. Finally, in Case No. 2014-00382, the program, as modified, was approved for three (3) more years to run through April 30, 2018.

Accordingly, the current DSM Program is scheduled to expire as of April 30, 2018. Per Ordering Paragraph 4 in Case No. 2014-00382, Atmos shall submit its next application no later than October 31, 2017 for further extension of its program. If the Commission will be unable to take final action on this Application prior to the tariffs' proposed effective date of May 1, 2018, Atmos requests the Commission to allow the current benefits and funding of the DSM Program to continue until final action by the Commission.

6. Attached under Tab #1 is a summary of Atmos' proposed DSM Program, including a description of the rebate component and the education component.

7. The DSM program was designed originally to provide annual funding for weatherization services to eligible, low income households served by the Company. Day to day administration of the program (applicant screening, energy audits, contract hiring, etc.) is conducted by various community action agencies and invoiced back to the Company on a per household basis. The Company then reimburses the agency from the funds it has collected under tariffs for this purpose.

8. As reflected in the attached summary, the Company is proposing to continue and to maintain the weatherization component, the rebate component and the education component. Atmos proposes to maintain the average funding available per qualifying low income household at \$3,000.00. Atmos also proposes to reduce the cap to \$200,000 since the Company anticipates less activity based on

recent historical participation. The Company believes that its funding levels per qualifying low income household for the weatherization component as well as the existing tiers for the rebate components are appropriate and is proposing no changes to the levels. The Company is proposing to increase the existing education program funding to engage the National Energy Foundation in our outreach efforts.

9. Atmos proposes to maintain the existing residential and commercial appliances that are available for rebates, as well as the existing tiers for the rebates so that the higher the efficiency of the appliance, the higher the rebate amount. The Company is proposing no changes to the rebate amounts that were approved in Case No. 2014-00382. The Company again chose not to tier the rebates for commercial cooking equipment due to the fact that the Company was not aware of any energy efficiency standard that existed for commercial cooking equipment as there is for other appliances such as water heaters and furnaces.

10. Atmos proposes to increase the existing education program funding to engage the National Energy Foundation in our outreach efforts. The proposed increase is an additional \$29,000. The Company proposes to continue to administer any adult outreach with Company personnel. Atmos proposes to continue to recover the expenses associated with this program as well as expenses associated with customer awareness, supplies, as well as lost sales and incentive components. For additional detail, see the attached summary under the heading "Cost Recovery".

11. There is further attached to this Application under Tab #2, the supporting schedules for Atmos' proposed cost recovery of its program as a whole. To be in compliance with Ordering Paragraph 4 of the Commission's Order in Case No. 2014-00382, the Company is also providing additional supporting schedules, by class, for its individual programs. Under Tab #3 are the supporting schedules for Atmos' proposed cost recovery of its weatherization program. Under Tab #4 are the supporting schedules for Atmos' proposed cost recovery of its education program. Under Tab #5 are the supporting schedules for Atmos' proposed cost recovery of its residential rebate program. Under Tab #6 are the supporting

schedules for Atmos' proposed cost recovery of its commercial rebate program. Under Tab #7 are attached the proposed Second Revised Sheet No. 30 cancelling First Revised Sheet No. 30, the proposed Second Revised Sheet No. 33 cancelling the First Revised Sheet No. 33, the proposed Second Revised Sheet No. 34 cancelling the First Revised Sheet No. 34, and the proposed Fifth Revised Sheet No. 36 cancelling the Fourth Revised Sheet No. 36. Lastly, Atmos' most recent Atmos Cares Report is attached under Tab #8.

12. Correspondence and communications with respect to this Application should be directed to:

Mark A. Martin
Atmos Energy Corporation
3275 Highland Pointe Drive
Owensboro, Kentucky 42303

Mark R. Hutchinson
611 Frederica Street
Owensboro, Kentucky 42301

WHEREFORE, for the reasons stated herein, Atmos respectfully requests the Commission to enter an Order modifying and extending Atmos' DSM program and Costs Recovery Mechanism as herein requested for a period of three (3) years; for an order approving the tariffs attached under Tab #3; and, for an order continuing the current DSM Program and funding until the Commission has entered an order taking final action in this proceeding.

Respectfully submitted this 30th day of October, 2017.



Mark R. Hutchinson
611 Frederica Street
Owensboro, Kentucky 42301

VERIFICATION

I, Mark A. Martin, being duly sworn under oath state that I am Vice President of Rates and Regulatory Affairs for Atmos Energy Corporation, Kentucky/Midstates Division, and that the statements contained in the foregoing Petition are true as I verily believe.



Mark A. Martin

CERTIFICATE OF SERVICE

I hereby certify that on the 30TH day of October, 2017, the original of this Application, together with three (3) copies were filed with the Kentucky Public Service Commission, 211 Sower Blvd., P.O. Box 615, Frankfort, Kentucky 40206 and upon Larry Cook, Office of Attorney General, 1024 Capital Center Drive, Suite 200, Frankfort, Kentucky 40601.



Mark R. Hutchinson

Demand-Side Management Program

Atmos Energy

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Program Overview

Program Mission

It is the desire of Atmos Energy (Atmos/Company) to promote the prudent use of natural gas as one of our most valued domestic natural resources. The promotion and implementation of conservation measures by the consumer are an intricate part of our strategy and a sound national energy policy. In accordance with that policy and philosophy, we would prefer to continue our existing program to benefit our customers and bring attention to the importance of conservation.

Discussion

The Company has had a Demand-Side Management (DSM) program in place for at least seventeen (17) years. Throughout the program's history, the Company is unaware of any eligible customer being turned down for any component of the program. The program was initially designed to benefit our low-income customer base. The only tenant of our historical program was a weatherization component. The weatherization program was capped at \$200,000 annually and \$1,500 per qualifying household. The weatherization program is and has been administered through a partnership with our local help agencies. In Case No. 2008-00499, the Commission approved the Company's request to eliminate the cap and to increase the funds available per qualifying household from \$1,500 to \$3,000. In Case No. 2010-00305, the Commission approved a settlement between the Company and the Attorney General's office of a cap of \$350,000 and to decrease the funds available per qualifying household from \$3,000 to \$2,500. In Case No. 2011-00395, the Commission approved the Company's request to increase the cap to \$375,000 and to increase the funds available per qualifying household from \$2,500 to \$3,000. Finally, in Case No. 2014-00382, the Commission approved the Company's request to continue the weatherization program at the existing annual cap of \$375,000 and \$3,000 per qualifying household. Our existing program is set to expire on April 30, 2018. The Company would like to continue its existing DSM program for a period of three years.

The proposed program remains a demand-side management program which aligns the interest of the Company with that of the customer. The proposed program encourages customers to conserve and efficiently use natural gas while not acting as a detriment to the financial performance of the Company. The Company proposes to maintain the available funds per qualifying low-income household and the existing rebate program levels. The Company is proposing to increase the existing education program funding to engage the National Energy Foundation in our outreach efforts.

The Company proposes to maintain the average funding available per qualifying low-income household at \$3,000. Atmos also proposes to reduce the cap to \$200,000 since the Company anticipates less activity based on recent historical participation.

While Atmos is in business to sell natural gas and make a profit from those sales, the trend of customers going off service to use alternative fuels serves as a reminder to the Company of its commitment to service and to maintain long term customers. The investment of facilities to bring gas service to a community is contingent on those customers remaining satisfied consumers for an extended period of time to properly recover the investment.

Over the past several years, Atmos has fielded consumer inquiries concerning possible heating equipment upgrade incentives and information related to lowering natural gas consumption through conservation and increased insulation measures. To meet the public interest and assist our customer base, Atmos in turn developed its rebate program. The Company also has helpful links and conservation tips on its website. Customers can also conduct a home energy audit on-line as well.

The existing rebate program is available to any new or existing residential or commercial customer. The Company has rebates for furnaces, boilers, thermostats, and water heaters. The Company proposes to maintain the existing appliances that are available for rebates, and proposes to maintain the existing rebates tiers so that the higher the efficiency of the appliance, the higher the rebate amount. Finally, the Company proposes to maintain the existing static rebate level for commercial cooking equipment.

The Company has an education program. The Company historically targeted elementary aged (either 4th or 5th graders) children within the Company's service territory. The intent had been to educate the students concerning the importance of energy conservation, and to introduce ways to reduce their family's energy consumption through various low or no-cost efficiency measures. The program has been administered by Company personnel. In Case No. 2011-00395, the education program was expanded to an overall education program to attempt to reach all levels of students as well as adults. Finally, in Case No. 2014-00382, the funding level of the education program was reduced to better reflect historical spending levels. The Company is proposing to increase the existing education program funding to engage the National Energy Foundation (NEF) in our outreach efforts. NEF has a tremendous track record and has worked with Vectren within their Indiana footprint. The goal is for NEF to target more of an assembly audience rather than one class room at a time. The Company believes that more students will be educated under this approach. The Company proposes to continue to administer any adult outreach with Company personnel.

In addition to the programs identified above, the Company is also proposing to recover expenses associated with customer awareness, supplies, as well as lost sales and incentive components. The lost sales and incentive components will be discussed in more detail in the Cost Recovery section.

Program Benefits

When considering energy efficiency from natural resource to end use, natural gas at the wellhead has 10 BTUs and arrives at the consumer's home around 9 BTUs of energy. Whereas electricity requirements at a power plant of 10 BTUs of coal or oil through the generation process only produce 3 BTUs of electricity to the consumer. As a resource, natural gas is more efficient.

Atmos has designed its Program to proactively address the concerns of its residential and commercial customer base related to decreasing consumption. The Program's mission is to decrease consumption through conservation and the efficient use of natural gas.

The decrease in gas usage of many of these customers through conservation or more efficient equipment will benefit Atmos by having more satisfied customers. It will benefit the general population by preserving for future use more natural gas.

Conservation

The Program promotes energy conservation through a home weatherization component for low-income customers as well as an education component for school children as well as adults. As a result of the weatherization program, the participant's home will become more efficient so that the customer can conserve natural gas. The education program was initially designed to target elementary age children. The goal was two fold. The first part was to encourage conservation at an early age. The second part was the desire that children take the material home to their parents/guardians. The Company believes that expanding its education program to all grade levels as well as any adult audience, will only help expand awareness and hopefully change usage patterns. Additionally, conservation tips are posted on the Company's website and are periodically mailed to Atmos' residential and commercial customers which give them facts and tips to promote overall conservation.

Efficiency

A key component of Atmos' DSM Program is the transition from older, antiquated gas fired equipment to newer technologies with higher efficiencies. This is an important step for many consumers to better the use of natural gas.

The program allows for rebate incentives for both the installation of a high efficiency natural gas appliance in new construction and the upgrade of existing Atmos customers from their existing appliances to high efficiency models. Program rebates are currently available for high efficiency gas furnaces, boilers, thermostats and water heaters.

Rate Recovery

The Program has a Demand-Side Management Cost Recovery Component (DSMRC) which is a billing adjustment to recover all direct and indirect costs associated with the program. To align the interest of the Company with that of the customer, the DSMRC also recovers the demand charges associated with the lost margin on the program participants, as well as an incentive based on the commodity savings generated through the Program.

Due to approval of the commercial rebate program in Case No. 2011-00395, the Company has two recovery components. One factor is only for the residential class and the other factor is only for the commercial class. The Company proposes to maintain two recovery factors so that one class does not subsidize the other. The costs of the residential programs should be borne by the residential class and the costs of the commercial program should be borne by the commercial class.

High Efficiency Heating Program

Program

Existing or new conversion customers that change their current heating system (natural gas, propane, electric) to a high efficiency forced air gas furnace or high efficiency gas boiler are eligible for rebates under the Program. New homes shall be eligible for the same program if a high efficiency model is installed. Rebate amounts are determined per heating unit.

Product Information

High efficiency gas furnaces operate without a standing pilot that burns gas continuously. This saves the customer money. Ninety percent plus efficiency gas furnaces offer the consumer optional multiple stage burners and variable speed fan packages to improve their efficient use of natural gas. It is possible that a high efficiency furnace could save up to 40% of the energy cost over older technology units.

Product Requirement, Qualifications, Rebate

Equipment Type	Efficiency Level	BTU Input	Rebate Amount
Forced Air Furnace	AFUE 90-93%	30,000 or greater	\$250.00
	AFUE 94-95%	30,000 or greater	\$325.00
	AFUE 96% or >	30,000 or greater	\$400.00
Boiler	AFUE > 85%	30,000 or greater	\$250.00
Programmable Thermostat			\$25.00

Guidelines

Equipment must meet the above stated qualifications and be EnergyStar approved or other similar organization. All equipment must be properly installed and meet the code requirements as stated by the NFPA 54 handbook and all State and local code requirements. Rebates must be redeemed through the Administrator outlined below. Participating Retailers and rebate forms are available at all of the Company's Kentucky office locations as well as on the Company's website. Each participant will receive a rebate after the completed rebate form is submitted with proper information. Upon receipt of a properly completed rebate form and associated documents, the Administrator will issue a check to the Participant within eight (8) to ten (10) weeks.

Rebate Disbursement

The Company will continue to utilize a third party vendor for the rebate disbursement. The Company has used Energy Federation, Inc. (EFI) to administer its KY rebate program. The success of the program and the existing relationship with EFI seemed like a natural fit to continue for this Program. However, the Company, may at its discretion, change third party vendors in an effort to better serve its customers.

High Efficiency Water Heater Program

Program

Existing or new conversion customers that change their current water heater (natural gas, propane, electric) to a high efficiency natural gas tank model or tankless model are eligible for rebates. New homes and businesses shall be eligible for rebates if a high efficiency model is installed. Rebate amounts are determined per heating unit.

Product Information

High efficiency gas water heaters are constructed with increased insulation along the outer shell and the addition of heat retention baffles inside the flue. Most power vent gas water heaters incorporate submerged combustion chambers and their burner configurations actually heat a greater area of water. Tankless water heaters have no standing pilot light and typically utilize around 25% less fuel than those with pilot lights. Natural gas water heaters have a higher recovery rate since there is not an electric element to heat up like on the electric models. Gas water heaters typically have a longer life due to the simplistic nature of a gas burner and over time will not lose their efficiency as tends to happen with electric heating elements. Conventionally vented or direct vent gas water heaters are not affected by power outages. Gas water heaters will lessen summer electric load and, therefore, decrease peak electric demand issues on the hottest of summer days. As the cleanest burning of all the fossil fuels, natural gas fired water heaters offer benefits to the environment and can lessen the pollution concerns of electric power generation by lowering the load requirements.

Product Requirement, Qualifications, Rebate

Equipment Type	Efficiency Level	Unit Requirement	Rebate Amount
High Efficiency Tank Model	Energy Factor (EF) 0.62-0.66	40 gallon or greater	\$200.00
High Efficiency Tank Model	EF 0.67 or greater	40 gallon or greater	\$300.00
Tankless Model	EF > 0.82		\$400.00

Guidelines

Equipment must meet the above stated qualifications and be EnergyStar approved or other similar organization. All equipment must be properly installed and meet the code requirements as stated by the NFPA 54 handbook and all State and local code requirements. Rebates must be redeemed through the Administrator outlined below. Participating Retailers and rebate forms will available at all of the Company's Kentucky

office locations as well as on the Company's website. Each participant will receive a rebate after the completed rebate form is submitted with proper information. Upon receipt of a properly completed rebate form and associated documents, the Administrator will issue a check to the Participant within eight (8) to ten (10) weeks.

Rebate Disbursement

The Company will continue to utilize a third party vendor for the rebate disbursement. The Company has used Energy Federation, Inc. (EFI) to administer its KY rebate program. The success of the program and the existing relationship with EFI seemed like a natural fit to continue for this Program. However, the Company, may at its discretion, change third party vendors in an effort to better serve its customers.

Commercial Cooking Program

Program

Existing or new commercial customers that change their current cooking equipment (natural gas, propane, electric) to a high efficiency natural gas models are eligible for rebates under the Program. New businesses shall be eligible for the same program if a high efficiency model is installed. Rebate amounts are determined per heating unit.

Product Information

Buildings with restaurants and other food service operations are very energy intensive, consuming roughly 2.5 times the energy per square foot as other commercial buildings. Utility cost savings of 10 to 30 percent are achievable without sacrificing service, quality, style or comfort – all while making significant contributions to a cleaner environment. Aside from gas savings, installation of EnergyStar steamers could also provide water savings up to 90% over standard models.

Product Requirement, Qualifications, Rebate

Equipment Type	Efficiency Level	Rebate Amount
Fryer	EnergyStar	\$500.00
Griddle	EnergyStar	\$500.00
Oven	EnergyStar	\$500.00
Steamer	EnergyStar	\$500.00

Guidelines

Equipment must meet the above stated qualifications and be EnergyStar approved or other similar organization. All equipment must be properly installed and meet the code requirements as stated by the NFPA 54 handbook and all State and local code requirements. Rebates must be redeemed through the Administrator outlined below. Participating Retailers and rebate forms will available at all of the Company's Kentucky office locations as well as on the Company's website. Each participant will receive a rebate after the completed rebate form is submitted with proper information. Upon receipt of a properly completed rebate form and associated documents, the Administrator will issue a check to the Participant within eight (8) to ten (10) weeks.

Rebate Disbursement

The Company will continue to utilize a third party vendor for the rebate disbursement. The Company has used Energy Federation, Inc. (EFI) to administer its KY rebate program. The success of the program and the existing relationship with EFI seemed like a natural fit to continue for this Program. However, the Company, may at its discretion, change third party vendors in an effort to better serve its customers.

Cost Recovery

The Company will recover its costs associated with the residential programs through the DSM Cost Recovery Mechanism-Residential (DSMRCR) which is a tariff rate that is applicable to all residential customers. The Company will recover its costs associated with the commercial program through the DSM Cost Recovery Mechanism-Commercial (DSMRCC) which is a tariff rate that is applicable to all commercial customers. Both tariff rates can be broken down into the following four specific components:

- DSM Cost Recovery-Current (DCRC)
- DSM Lost Sales Adjustment (DLSA)
- DSM Incentive Adjustment (DIA)
- DSM Balance Adjustment (DBA)

DCRC

Under the tariff, the DCRC shall include all actual costs, direct and indirect, under this program which has been approved by the Commission. This includes all direct costs associated with the program including rebates paid under the program, the cost of educational supplies, and customer awareness related to conservation/efficiency. In addition, indirect costs shall include the costs of planning, developing, implementing, monitoring, and evaluating DSM programs. In addition, all costs incurred by or on behalf of the program, including but not limited to costs for consultants and administrative expenses, will be recovered through the DCRC.

DLSA

To effectively promote and execute the program, the Company shall recover the annual lost sales attributable to customer conservation/efficiency created as a result of the Program. This aligns the Company's interest with that of its customers by reducing the correlation between volume and revenue for those customers who elect to participate in the program. The lost sales are the estimated conservation, per participant, times the base rate for the applicable customer. The goal is to make the Company whole for promoting the program. Lost sales are based on the cumulative lost sales since the program inception and will reset when the Company completes a general rate case.

DIA

As a result of the program, the customers who participate in the program will save on their gas bills due to decreased usage, which results in decreased commodity charges. As an incentive for the Company to devote the necessary monetary and physical resources to promote and administer the program, the Company will earn a fifteen percent (15%) incentive based on the net resource savings of the Program participants.

Net resource savings are defined as Program benefits less utility Program costs and participant costs where Program benefits will be calculated on the basis of the present value of Atmos' avoided commodity costs over the expected life of the Program. For the purpose of calculating

the Program benefits, a specific measure's life as define in DEER (Database for Energy Efficient Resources), ENERGY STAR ® or NEEP is assumed with future gas costs over a corresponding period based on projection of the Company's Gas Cost Adjustment (GCA) at the time of the filing with escalation factors determined by NYMEX futures prices on the cost of gas at Henry Hub. The present value is the weighted average cost of capital as stated in the Company's most recent rate case.

DBA

The DBA is a balancing adjustment to adjust the current rates for any over-(under-) collections of the previous year's DSM rates. An interest factor is applied to any over-(under-) collections based on the Average 3-Month Commercial Paper Rate for the Program year.

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Atmos Energy's Demand Side Management Application October 2017

Program Summary

		Year 1	
Total DSM Cost for recovery	California Tests	G-1 Residential	G-1 Commercial
		\$ 782,059	\$ 2,662
Program Costs	<u>DCRC</u>	\$ 735,126	\$ 62,057
Lost Sales	<u>DLSA</u>	\$ 25,728	\$ 3,183
Program Incentive	<u>DIA</u>	\$ (9,400)	\$ 600
Program Balancing Adjustment	<u>DBA</u>	\$ 30,605	\$ (63,178)
Annual Average Recovery Cost per Customer	<u>DSMRC</u>	\$ 4.94	\$ 0.15

	<u>Benefit/ Cost Ratio</u>
<u>Participant Test</u>	1.54
<u>Program Admin Test</u>	1.00
<u>Ratepayer Impact Test (RIM)</u>	0.42
<u>Total Resource Cost Test (TRC)</u>	0.59

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Atmos Energy Variable Data

1.	# Kentucky Residential Customers	158,221		
2.	Residential Sales Volumes (Ccf)	109,894,930		
1a.	# Kentucky Commercial Customers	17,416		
2a.	Commercial Sales Volumes (Ccf)	48,854,530		
3.	Estimated Participants	Total	Residential	Commercial
a)	Furnace AFUE 90 - 93	235	225	10
b)	Furnace AFUE 94 - 95	135	125	10
c)	Furnace AFUE 96 or >	370	350	20
d)	Boiler AFUE 85 -89	5	0	5
f)	Tank Water Heater EF .62 - .66	335	330	5
g)	Tank Water Heater EF .67 or >	55	50	5
h)	Tankless/Condensing Water Heater EF > .82	285	275	10
k)	Programmable Thermostat (manual)	310	300	10
l)	Weatherization	60	60	0
m)	Commercial Fryer	5	0	5
n)	Commercial Griddle	5	0	5
o)	Commercial Oven	5	0	5
p)	Commercial Steamer	5	0	5
4.	Atmos Distribution Charge \$	0.183		
5.	Average Heat use (ccf) per customer	361.00		
6.	Average water heating use (ccf) per customer	148.00		
7.	Proposed Rebates			
	Furnace AFUE 90 - \$	250		
	Furnace AFUE 94 - \$	325		
	Furnace AFUE 96 or > \$	400		
	Boiler AFUE > 85 \$	250		
	Tank Water Heater \$	200		
	Tank Water Heater \$	300		
	Tankless/Condensing \$	400		
	Programmable Thermostat \$	25		
	Commercial Fryer \$	500		
	Commercial Griddle \$	500		
	Commercial Oven \$	500		
	Commercial Steamer \$	500		
8.	Weatherization Program \$	3,000		
9.	Incremental Cost of 90-93 AFUE furnace \$	654		
	Incremental Cost of 94-95 AFUE furnace \$	668		
	Incremental Cost of 96 or > AFUE furnace \$	1,238		
	Incremental Cost of 85-89 AFUE boiler \$	1,583		
	Incremental Cost of Programmable Thermostat \$	39		
	Incremental Cost of .62 EF tank W/H \$	38		
	Incremental Cost of .67 EF tank W/H \$	347		
	Incremental Cost of .82-.90 EF tankless W/H \$	839		
	Incremental Cost for Gas Fryer \$	468		
	Incremental Cost for Gas Griddle \$	121		
	Incremental Cost for Gas Oven \$	119		
	Incremental Cost for Gas Steamer \$	2,103		
10.	Discount Rate	7.73%		

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Deemed Savings for Measures

Measure	Efficiency Level	Kentucky	
		Savings (CCF)	Savings (Therm)
Forced Air Furnace	92% AFUE	109.5	113.6
Forced Air Furnace	94% AFUE	122.6	127.1
Forced Air Furnace	96% AFUE	135.0	140.0
Boiler	85% AFUE	42.3	43.9
Boiler	90% AFUE	79.9	82.9
Tank Water Heater	0.62 EF or greater	17.6	18.2
Tank Water Heater	0.67 EF or greater	36.6	38.0
Tankless Water Heater	0.82 - .90 EF	80.0	83.0
Tankless Water Heater	0.91 EF or greater	99.1	102.8
Condensing Water Heater	0.90 EF or greater	68.5	71.0
Programmable Thermostat	Manual	60.3	62.6
Weatherization	30% Savings	100.4	109.4
Fryer	EnergyStar	520.7	540.0
Griddle	EnergyStar	115.7	120.0
Oven	EnergyStar	217.0	225.0
Steamer	EnergyStar	1253.6	1,300.0

<https://portfoliomanager.energystar.gov/pdf/reference/Thermal%20Conversions.pdf?2b52-b268>

August of 2015 Report shows 1.026 factor

https://www.eia.gov/totalenergy/data/monthly/pdf/sec13_4.pdf

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Billing Factor Calculation

Program Begins: May 1, 2018
 Program Year End: December 31, 2018
 Rate Effective: May 1, 2018

DCRC = DSM Cost Recovery-Current

Program Costs	G-1 Residential	G-1 Commercial
Rebates	\$ 435,375	\$ 31,750
Program Costs (Weatherization & Education)	\$ 214,000	\$ -
Customer Awareness	\$ 50,000	\$ 25,000
Program Administration	\$ 32,401	\$ 3,657
Supplies	\$ 3,350	\$ 1,650
Program Overhead	\$ -	\$ -
TOTAL DCRC	G-1 Residential \$ 735,126	G-1 Commercial \$ 62,057
Excluding Rebates	\$ 299,751	\$ 30,307

DLSA = DSM Lost Sales Adjustment

Current Year Program Participation (Schedule A)

Rate	# of Participants	CCF Conserved	Distribution Charge	Lost Sales
G-1 Residential Customers	1,715	140,974	\$ 0.1825	\$ 25,728
G-1 Commercial Customers	95	17,443	\$ 0.1825	\$ 3,183
Total Current Year Lost Sales	1,810	158,416		\$ 28,911
Cumulative Prior Years Participation (Schedule B)	-	0	\$ 0.1825	\$ -
TOTAL DLSC	1,810	158,416		\$ 28,900

DIA = DSM Incentive Adjustment

	G-1 Residential	G-1 Commercial
Program Benefits (Schedule C)	\$ 672,230	\$ 66,230
Less: Program Costs	\$ (735,126)	\$ (62,057)
Net Resource Savings	\$ (62,896)	\$ 4,173
Incentive Percentage	15%	15%
DIA	\$ (9,400)	\$ 600

DBA = DSM Balance Adjustment

	G-1 Residential	Balancing Adjustment	G-1 Commercial	Balancing Adjustment
	Estimated Residential Sales		Estimated Commercial Sales	
<u>Under/(Over) Recovery</u>	<u>Residential Sales</u>	<u>Adjustment</u>	<u>Under/(Over) Recovery</u>	<u>Commercial Sales</u>
\$ 30,605.45	109,894,930	\$ 0.00028	\$ (63,177.88)	48,854,530
				\$ (0.00129)

DSMRC = DSM Cost Recovery Component

G-1 Residential			
Estimated Residential Sales	109,894,930	Ccf	
Estimated Residential Customers	158,221		
	Recovery Amount	Rate, per Ccf	Rate, per Mcf
DCRC	\$ 735,126	\$ 0.0067	\$ 0.0670
DLSA	\$ 25,728	\$ 0.0002	\$ 0.0020
DIA	\$ (9,400)	\$ (0.0001)	\$ (0.0010)
DBA	\$ 30,605	\$ 0.0003	\$ 0.0028
TOTAL DSMRC	\$ 782,059	\$ 0.00708	\$ 0.0708

Annual Cost Recovery per G-1 Residential Customers \$ 4.94

G-1 Commercial			
Estimated Commercial Sales	48,854,530	Ccf	
Estimated Commercial Customers	17,416		
	Recovery Amount	Rate, per Ccf	Rate, per Mcf
DCRC	\$ 62,057	\$ 0.0013	\$ 0.0130
DLSA	\$ 3,183	\$ 0.0001	\$ 0.0010
DIA	\$ 600	\$ -	\$ -
DBA	\$ (63,178)	\$ (0.0013)	\$ (0.0129)
TOTAL DSMRC	\$ 2,662	\$ 0.0001	\$ 0.0011

Annual Cost Recovery per G-1 Commercial Customers \$ 0.15

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Schedule A - Current Year Participation Detail

Program Year End: December 31, 2018

G-1 Residential Efficiency Heating Savings	Program		CCF Conservation		Rebate		Measure	
	Participants	Per Participant	Total	Amount	Total	Life	Source	
Furnace AFUE 92 - 93	225	109.55	24,648	\$ 250	\$ 56,250	18	DEER	
Furnace AFUE 94 - 95	125	122.57	15,321	\$ 325	\$ 40,625	18	DEER	
Furnace AFUE 96 or >	350	135.00	47,252	\$ 400	\$ 140,000	18	DEER	
Boiler AFUE > 85	-	42.33	-	\$ 250	\$ -	18	DEER	
Programmable Thermostat	300	60.32	18,095	\$ 25	\$ 7,500	15	DEER	
Totals	1,000	NA	105,316	NA	\$ 244,375			

G-1 Commercial Efficiency Heating Savings	Program		CCF Conservation		Rebate		Measure	
	Participants	Per Participant	Total	Amount	Total	Life	Source	
Furnace AFUE 92 - 93	10	109.55	1,095	\$ 250	\$ 2,500	18	DEER	
Furnace AFUE 94 - 95	10	122.57	1,226	\$ 325	\$ 3,250	18	DEER	
Furnace AFUE 96 or >	20	135.00	2,700	\$ 400	\$ 8,000	18	DEER	
Boiler AFUE >85	5	42.33	212	\$ 250	\$ 1,250	18	DEER	
Programmable Thermostat	10	60.32	603	\$ 25	\$ 250	15	DEER	
Totals	55	NA	5,836	NA	\$ 15,250			

G-1 Residential Water Heating Savings	Program		CCF Conservation		Rebate		Measure	
	Participants	Per Participant	Total	Amount	Total	Life	Source	
Tank Water Heater EF .62 - .66	330	17.55	5,792	\$ 200	\$ 66,000	13	DEER	
Tank Water Heater EF .67 or >	50	36.64	1,832	\$ 300	\$ 15,000	13	DEER	
Tankless/Condensing Water Heater EF >.82	275	80.04	22,011	\$ 400	\$ 110,000	20	DEER	
Totals	655	NA	29,635	NA	\$ 191,000			

G-1 Commercial Water Heating Savings	Program		CCF Conservation		Rebate		Measure	
	Participants	Per Participant	Total	Amount	Total	Life	Source	
Tank Water Heater EF .62 - .66	5	17.55	88	\$ 200	\$ 1,000	13	DEER	
Tank Water Heater EF .67 or >	5	36.64	183	\$ 300	\$ 1,500	13	DEER	
Tankless/Condensing Water Heater EF >.82	10	80.04	800	\$ 400	\$ 4,000	20	DEER	
Totals	20	NA	1,071	NA	\$ 6,500			

G-1 Commercial Cooking Equipment Savings	Program		CCF Conservation		Rebate		Measure	
	Participants	Per Participant	Total	Amount	Total	Life	Source	
Fryer EnergyStar Rated	5	520.73	2,604	\$ 500	\$ 2,500	8	Energy Star	
Griddle EnergyStar Rated	5	115.72	579	\$ 500	\$ 2,500	12	Energy Star	
Oven EnergyStar Rated	5	216.97	1,085	\$ 500	\$ 2,500	10	NEEP	
Steamer EnergyStar Rated	5	1,253.62	6,268	\$ 500	\$ 2,500	10	Energy Star	
Totals	20	NA	10,535	NA	\$ 10,000			

Weatherization	Program		CCF Conservation		Rebate		Measure	
	Participants	Per Participant	Total	Amount	Total	Life	Source	
	60	100.3875	6,023	\$ 3,000	\$ 180,000	25	DEER	

Education Program	Program		CCF Conservation		Rebate		Measure	
	Participants	Per Participant	Total	Amount	Total	Life	Source	
					\$ 34,000			

Totals by Customer Class	Program		CCF Conservation		Rebate		Measure	
	Participants	Per Participant	Total	Amount	Total	Life	Source	
G-1 Residential Totals	1,715	Varies see above	140,974	Varies see above	\$ 649,375			
G-1 Commercial Totals	95	Varies see above	17,443	Varies see above	\$ 31,750			

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Annual Savings**

SAVINGS

Year	G-1			G-1		Weather- ization	Res. Total	Comm. Total	Total
	Res. Heating	Comm. Heating	Res. Water	Comm. Water	Comm. Cooking Equipment				
1	105,316	5,836	29,635	1,071	10,535	6,023	140,974	17,443	158,416
2	105,316	5,836	29,635	1,071	10,535	6,023	140,974	17,443	158,416
3	105,316	5,836	29,635	1,071	10,535	6,023	140,974	17,443	158,416
4	105,316	5,836	29,635	1,071	10,535	6,023	140,974	17,443	158,416
5	105,316	5,836	29,635	1,071	10,535	6,023	140,974	17,443	158,416
6	105,316	5,836	29,635	1,071	10,535	6,023	140,974	17,443	158,416
7	105,316	5,836	29,635	1,071	10,535	6,023	140,974	17,443	158,416
8	105,316	5,836	29,635	1,071	10,535	6,023	140,974	17,443	158,416
9	105,316	5,836	29,635	1,071	7,932	6,023	140,974	14,839	155,813
10	105,316	5,836	29,635	1,071	7,932	6,023	140,974	14,839	155,813
11	105,316	5,836	29,635	1,071	579	6,023	140,974	7,486	148,460
12	105,316	5,836	29,635	1,071	579	6,023	140,974	7,486	148,460
13	105,316	5,836	29,635	1,071	-	6,023	140,974	6,907	147,881
14	105,316	5,836	22,011	800	-	6,023	133,350	6,636	139,986
15	105,316	5,836	22,011	800	-	6,023	133,350	6,636	139,986
16	87,220	5,233	22,011	800	-	6,023	115,254	6,033	121,287
17	87,220	5,233	22,011	800	-	6,023	115,254	6,033	121,287
18	87,220	5,233	22,011	800	-	6,023	115,254	6,033	121,287
19	-	-	22,011	800	-	6,023	28,034	800	28,834
20	-	-	22,011	800	-	6,023	28,034	800	28,834
21	-	-	-	-	-	6,023	6,023	-	6,023
22	-	-	-	-	-	6,023	6,023	-	6,023
23	-	-	-	-	-	6,023	6,023	-	6,023
24	-	-	-	-	-	6,023	6,023	-	6,023
25	-	-	-	-	-	6,023	6,023	-	6,023

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Energy Federation, Inc. Administrative Costs**

EFI Budget Estimates for Administration of Kentucky DSM Appliance Rebate Program

Annual Budget

	Unit Cost	Residential Costs	Commercial Costs	Total Cost
Estimated Rebates		1,655	95	
Processing fee	\$ 9.00	\$ 14,895	\$ 855	\$ 15,750
"Cost of Money" Charge	1%	\$ 4,694	\$ 318	\$ 5,011
Reservation Fee	\$ 4.00	\$ 6,620	\$ 380	\$ 7,000
Customer e-mails (EFI to cust.)	\$ 2.50	\$ 828	\$ 48	\$ 875
Customer Service Phone Chg.(hours)	\$ 39.00	\$ 1,345	\$ 77	\$ 1,422
Program Management fee	\$ 1,500	\$ 4,020	\$ 1,980	\$ 6,000
Totals		\$ 32,401	\$ 3,657	\$ 36,058

Atmos Energy
Demand Side Management (DSM) Program
DSM APPLIANCE INFORMATION

FURNACES					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 90% Efficiency	Incremental Cost
Bowling Green	York	2,000 sq. ft.	\$ 1,950	\$ 2,467	\$ 517
Bowling Green	Amana	2,000 sq. ft.	\$ 1,000	\$ 1,570	\$ 570
Bowling Green	Trane	2,000 sq. ft.	\$ 1,450	\$ 1,700	\$ 250
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 2,500	\$ 1,100
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Owensboro	York	2,000 sq. ft.	\$ 725	\$ 1,050	\$ 325
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,250	\$ 550
Average Incremental Cost					\$ 602

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 92% Efficiency	Incremental Cost
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 2,200	\$ 800
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Bowling Green	Amana	2,000 sq. ft.	\$ 1,000	\$ 2,026	\$ 1,026
Bowling Green	York	2,000 sq. ft.	\$ 1,950	\$ 2,467	\$ 517
Owensboro	Heil	2,000 sq. ft.	\$ 750	\$ 1,200	\$ 450
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,300	\$ 600
Average Incremental Cost					\$ 716
Average Incremental Cost 90-92 AFUE					\$ 654

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 94% Efficiency	Incremental Cost
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,380	\$ 680
Owensboro	York	2,000 sq. ft.	\$ 725	\$ 1,150	\$ 425
Average Incremental Cost					\$ 668

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 96% Efficiency	Incremental Cost
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 3,200	\$ 1,800
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 3,600	\$ 2,000
Owensboro	York	2,000 sq. ft.	\$ 700	\$ 1,200	\$ 500
Owensboro	Heil	2,000 sq. ft.	\$ 750	\$ 1,400	\$ 650
Average Incremental Cost					\$ 1,238

Boilers					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 85% Efficiency	Incremental Cost
Owensboro	A.O. Smith	2,000 sq. ft.	\$ 8,150	\$ 9,865	\$ 1,715
Danville	Locinar	2,000 sq. ft.	\$ 7,950	\$ 9,400	\$ 1,450
Average Incremental Cost					\$ 1,583

WATER HEATERS - TANK TYPE					
Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 62% Efficiency	Incremental Cost
2011 ASHRAE Winter Conference					\$ 38
Average Incremental Cost					\$ 38

Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 67% Efficiency	Incremental Cost
Lowe's	A.O. Smith	50 gallon	\$ 409	\$ 656	\$ 247
Home Depot	Rheem	40 gallon	\$ 400	\$ 639	\$ 239
Lowe's	State	40 gallon	\$ 379	\$ 935	\$ 556
Average Incremental Cost					\$ 347

WATER HEATERS - TANKLESS					
Contractor Location	Brand Comparison	Unit Sizing	58% Eff Tank Type	82% Eff. Tankless	Incremental Cost
Owensboro	Rinnai	180,000 Btu	\$ 404	\$ 1,000	\$ 596
Paducah	Navian	199,000 Btu	\$ 350	\$ 1,136	\$ 786
Bowling Green	Rinnai	199,000 Btu	\$ 409	\$ 1,210	\$ 801
Bowling Green	A.O. Smith	199,000 Btu	\$ 409	\$ 1,331	\$ 922
Owensboro	Navian	199,000 Btu	\$ 429	\$ 1,150	\$ 721
Paducah	Rheem	199,000 Btu	\$ 390	\$ 1,300	\$ 1,210
Average Incremental Cost					\$ 839

COMMERCIAL GAS EQUIPMENT					
Taken from Savings Calculator for EnergyStar Equipment developed by U.S. EPA & DOE					
Gas Fryer					\$ 468
Gas Griddle					\$ 121
Gas Oven					\$ 119
Gas Steamer					\$ 2,103
Average Incremental Cost					\$ 703

THERMOSTATS					
Contractor Location	Brand Comparison	Model Number	Non-Programmable	Programmable	Incremental Cost
Lowe's	Honeywell	RTH6350D1000	\$ 40	\$ 60	\$ 20
Lowe's	Lux	TX9600TS	\$ 40	\$ 68	\$ 28
Lowe's	Iris	CT-101-L	\$ 40	\$ 99	\$ 59
Lowe's	Honeywell	RTH7600D1048	\$ 40	\$ 89	\$ 49
Average Incremental Cost					\$ 39

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Schedule B - Cumulative Prior Years Program Participation

Program Year End: December 31, 2018

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Cumulative Total
Program Participants											
<u>A. High Efficiency Appliances</u>	0	0	0	0	-	0	0	0			-
<u>B. Weatherization Program</u>	0	0	0	0	0	0	0	0			-
Total Participants	0	0	0	0	0	0	0	0			-
 Total Conservation in Ccf											
<u>A. High Efficiency Appliance Savings</u>	0	0	0	0	0	0	0	0			-
<u>B. Weatherization Program</u>	0	0	0	0	0	0	0	0			-
Total Ccf Savings	0	0	0	0	0	0	0	0			-
 Total Lost Sales	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -

Atmos Energy's Demand Side Management Application October 2017

Daily Settlements for Henry Hub Natural Gas Futures (PRELIMINARY) Trade Date: 10/24/2017

http://www.cmegroup.com/trading/energy/natural-gas/natural-gas_quotes_settlements_futures.html

Month	Open	High	Low	Last	Change	Settle	Estimated Volume	Prior Day Open Interest
Nov-17	2.971	3.004	2.960	2.988	(0.017)	2.974	114,500	46,837
Dec-17	3.139	3.165	3.117	3.148	(0.021)	3.135	105,230	267,776
Jan-18	3.258	3.285	3.243	3.268	(0.023)	3.257	44,476	201,511
Feb-18	3.260	3.287	3.246	3.27	(0.024)	3.260	16,371	82,361
Mar-18	3.218	3.243	3.201	3.227	(0.024)	3.216	33,907	174,362
Apr-18	2.979	2.995	2.975	2.992	(0.003)	2.989	29,734	126,898
May-18	2.960	2.970	2.950	2.964	(0.002)	2.964	10,912	77,441
Jun-18	2.990	2.997	2.978	2.991	(0.002)	2.992	805	32,520
Jul-18	3.017	3.024	3.006	3.02	(0.002)	3.020	3,064	41,447
Aug-18	3.019	3.026	3.008	3.018	(0.002)	3.021	2,014	31,390
Sep-18	3.000	3.007	2.990	3.002	(0.003)	3.002	1,963	33,363
Oct-18	3.023	3.030	3.012	3.026	(0.002)	3.025	7,560	69,251
Nov-18	3.075	3.077	3.061	3.077	(0.003)	3.077	1,053	28,248
Dec-18	3.204	3.212	3.195	3.204	(0.003)	3.208	1,393	28,455
Jan-19	3.285	3.291	3.271	3.286	(0.003)	3.287	2,524	27,263
Feb-19	3.241	3.249	3.240	3.249	(0.002)	3.255	423	8,269
Mar-19	3.168	3.179	3.161	3.177	-	3.178	1,371	21,240
Apr-19	2.783	2.791	2.772	2.787	0.004	2.790	2,240	16,350
May-19	2.734	2.735	2.734	2.735	0.003	2.742	765	5,002
Jun-19	2.756	2.756	2.756	2.756	0.002	2.763	196	4,073
Jul-19	2.778	2.784	2.778	2.784	0.002	2.785	84	3,786
Aug-19	2.771	2.775	2.771	2.775	0.002	2.785	20	2,673
Sep-19	2.755	2.765	2.755	2.765	0.002	2.768	23	2,485
Oct-19	2.792	2.792	2.776	2.790	-	2.790	513	4,131
Nov-19	-	-	-	0.000	(0.001)	2.850	5	2,664
Dec-19	-	-	-	0.000	(0.001)	2.998	2	2,693
Jan-20	-	-	-	-	(0.001)	3.099	52	1,470
Feb-20	-	-	-	-	-	3.076	-	589
Mar-20	-	-	-	-	0.002	3.022	61	858
Apr-20	-	-	-	0.000	(0.001)	2.714	61	1,017
May-20	-	-	-	0.000	(0.001)	2.689	9	627
Jun-20	-	-	-	0.000	(0.001)	2.712	9	560
Jul-20	-	-	-	0.000	(0.001)	2.738	-	505
Aug-20	0	0	0	0.000	(0.001)	2.750	-	468
Sep-20	0	0	0	0.000	(0.001)	2.750	-	469
Oct-20	-	-	-	-	(0.001)	2.776	-	517
Nov-20	-	-	-	-	(0.001)	2.849	-	501
Dec-20	-	-	-	-	(0.003)	3.002	-	780
Jan-21	3.11	3.11	3.11	3.105	(0.004)	3.114	5	265
Feb-21	-	-	-	-	(0.006)	3.091	-	186
Mar-21	-	-	-	-	-0.006	3.037	-	187
Apr-21	-	-	-	-	-0.009	2.739	-	116
May-21	-	-	-	-	-0.009	2.714	-	102
Jun-21	-	-	-	-	-0.009	2.737	-	89
Jul-21	-	-	-	-	-0.009	2.761	-	89
Aug-21	-	-	-	-	-0.009	2.777	-	92
Sep-21	-	-	2.77	2.771	-0.009	2.777	-	100
Oct-21	-	-	-	-	-0.009	2.803	-	73
Nov-21	-	-	-	-	-0.009	2.877	-	72

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Dec-21	-	-	-	-	-0.009	3.030	0	100
Jan-22	-	-	-	-	0.000	3.142	-	18
Feb-22	-	-	-	-	-0.001	3.119	-	22
Mar-22	-	-	-	-	-0.001	3.063	-	19
Apr-22	-	-	-	-	-0.001	2.768	-	14
May-22	4.22	4.22	4.22	-	-0.001	2.750	0	20
Jun-22	-	-	-	-	-0.001	2.775	-	14
Jul-22	-	-	-	-	-0.001	2.802	-	15
Aug-22	-	-	-	-	-0.001	2.822	-	15
Sep-22	-	-	-	-	-0.001	2.822	-	14
Oct-22	-	-	-	-	-0.001	2.848	-	14
Nov-22	-	-	-	-	-0.001	2.923	-	14
Dec-22	-	-	-	-	-0.001	3.078	-	19
Jan-23	-	-	-	-	-0.001	3.201	-	4
Feb-23	-	-	-	-	-0.001	3.178	-	1
Mar-23	-	-	-	-	-0.001	3.121	-	12
Apr-23	-	-	-	-	-0.001	2.829	-	12
May-23	-	-	-	-	-0.001	2.811	-	19
Jun-23	-	-	-	-	-0.001	2.836	-	12
Jul-23	-	-	-	-	-0.001	2.863	-	12
Aug-23	-	-	-	-	-0.001	2.886	-	23
Sep-23	-	-	-	-	-0.001	2.889	-	1
Oct-23	-	-	-	-	-0.001	2.919	-	16
Nov-23	-	-	-	-	-0.001	2.994	-	12
Dec-23	-	-	-	-	-0.001	3.149	-	1
Jan-24	-	-	-	-	-0.001	3.272	-	0
Feb-24	-	-	-	-	-0.001	3.246	-	0
Mar-24	-	-	-	-	-0.001	3.184	-	0
Apr-24	-	-	-	-	-0.001	2.892	-	0
May-24	-	-	-	-	-0.001	2.874	-	2
Jun-24	-	-	-	-	-0.001	2.900	-	0
Jul-24	-	-	-	-	-0.001	2.928	-	0
Aug-24	-	-	-	-	-0.001	2.951	-	0
Sep-24	-	-	-	-	-0.001	2.955	-	0
Oct-24	-	-	-	-	-0.001	2.988	-	0
Nov-24	-	-	-	-	-0.001	3.063	-	0
Dec-24	-	-	-	-	-0.001	3.218	-	0
Jan-25	-	-	-	-	-0.001	3.341	-	0
Feb-25	-	-	-	-	-0.001	3.312	-	0
Mar-25	-	-	-	-	-0.001	3.247	-	0
Apr-25	-	-	-	-	-0.001	2.955	-	-
May-25	-	-	-	-	-0.001	2.937	-	1
Jun-25	-	-	-	-	-0.001	2.965	-	-
Jul-25	-	-	-	-	-0.001	2.995	-	0
Aug-25	-	-	-	-	-0.001	3.024	-	0
Sep-25	-	-	-	-	-0.001	3.028	-	-
Oct-25	-	-	-	-	-0.001	3.063	-	-
Nov-25	-	-	-	-	-0.001	3.138	-	-
Dec-25	-	-	-	-	-0.001	3.293	-	-
Jan-26	-	-	-	-	-0.001	3.416	-	-
Feb-26	-	-	-	-	-0.001	3.383	-	-
Mar-26	-	-	-	-	-0.001	3.311	-	0
Apr-26	-	-	-	-	-0.001	3.008	-	-
May-26	-	-	-	-	-0.001	2.990	-	-
Jun-26	-	-	-	-	-0.001	3.023	-	-

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Jul-26	-	-	-	-	-0.001	3.063	-	-
Aug-26	-	-	-	-	-0.001	3.101	-	-
Sep-26	-	-	-	-	-0.001	3.111	-	-
Oct-26	-	-	-	-	-0.001	3.156	-	-
Nov-26	-	-	-	-	-0.001	3.232	-	-
Dec-26	-	-	-	-	-0.001	3.389	-	-
Jan-27	-	-	-	-	-0.001	3.524	-	-
Feb-27	-	-	-	-	-0.001	3.489	-	-
Mar-27	-	-	-	-	-0.001	3.414	-	-
Apr-27	-	-	-	-	-0.001	3.099	-	-
May-27	-	-	-	-	-0.001	3.074	-	-
Jun-27	-	-	-	-	-0.001	3.099	-	-
Jul-27	-	-	-	-	-0.001	3.128	-	-
Aug-27	-	-	-	-	-0.001	3.156	-	-
Sep-27	-	-	-	-	-0.001	3.166	-	-
Oct-27	-	-	-	-	-0.001	3.206	-	-
Nov-27	-	-	-	-	-0.001	3.282	-	-
Dec-27	-	-	-	-	-0.001	3.439	-	-
Jan-28	-	-	-	-	-0.001	3.579	-	-
Feb-28	-	-	-	-	-0.001	3.544	-	-
Mar-28	-	-	-	-	-0.001	3.469	-	-
Apr-28	-	-	-	-	-0.001	3.139	-	-
May-28	-	-	-	-	-0.001	3.124	-	-
Jun-28	-	-	-	-	-0.001	3.159	-	-
Jul-28	-	-	-	-	-0.001	3.204	-	-
Aug-28	-	-	-	-	-0.001	3.244	-	-
Sep-28	-	-	-	-	-0.001	3.259	-	-
Oct-28	-	-	-	-	-0.001	3.314	-	-
Nov-28	-	-	-	-	-0.001	3.392	-	-
Dec-28	-	-	-	-	-0.001	3.550	-	-
Jan-29	-	-	-	-	-0.001	3.693	-	-
Feb-29	-	-	-	-	-0.001	3.658	-	-
Mar-29	-	-	-	-	-0.001	3.583	-	-
Apr-29	-	-	-	-	-0.001	3.228	-	-
May-29	-	-	-	-	-0.001	3.213	-	-
Jun-29	-	-	-	-	-0.001	3.248	-	-
Jul-29	-	-	-	-	-0.001	3.293	-	-
Aug-29	-	-	-	-	-0.001	3.333	-	-
Sep-29	-	-	-	-	-0.001	3.348	-	-
Oct-29	-	-	-	-	-0.001	3.403	-	-
Nov-29	-	-	-	-	-0.001	3.481	-	-

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

$$NPV_P = B_P - C_P$$

$B_P = \$$	1,440,856
$C_P =$	934,788
$NPV_P = \$$	506,068

Benefit-Cost Ratio **1.54**

Conclusion:

Since the net present value is greater than zero, the program will benefit the participants

Where:

- NPV_P = Net present value to all participants
- B_P = NPV of benefit to all participants
- C_P = NPV of cost to all participants

$$B_P = \sum_{t=1}^N \frac{BR_t + TC_t + INC_t}{(1+d)^{t-1}}$$

$$C_P = \sum_{t=1}^N \frac{PC_t + BI_t}{(1+d)^{t-1}}$$

- BR_t = Bill reductions in year t (not accounted for in participant cost test).
- BI_t = Bill increases in year t
- TC_t = Tax credits in year t
- INC_t = Incentives paid to the participant by the Utility
- PC_t = Participant costs in year t, which include incremental capital costs

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

$$B_p = \sum_{t=1}^N \frac{BR_t + TC_t + INC_t}{(1+d)^{t-1}}$$

t	BR _t	TC _t	INC _t	B _p
1	106,769	-	467,125	573,894
2	107,570	-	-	107,570
3	103,237	-	-	103,237
4	101,508	-	-	101,508
5	102,102	-	-	102,102
6	103,070	-	-	103,070
7	104,692	-	-	104,692
8	106,380	-	-	106,380
9	106,360	-	-	106,360
10	107,919	-	-	107,919
11	104,340	-	-	104,340
12	105,885	-	-	105,885
13	107,042	-	-	107,042
14	102,844	-	-	102,844
15	104,389	-	-	104,389
16	91,812	-	-	91,812
17	93,205	-	-	93,205
18	94,626	-	-	94,626
19	22,841	-	-	22,841
20	23,192	-	-	23,192
21	4,920	-	-	4,920
22	4,996	-	-	4,996
23	5,074	-	-	5,074
24	5,153	-	-	5,153
25	5,235	-	-	5,235
	1,925,161	-	467,125	2,392,286

7.730% Discount Rate

\$1,440,856 NPV

- BR_t = Bill reductions in year t
 TC_t = Tax credits in year t
 INC_t = Incentives paid to the participant by the Utility

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

BR_t = Bill reductions in year t

G-1 Residential

t	(1)	(2)	(3)	(4)	(1) x (4)
	Ccf Conserved	Projected Gas Cost*	Demand Charge	(2) + (3) Combined Rate	BR _t
1	140,974	\$ 0.491	\$ 0.1825	\$ 0.67	\$ 95,013
2	140,974	\$ 0.497	0.1825	0.68	95,726
3	140,974	\$ 0.469	0.1825	0.65	91,870
4	140,974	\$ 0.458	0.1825	0.64	90,331
5	140,974	\$ 0.462	0.1825	0.64	90,860
6	140,974	\$ 0.468	0.1825	0.65	91,721
7	140,974	\$ 0.478	0.1825	0.66	93,165
8	140,974	\$ 0.489	0.1825	0.67	94,667
9	140,974	\$ 0.500	0.1825	0.68	96,231
10	140,974	\$ 0.510	0.1825	0.69	97,641
11	140,974	\$ 0.520	0.1825	0.70	99,079
12	140,974	\$ 0.531	0.1825	0.71	100,546
13	140,974	\$ 0.541	0.1825	0.72	102,042
14	133,350	\$ 0.552	0.1825	0.73	97,968
15	133,350	\$ 0.563	0.1825	0.75	99,440
16	115,254	\$ 0.574	0.1825	0.76	87,245
17	115,254	\$ 0.586	0.1825	0.77	88,569
18	115,254	\$ 0.598	0.1825	0.78	89,919
19	28,034	\$ 0.610	0.1825	0.79	22,207
20	28,034	\$ 0.622	0.1825	0.80	22,548
21	6,023	\$ 0.634	0.1825	0.82	4,920
22	6,023	\$ 0.647	0.1825	0.83	4,996
23	6,023	\$ 0.660	0.1825	0.84	5,074
24	6,023	\$ 0.673	0.1825	0.86	5,153
25	6,023	\$ 0.687	0.1825	0.87	5,235
					\$ 1,772,166

G-1 Commercial

t	(1)	(2)	(3)	(4)	(1) x (4)
	Ccf Conserved	Projected Gas Cost*	Demand Charge	(2) + (3) Combined Rate	BR _t
1	17,443	\$ 0.491	\$ 0.1825	\$ 0.67	\$ 11,756
2	17,443	\$ 0.497	0.1825	0.68	11,844
3	17,443	\$ 0.469	0.1825	0.65	11,367
4	17,443	\$ 0.458	0.1825	0.64	11,177
5	17,443	\$ 0.462	0.1825	0.64	11,242
6	17,443	\$ 0.468	0.1825	0.65	11,349
7	17,443	\$ 0.478	0.1825	0.66	11,527
8	17,443	\$ 0.489	0.1825	0.67	11,713
9	14,839	\$ 0.500	0.1825	0.68	10,129
10	14,839	\$ 0.510	0.1825	0.69	10,278
11	7,486	\$ 0.520	0.1825	0.70	5,261
12	7,486	\$ 0.531	0.1825	0.71	5,339
13	6,907	\$ 0.541	0.1825	0.72	5,000
14	6,636	\$ 0.552	0.1825	0.73	4,876
15	6,636	\$ 0.563	0.1825	0.75	4,949
16	6,033	\$ 0.574	0.1825	0.76	4,567
17	6,033	\$ 0.586	0.1825	0.77	4,636
18	6,033	\$ 0.598	0.1825	0.78	4,707
19	800	\$ 0.610	0.1825	0.79	634
20	800	\$ 0.622	0.1825	0.80	644
21	-	\$ 0.634	0.1825	0.82	-
22	-	\$ 0.647	0.1825	0.83	-
23	-	\$ 0.660	0.1825	0.84	-
24	-	\$ 0.673	0.1825	0.86	-
25	-	\$ 0.687	0.1825	0.87	-
					\$ 152,995

(1) Total projected Ccf savings, based on budgeted participation levels in year one of the program.
 (2) Based on the Company's current G-1 GCA as well as NYMEX futures, converted to per ccf residential cost; where t = 1 = 2017
 (3) Volumetric charge for residential customers per Sheet No. 8 of the Company's tariff.

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Atmos Energy
 Demand Side Management (DSM) Program
 Participant Test

TC_t = Tax credits in year t (presently no federal tax credits are available in 2014)

	(1) Program Participants	(2) Residential Energy Credits	(1) x (2) TC_t
<u>A. High Efficiency Heating Savings</u>			
<u>B. High Efficiency Water Heating Savings</u>			
Total	-	\$	-

Note: participants are eligible for tax credits in the year they incur expenditures for high-efficiency appliances, since this is an analysis of participation in a single year, the tax credit is applicable only where $t = 1$

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy Demand Side Management (DSM) Program Participant Test

INC_t = Incentives paid to the participant by the Utility, for $t = 1$

<u>Energy Savings by Customer Class</u>	<u>INC_t</u>
G-1 Residential Customers	\$ 435,375
G-1 Commercial Customers	31,750
Total	\$ 467,125

Note: rebates are given to participant in the year they elect to participate, since this is an analysis of participation in a single year, the rebate is applicable only where $t = 1$

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**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

$$C_p = \sum_{t=1}^N \frac{PC_t + BI_t}{(1+d)^{t-1}}$$

t	(1) BI _t	(2) PC _t	(1) + (2) C _p
1	-	1,007,047	1,007,047
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-
	-	1,007,047	1,007,047

7.730% Discount Rate

\$934,788 NPV

BI_t = Bill increases in year t (not accounted for in participant cost test).

PC_t = Participant costs in year t, which include
incremental capital costs

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

PC_t = Participant costs for $t = 1$

	(1) Program Participants	(2) Incremental Cost	(1) x (2) PC_t
<u>A. High Efficiency Heating Savings</u>			
Furnace AFUE 90 - 93	235	\$ 654	\$ 153,744
Furnace AFUE 94 - 95	135	668	90,225
Furnace AFUE 96 or >	370	1,238	457,875
Boiler AFUE 85 -89	5	1,583	7,913
Programmable Thermostat	310	39	12,192
Total	1,055		721,949
<u>B. High Efficiency Water Heating Savings</u>			
Tank W/H .62 - .66 EF	335	\$ 38	\$ 12,730
Tank W/H .67 or > EF	55	347	19,103
Tankless W/H .82 - 90 EF	285	839	239,210
Total	675	\$	271,043
<u>C. High Efficiency Commercial Kitchen Equipment</u>			
Gas Fryer	5	\$ 468	\$ 2,340
Gas Griddle	5	121	605
Gas Oven	5	119	595
Gas Steamer	5	2,103	10,515
Total	20	\$	14,055

IC = Incremental Costs for purchasing high-efficiency unit

(1) Based on budgeted participation levels in year one of the CEP.

Atmos Energy
 Demand Side Management (DSM) Program
 Program Administrator Cost Test

$$NPV_{pa} = B_{pa} - C_{pa}$$

$B_{pa} =$	\$	738,460
$C_{pa} =$		739,982
$NPV_{pa} =$	\$	(1,522)

Benefit-Cost Ratio 1.00

Conclusion:

Since the net present value is greater than zero, the program would decrease costs to the utility

Where:

- NPV_{pa} = Net present value of total cost of the resource
- B_{pa} = NPV of benefits of the program
- C_{pa} = NPV of costs of the programs

$$B_{pa} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

$$C_{pa} = \sum_{t=1}^N \frac{PRC_t + INC_t + UIC_t}{(1+d)^{t-1}}$$

- UAC_t = Utility avoided supply costs in year t
- PRC_t = Program Administrator Costs in year t
- INC_t = Incentives paid to the participant by the Utility
- UIC_t = Utility increased supply costs in year t

The following calculations are based on the budgeted participation levels for year one of the program.

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**Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test**

$$B_{pa} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

(1)

<u>t</u>	<u>UAC_t</u>
1	\$ 77,859
2	\$ 78,659
3	\$ 74,326
4	\$ 72,597
5	\$ 73,192
6	\$ 74,158
7	\$ 75,781
8	\$ 77,470
9	\$ 77,924
10	\$ 79,483
11	\$ 77,246
12	\$ 78,791
13	\$ 80,054
14	\$ 77,295
15	\$ 78,842
16	\$ 69,677
17	\$ 71,070
18	\$ 72,492
19	\$ 17,578
20	\$ 17,930
21	\$ 3,820
22	\$ 3,897
23	\$ 3,975
24	\$ 4,054
25	\$ 4,135
	\$ 1,422,305

7.730% Discount Rate

\$738,460 NPV

(1) UAC_t scheduled per calculation performed for RIM test

UAC_t = Utility avoided supply costs in year t

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test**

$$C_{pa} = \sum_{t=1}^N \frac{PRC_t + INC_t + UIC_t}{(1+d)^{t-1}}$$

t	(1) PRC _t	(2) INC _t	(3) UIC _t	C _{pa}
1	330,058	467,125	-	797,183
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
	330,058	467,125	-	797,183

7.730% Discount Rate

\$739,982 NPV

- PRC_t = Program Administrator Costs in year t
 INC_t = Incentives paid to the participant by the Utility
 UIC_t = Utility increased supply costs in year t

- (1) Program costs scheduled from PRC_t which was calculated for the RIM Test
- (2) Incentives scheduled from INC_t which was calculated for the Participant test
- (3) No known increased supply costs as a result of operating the CEP

Atmos Energy
 Demand Side Management (DSM) Program
 Ratepayer Impact Measure (RIM) Test

$$NPV_{RIM} = B_{RIM} - C_{RIM}$$

$B_{RIM} = \$$	738,460
$C_{RIM} =$	1,747,231
$NPV_{RIM} = \$$	<u>(1,008,771)</u>

Benefit-Cost Ratio 0.42

Conclusion:

Since the net present value is negative, the program will cause an increase customer rates.

Where:

- NPV_{RIM} = Net present value levels
- B_{RIM} = Benefits to rate levels or customer bills
- C_{RIM} = Costs to rate levels or customer bills

$$B_{RIM} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

$$C_{RIM} = \sum_{t=1}^N \frac{UIC_t + RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$

- UAC_t = Utility avoided supply costs in year t
- UIC_t = Utility increased supply costs in year t
- RL_t = Revenue loss from reduced sales in year t
- PRC_t = Program administrator costs in year t
- INC_t = Incentives paid to the participant by the sponsoring utility in year t

The following calculations are based on the budgeted participation levels for year one of the program.

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Atmos Energy
 Demand Side Management (DSM) Program
 Ratepayer Impact Measure (RIM) Test

$$B_{RIM} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

t	UAC _t
1	77,859
2	78,659
3	74,326
4	72,597
5	73,192
6	74,158
7	75,781
8	77,470
9	77,924
10	79,483
11	77,246
12	78,791
13	80,054
14	77,295
15	78,842
16	69,677
17	71,070
18	72,492
19	17,578
20	17,930
21	3,820
22	3,897
23	3,975
24	4,054
25	4,135
	1,422,305

7.730% Discount Rate

\$738,460 NPV

UAC_t = Utility avoided supply costs in year t

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test**

UAC_t = Utility avoided supply costs in year t

t	G-1 Residential			G-1 Commercial			UAC_t
	Projected Gas Cost*	Annual Savings	Commodity Savings	Projected Gas Cost*	Annual Savings	Commodity Savings	
1	\$ 0.491	140,974	\$ 69,286	\$ 0.491	17,443	\$ 8,573	\$ 77,859
2	\$ 0.497	140,974	\$ 69,998	\$ 0.497	17,443	\$ 8,661	\$ 78,659
3	\$ 0.469	140,974	\$ 66,142	\$ 0.469	17,443	\$ 8,184	\$ 74,326
4	\$ 0.458	140,974	\$ 64,604	\$ 0.458	17,443	\$ 7,993	\$ 72,597
5	\$ 0.462	140,974	\$ 65,133	\$ 0.462	17,443	\$ 8,059	\$ 73,192
6	\$ 0.468	140,974	\$ 65,993	\$ 0.468	17,443	\$ 8,165	\$ 74,158
7	\$ 0.478	140,974	\$ 67,437	\$ 0.478	17,443	\$ 8,344	\$ 75,781
8	\$ 0.489	140,974	\$ 68,940	\$ 0.489	17,443	\$ 8,530	\$ 77,470
9	\$ 0.500	140,974	\$ 70,503	\$ 0.500	14,839	\$ 7,421	\$ 77,924
10	\$ 0.510	140,974	\$ 71,913	\$ 0.510	14,839	\$ 7,570	\$ 79,483
11	\$ 0.520	140,974	\$ 73,351	\$ 0.520	7,486	\$ 3,895	\$ 77,246
12	\$ 0.531	140,974	\$ 74,818	\$ 0.531	7,486	\$ 3,973	\$ 78,791
13	\$ 0.541	140,974	\$ 76,315	\$ 0.541	6,907	\$ 3,739	\$ 80,054
14	\$ 0.552	133,350	\$ 73,631	\$ 0.552	6,636	\$ 3,664	\$ 77,295
15	\$ 0.563	133,350	\$ 75,104	\$ 0.563	6,636	\$ 3,738	\$ 78,842
16	\$ 0.574	115,254	\$ 66,211	\$ 0.574	6,033	\$ 3,466	\$ 69,677
17	\$ 0.586	115,254	\$ 67,535	\$ 0.586	6,033	\$ 3,535	\$ 71,070
18	\$ 0.598	115,254	\$ 68,886	\$ 0.598	6,033	\$ 3,606	\$ 72,492
19	\$ 0.610	28,034	\$ 17,090	\$ 0.610	800	\$ 488	\$ 17,578
20	\$ 0.622	28,034	\$ 17,432	\$ 0.622	800	\$ 498	\$ 17,930
21	\$ 0.634	6,023	\$ 3,820	\$ 0.634	-	\$ -	\$ 3,820
22	\$ 0.647	6,023	\$ 3,897	\$ 0.647	-	\$ -	\$ 3,897
23	\$ 0.660	6,023	\$ 3,975	\$ 0.660	-	\$ -	\$ 3,975
24	\$ 0.673	6,023	\$ 4,054	\$ 0.673	-	\$ -	\$ 4,054
25	\$ 0.687	6,023	\$ 4,135	\$ 0.687	-	\$ -	\$ 4,135
Total Commodity Savings		\$ 1,310,203			\$ 112,102		\$ 1,422,305

- (1) Total projected Ccf savings, based on budgeted participation levels in year one of the program. These amounts continue to be saved year after year.
- (2) Based on Department of Energy 2011 "Annual Energy Outlook", converted to per ccf residential cost; where t = 1 = 2012

Note: the above analysis is based on the CCF conserved from a single year of participation in the CEP

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test**

$$C_{RIM} = \sum_{t=1}^N \frac{UIC_t + RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$

t	(1) UIC _t	(2) RL _t	(3) PRC _t	(4) INC _t	(1) + (2) C _{RIM}
1	-	106,769	330,058	467,125	903,952
2	-	107,570		-	107,570
3	-	103,237		-	103,237
4	-	101,508		-	101,508
5	-	102,102		-	102,102
6	-	103,070		-	103,070
7	-	104,692		-	104,692
8	-	106,380		-	106,380
9	-	106,360		-	106,360
10	-	107,919		-	107,919
11	-	104,340		-	104,340
12	-	105,885		-	105,885
13	-	107,042		-	107,042
14	-	102,844		-	102,844
15	-	104,389		-	104,389
16	-	91,812		-	91,812
17	-	93,205		-	93,205
18	-	94,626		-	94,626
19	-	22,841		-	22,841
20	-	23,192		-	23,192
21	-	4,920		-	4,920
22	-	4,996		-	4,996
23	-	5,074		-	5,074
24	-	5,153		-	5,153
25	-	5,235		-	5,235
	-	1,925,161	330,058	467,125	2,722,344

7.730% Discount Rate

\$1,747,231 NPV

- UIC_t = Utility increased supply costs in year t
- RL_t = Revenue loss from reduced sales in year t
- PRC_t = Program administrator costs in year t
- INC_t = Incentives paid to the participant by the sponsoring utility in year t

- (1) No known increased supply costs
- (2) see RIM Test RG; column (2)
- (3) see RIM Test RG; column (3)
- (4) Scheduled per calculation performed for Participant Test

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$NPV_{TRC} = B_{TRC} - C_{TRC}$$

$$\begin{array}{rcl} B_{TRC} & = & \$ \quad 738,460 \\ C_{TRC} & = & 1,241,164 \\ \hline NPV_{TRC} & = & \$ \quad (502,704) \end{array}$$

Benefit-Cost Ratio 0.59

Conclusion:

Since the net present value is greater than zero, the program is a less expensive resource than the supply option upon which the marginal costs are based.

Where:

NPV_{TRC} = Net present value of total cost of the resource

B_{TRC} = NPV of benefits of the program

C_{TRC} = NPV of costs of the programs

$$B_{TRC} = \sum_{t=1}^N \frac{UAC_t + TC_t}{(1+d)^{t-1}}$$

$$C_{TRC} = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

UAC_t = Utility avoided supply costs in year t

TC_t = Tax credits in year t

UIC_t = Utility increased supply costs in year t

PRC_t = Program administrator costs in year t

PCN_t = Net participant costs

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$B_{TRC} = \sum_{t=1}^N \frac{UAC_t + TC_t}{(1+d)^{t-1}}$$

t	(1) UAC _t	(2) TC _t	B _{TRC}
1	\$ 77,859	-	\$ 77,859
2	78,659	-	78,659
3	74,326	-	74,326
4	72,597	-	72,597
5	73,192	-	73,192
6	74,158	-	74,158
7	75,781	-	75,781
8	77,470	-	77,470
9	77,924	-	77,924
10	79,483	-	79,483
11	77,246	-	77,246
12	78,791	-	78,791
13	80,054	-	80,054
14	77,295	-	77,295
15	78,842	-	78,842
16	69,677	-	69,677
17	71,070	-	71,070
18	72,492	-	72,492
19	17,578	-	17,578
20	17,930	-	17,930
21	3,820	-	3,820
22	3,897	-	3,897
23	3,975	-	3,975
24	4,054	-	4,054
25	4,135	-	4,135
	\$ 1,422,305	-	\$ 1,422,305

7.730% Discount Rate

\$738,460 NPV

UAC_t = Utility avoided supply costs in year t

TC_t = Tax Credits in year t

- (1) Scheduled per calculation performed for RIM Test
- (2) Scheduled per calculation performed for Participant Test

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test**

$$C_{TRC} = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

t	(1) PRC _t	(2) PCN _t	(3) UIC _t	C _{TRC}
1	330,058	1,007,047	-	1,337,105
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
	330,058	1,007,047	-	1,337,105

7.730% Discount Rate

\$1,241,164 NPV

- PRC_t = Program administrator costs in year t
 PCN_t = Net participant costs
 UIC_t = Utility increased supply costs in year t

- (1) Scheduled per calculation performed for RIM Test
- (2) Represents net participant costs which is the incremental cost to the participant of purchasing a high-efficiency appliance versus one with standard efficiency. Amount scheduled from PC_t from the Participant Test.
- (3) No known increased supply costs as a result of operating the CEP

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Atmos Energy's Demand Side Management Application October 2017

Program Summary

		Year 1	
Total DSM Cost for recovery	California Tests	G-1 Residential	G-1 Commercial
		\$ 189,804	\$ (63,178)
Program Costs	<u>DCRC</u>	\$ 180,000	\$ -
Lost Sales	<u>DLSA</u>	\$ 1,099	\$ -
Program Incentive	<u>DIA</u>	\$ (21,900)	\$ -
Program Balancing Adjustment	<u>DBA</u>	\$ 30,605	\$ (63,178)
Annual Average Recovery Cost per Customer	<u>DSMRC</u>	\$ 1.20	\$ (3.63)

<u>Benefit/ Cost Ratio</u>	
<u>Participant Test</u>	#DIV/0!
<u>Program Admin Test</u>	0.20
<u>Ratepayer Impact Test (RIM)</u>	0.16
<u>Total Resource Cost Test (TRC)</u>	0.20

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Atmos Energy Variable Data

1.	# Kentucky Residential Customers	158,221		
2.	Residential Sales Volumes (Ccf)	109,894,930		
1a.	# Kentucky Commercial Customers	17,416		
2a.	Commercial Sales Volumes (Ccf)	48,854,530		
3.	Estimated Participants	Total	Residential	Commercial
a)	Furnace AFUE 90 - 93	-	0	0
b)	Furnace AFUE 94 - 95	-	0	0
c)	Furnace AFUE 96 or >	-	0	0
d)	Boiler AFUE 85 -89	-	0	0
f)	Tank Water Heater EF .62 - .66	-	0	0
g)	Tank Water Heater EF .67 or >	-	0	0
h)	Tankless/Condensing Water Heater EF >.82	-	0	0
k)	Programmable Thermostat (manual)	-	0	0
l)	Weatherization	60	60	0
m)	Commercial Fryer	-	0	0
n)	Commercial Griddle	-	0	0
o)	Commercial Oven	-	0	0
p)	Commercial Steamer	-	0	0
4.	Atmos Distribution Charge \$	0.183		
5.	Average Heat use (ccf) per customer	361.00		
6.	Average water heating use (ccf) per customer	148.00		
7.	Proposed Rebates			
	Furnace AFUE 90 - \$	250		
	Furnace AFUE 94 - \$	325		
	Furnace AFUE 96 or > \$	400		
	Boiler AFUE > 85 \$	250		
	Tank Water Heater \$	200		
	Tank Water Heater \$	300		
	Tankless/Condensing \$	400		
	Programmable Thermostat \$	25		
	Commercial Fryer \$	500		
	Commercial Griddle \$	500		
	Commercial Oven \$	500		
	Commercial Steamer \$	500		
8.	Weatherization Program \$	3,000		
9.	Incremental Cost of 90-93 AFUE furnace \$	654		
	Incremental Cost of 94-95 AFUE furnace \$	668		
	Incremental Cost of 96 or > AFUE furnace \$	1,238		
	Incremental Cost of 85-89 AFUE boiler \$	1,583		
	Incremental Cost of Programmable Thermostat \$	39		
	Incremental Cost of .62 EF tank W/H \$	38		
	Incremental Cost of .67 EF tank W/H \$	347		
	Incremental Cost of .82-.90 EF tankless W/H \$	839		
	Incremental Cost for Gas Fryer \$	468		
	Incremental Cost for Gas Griddle \$	121		
	Incremental Cost for Gas Oven \$	119		
	Incremental Cost for Gas Steamer \$	2,103		
10.	Discount Rate	7.73%		

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Deemed Savings for Measures**

Measure	Efficiency Level	Kentucky	
		Savings (CCF)	Savings (Therm)
Forced Air Furnace	92% AFUE	109.5	113.6
Forced Air Furnace	94% AFUE	122.6	127.1
Forced Air Furnace	96% AFUE	135.0	140.0
Boiler	85% AFUE	42.3	43.9
Boiler	90% AFUE	79.9	82.9
Tank Water Heater	0.62 EF or greater	17.6	18.2
Tank Water Heater	0.67 EF or greater	36.6	38.0
Tankless Water Heater	0.82 - .90 EF	80.0	83.0
Tankless Water Heater	0.91 EF or greater	99.1	102.8
Condensing Water Heater	0.90 EF or greater	68.5	71.0
Programmable Thermostat	Manual	60.3	62.6
Weatherization	30% Savings	100.4	109.4
Fryer	EnergyStar	520.7	540.0
Griddle	EnergyStar	115.7	120.0
Oven	EnergyStar	217.0	225.0
Steamer	EnergyStar	1253.6	1,300.0

<https://portfoliomanager.energystar.gov/pdf/reference/Thermal%20Conversions.pdf?2b52-b268>

August of 2015 Report shows 1.026 factor

https://www.eia.gov/totalenergy/data/monthly/pdf/sec13_4.pdf

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Billing Factor Calculation

Program Begins: May 1, 2018
Program Year End: December 31, 2018
Rate Effective: May 1, 2018

DCRC = DSM Cost Recovery-Current

Program Costs	G-1 Residential	G-1 Commercial
Rebates	\$ -	\$ -
Program Costs (Weatherization & Education)	\$ 180,000	\$ -
Customer Awareness	\$ -	\$ -
Program Administration	\$ -	\$ -
Supplies	\$ -	\$ -
Program Overhead	\$ -	\$ -
TOTAL DCRC	\$ 180,000	\$ -
Excluding Rebates	\$ 180,000	\$ -

DLSA = DSM Lost Sales Adjustment

Current Year Program Participation (Schedule A)

Rate	# of Participants	CCF Conserved	Distribution Charge	Lost Sales
G-1 Residential Customers	60	6,023	\$ 0.1825	\$ 1,099
G-1 Commercial Customers	-	-	\$ 0.1825	\$ -
Total Current Year Lost Sales	60	6,023		\$ 1,099
Cumulative Prior Years Participation (Schedule B)	-	0	\$ 0.1825	\$ -
TOTAL DLSA	60	6,023		\$ 1,100

DIA = DSM Incentive Adjustment

	G-1 Residential	G-1 Commercial
Program Benefits (Schedule C)	\$ 34,225	\$ -
Less: Program Costs	\$ (180,000)	\$ -
Net Resource Savings	\$ (145,775)	\$ -
Incentive Percentage	15%	15%
DIA	\$ (21,900)	\$ -

DBA = DSM Balance Adjustment

	G-1 Residential	Balancing Adjustment	G-1 Commercial	Balancing Adjustment
	Under/(Over) Recovery	Estimated Residential Sales	Under/(Over) Recovery	Estimated Commercial Sales
\$	30,605.45	109,894,930	(63,177.88)	48,854,530
				\$ (0.00129)

DSMRC = DSM Cost Recovery Component

G-1 Residential				
Estimated Residential Sales		109,894,930	Ccf	
Estimated Residential Customers		158,221		
	Recovery Amount	Rate, per Ccf	Rate, per Mcf	
DCRC	\$ 180,000	\$ 0.0016	\$ 0.0160	
DLSA	\$ 1,099	\$ -	\$ -	
DIA	\$ (21,900)	\$ (0.0002)	\$ (0.0020)	
DBA	\$ 30,605	\$ 0.0003	\$ 0.0028	
TOTAL DSMRC	\$ 189,804	\$ 0.00168	\$ 0.0168	

Annual Cost Recovery per G-1 Residential Customers \$ 1.20

G-1 Commercial				
Estimated Commercial Sales		48,854,530	Ccf	
Estimated Commercial Customers		17,416		
	Recovery Amount	Rate, per Ccf	Rate, per Mcf	
DCRC	\$ -	\$ -	\$ -	
DLSA	\$ -	\$ -	\$ -	
DIA	\$ -	\$ -	\$ -	
DBA	\$ (63,178)	\$ (0.0013)	\$ (0.0129)	
TOTAL DSMRC	\$ (63,178)	\$ (0.0013)	\$ (0.0129)	

Annual Cost Recovery per G-1 Commercial Customers \$ (3.63)

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Schedule A - Current Year Participation Detail

Program Year End: December 31, 2018

G-1 Residential Efficiency Heating Savings	Program	CCF Conservation		Rebate		Measure	
		Participants	Per Participant	Total	Amount	Total	Life
Furnace AFUE 92 - 93	-	109.55	-	\$ 250	\$ -	18	DEER
Furnace AFUE 94 - 95	-	122.57	-	\$ 325	\$ -	18	DEER
Furnace AFUE 96 or >	-	135.00	-	\$ 400	\$ -	18	DEER
Boiler AFUE > 85	-	42.33	-	\$ 250	\$ -	18	DEER
Programmable Thermostat	-	60.32	-	\$ 25	\$ -	15	DEER
Totals	-	NA	-	NA	\$ -		

G-1 Commercial Efficiency Heating Savings	Program	CCF Conservation		Rebate		Measure	
		Participants	Per Participant	Total	Amount	Total	Life
Furnace AFUE 92 - 93	-	109.55	-	\$ 250	\$ -	18	DEER
Furnace AFUE 94 - 95	-	122.57	-	\$ 325	\$ -	18	DEER
Furnace AFUE 96 or >	-	135.00	-	\$ 400	\$ -	18	DEER
Boiler AFUE > 85	-	42.33	-	\$ 250	\$ -	18	DEER
Programmable Thermostat	-	60.32	-	\$ 25	\$ -	15	DEER
Totals	-	NA	-	NA	\$ -		

G-1 Residential Water Heating Savings	Program	CCF Conservation		Rebate		Measure	
		Participants	Per Participant	Total	Amount	Total	Life
Tank Water Heater EF .62 - .66	-	17.55	-	\$ 200	\$ -	13	DEER
Tank Water Heater EF .67 or >	-	36.64	-	\$ 300	\$ -	13	DEER
Tankless/Condensing Water Heater EF >.82	-	80.04	-	\$ 400	\$ -	20	DEER
Totals	-	NA	-	NA	\$ -		

G-1 Commercial Water Heating Savings	Program	CCF Conservation		Rebate		Measure	
		Participants	Per Participant	Total	Amount	Total	Life
Tank Water Heater EF .62 - .66	-	17.55	-	\$ 200	\$ -	13	DEER
Tank Water Heater EF .67 or >	-	36.64	-	\$ 300	\$ -	13	DEER
Tankless/Condensing Water Heater EF >.82	-	80.04	-	\$ 400	\$ -	20	DEER
Totals	-	NA	-	NA	\$ -		

G-1 Commercial Cooking Equipment Savings:	Program	CCF Conservation		Rebate		Measure	
		Participants	Per Participant	Total	Amount	Total	Life
Fryer EnergyStar Rated	-	520.73	-	\$ 500	\$ -	8	Energy Star
Griddle EnergyStar Rated	-	115.72	-	\$ 500	\$ -	12	Energy Star
Oven EnergyStar Rated	-	216.97	-	\$ 500	\$ -	10	NEEP
Steamer EnergyStar Rated	0	1,253.62	-	\$ 500	\$ -	10	Energy Star
Totals	-	NA	-	NA	\$ -		

Weatherization	Program	CCF Conservation		Rebate		Measure		
		Participants	Per Participant	Total	Amount	Total	Life	Source
		60	100.3875	6,023	\$ 3,000	\$ 180,000	25	DEER

Education Program	Program	CCF Conservation		Rebate		Measure		
		Participants	Per Participant	Total	Amount	Total	Life	Source
					\$ -			

Totals by Customer Class	Program	CCF Conservation		Rebate		Measure		
		Participants	Per Participant	Total	Amount	Total	Life	Source
G-1 Residential Totals		60	Varies see above	6,023	Varies see above	\$ 180,000		
G-1 Commercial Totals		-	Varies see above	-	Varies see above	\$ -		

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Annual Savings

SAVINGS

Year	G-1 Res. Heating	G-1 Comm. Heating	G-1 Res. Water	G-1 Comm. Water	G-1 Comm. Cooking Equipment	Weather-ization	Res. Total	Comm. Total	Total
1	-	-	-	-	-	6,023	6,023	-	6,023
2	-	-	-	-	-	6,023	6,023	-	6,023
3	-	-	-	-	-	6,023	6,023	-	6,023
4	-	-	-	-	-	6,023	6,023	-	6,023
5	-	-	-	-	-	6,023	6,023	-	6,023
6	-	-	-	-	-	6,023	6,023	-	6,023
7	-	-	-	-	-	6,023	6,023	-	6,023
8	-	-	-	-	-	6,023	6,023	-	6,023
9	-	-	-	-	-	6,023	6,023	-	6,023
10	-	-	-	-	-	6,023	6,023	-	6,023
11	-	-	-	-	-	6,023	6,023	-	6,023
12	-	-	-	-	-	6,023	6,023	-	6,023
13	-	-	-	-	-	6,023	6,023	-	6,023
14	-	-	-	-	-	6,023	6,023	-	6,023
15	-	-	-	-	-	6,023	6,023	-	6,023
16	-	-	-	-	-	6,023	6,023	-	6,023
17	-	-	-	-	-	6,023	6,023	-	6,023
18	-	-	-	-	-	6,023	6,023	-	6,023
19	-	-	-	-	-	6,023	6,023	-	6,023
20	-	-	-	-	-	6,023	6,023	-	6,023
21	-	-	-	-	-	6,023	6,023	-	6,023
22	-	-	-	-	-	6,023	6,023	-	6,023
23	-	-	-	-	-	6,023	6,023	-	6,023
24	-	-	-	-	-	6,023	6,023	-	6,023
25	-	-	-	-	-	6,023	6,023	-	6,023

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Energy Federation, Inc. Administrative Costs**

EFI Budget Estimates for Administration of Kentucky DSM Appliance Rebate Program

Annual Budget

	Unit Cost	Residential Costs	Commercial Costs	Total Cost
Estimated Rebates		0	0	
Processing fee	\$ 9.00	\$ -	\$ -	\$ -
"Cost of Money" Charge	1%	\$ -	\$ -	\$ -
Reservation Fee	\$ 4.00	\$ -	\$ -	\$ -
Customer e-mails (EFI to cust.)	\$ 2.50	\$ -	\$ -	\$ -
Customer Service Phone Chg.(hours)	\$ 39.00	\$ -	\$ -	\$ -
Program Management fee	\$ -	\$ -	\$ -	\$ -
Totals		\$ -	\$ -	\$ -

Atmos Energy
Demand Side Management (DSM) Program
DSM APPLIANCE INFORMATION

FURNACES					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 90% Efficiency	Incremental Cost
Bowling Green	York	2,000 sq. ft.	\$ 1,950	\$ 2,467	\$ 517
Bowling Green	Amana	2,000 sq. ft.	\$ 1,000	\$ 1,570	\$ 570
Bowling Green	Trane	2,000 sq. ft.	\$ 1,450	\$ 1,700	\$ 250
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 2,500	\$ 1,100
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Owensboro	York	2,000 sq. ft.	\$ 725	\$ 1,050	\$ 325
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,250	\$ 550
Average Incremental Cost					\$ 602

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 92% Efficiency	Incremental Cost
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 2,200	\$ 800
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Bowling Green	Amana	2,000 sq. ft.	\$ 1,000	\$ 2,026	\$ 1,026
Bowling Green	York	2,000 sq. ft.	\$ 1,950	\$ 2,467	\$ 517
Owensboro	Heil	2,000 sq. ft.	\$ 750	\$ 1,200	\$ 450
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,300	\$ 600
Average Incremental Cost					\$ 716
Average Incremental Cost 90-92 AFUE					\$ 654

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 94% Efficiency	Incremental Cost
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,380	\$ 680
Owensboro	York	2,000 sq. ft.	\$ 725	\$ 1,150	\$ 425
Average Incremental Cost					\$ 668

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 96% Efficiency	Incremental Cost
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 3,200	\$ 1,800
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 3,600	\$ 2,000
Owensboro	York	2,000 sq. ft.	\$ 700	\$ 1,200	\$ 500
Owensboro	Heil	2,000 sq. ft.	\$ 750	\$ 1,400	\$ 650
Average Incremental Cost					\$ 1,238

Boilers					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 85% Efficiency	Incremental Cost
Owensboro	A.O. Smith	2,000 sq. ft.	\$ 8,150	\$ 9,865	\$ 1,715
Danville	Loclar	2,000 sq. ft.	\$ 7,950	\$ 9,400	\$ 1,450
Average Incremental Cost					\$ 1,583

WATER HEATERS - TANK TYPE					
Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 62% Efficiency	Incremental Cost
2011 ASHRAE Winter Conference					\$ 38
Average Incremental Cost					\$ 38

Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 67% Efficiency	Incremental Cost
Lowe's	A.O. Smith	50 gallon	\$ 409	\$ 656	\$ 247
Home Depot	Rheem	40 gallon	\$ 400	\$ 639	\$ 239
Lowe's	State	40 gallon	\$ 379	\$ 935	\$ 556
Average Incremental Cost					\$ 347

WATER HEATERS - TANKLESS					
Contractor Location	Brand Comparison	Unit Sizing	58% Eff Tank Type	82% Eff. Tankless	Incremental Cost
Owensboro	Rinnai	180,000 Btu	\$ 404	\$ 1,000	\$ 596
Paducah	Navian	199,000 Btu	\$ 350	\$ 1,136	\$ 786
Bowling Green	Rinnai	199,000 Btu	\$ 409	\$ 1,210	\$ 801
Bowling Green	A.O. Smith	199,000 Btu	\$ 409	\$ 1,331	\$ 922
Owensboro	Navian	199,000 Btu	\$ 429	\$ 1,150	\$ 721
Paducah	Rheem	199,000 Btu	\$ 390	\$ 1,300	\$ 1,210
Average Incremental Cost					\$ 839

COMMERCIAL GAS EQUIPMENT					
Taken from Savings Calculator for EnergyStar Equipment developed by U.S. EPA & DOE					
Gas Fryer					\$ 468
Gas Griddle					\$ 121
Gas Oven					\$ 119
Gas Steamer					\$ 2,103
Average Incremental Cost					\$ 703

THERMOSTATS					
Contractor Location	Brand Comparison	Model Number	Non-Programmable	Programmable	Incremental Cost
Lowe's	Honeywell	RTH6350D1000	\$ 40	\$ 60	\$ 20
Lowe's	Lux	TX9600TS	\$ 40	\$ 68	\$ 28
Lowe's	Iris	CT-101-L	\$ 40	\$ 99	\$ 59
Lowe's	Honeywell	RTH7600D1048	\$ 40	\$ 89	\$ 49
Average Incremental Cost					\$ 39

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Schedule B - Cumulative Prior Years Program Participation

Program Year End: December 31, 2018

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Cumulative Total
Program Participants											
<u>A. High Efficiency Appliances</u>	0	0	0	0	-	0	0	0			-
<u>B. Weatherization Program</u>	0	0	0	0	0	0	0	0			-
Total Participants	0	0	0	0	0	0	0	0			-
 Total Conservation in Ccf											
<u>A. High Efficiency Appliance Savings</u>	0	0	0	0	0	0	0	0			-
<u>B. Weatherization Program</u>	0	0	0	0	0	0	0	0			-
Total Ccf Savings	0	0	0	0	0	0	0	0			-
 Total Lost Sales	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -

Atmos Energy's Demand Side Management Application October 2017

Daily Settlements for Henry Hub Natural Gas Futures (PRELIMINARY) Trade Date: 10/24/2017

http://www.cmegroup.com/trading/energy/natural-gas/natural-gas_quotes_settlements_futures.html

Month	Open	High	Low	Last	Change	Settle	Estimated Volume	Prior Day Open Interest
Nov-17	2.971	3.004	2.960	2.988	(0.017)	2.974	114,500	46,837
Dec-17	3.139	3.165	3.117	3.148	(0.021)	3.135	105,230	267,776
Jan-18	3.258	3.285	3.243	3.268	(0.023)	3.257	44,476	201,511
Feb-18	3.260	3.287	3.246	3.27	(0.024)	3.260	16,371	82,361
Mar-18	3.218	3.243	3.201	3.227	(0.024)	3.216	33,907	174,362
Apr-18	2.979	2.995	2.975	2.992	(0.003)	2.989	29,734	126,898
May-18	2.960	2.970	2.950	2.964	(0.002)	2.964	10,912	77,441
Jun-18	2.990	2.997	2.978	2.991	(0.002)	2.992	805	32,520
Jul-18	3.017	3.024	3.006	3.02	(0.002)	3.020	3,064	41,447
Aug-18	3.019	3.026	3.008	3.018	(0.002)	3.021	2,014	31,390
Sep-18	3.000	3.007	2.990	3.002	(0.003)	3.002	1,963	33,363
Oct-18	3.023	3.030	3.012	3.026	(0.002)	3.025	7,560	69,251
Nov-18	3.075	3.077	3.061	3.077	(0.003)	3.077	1,053	28,248
Dec-18	3.204	3.212	3.195	3.204	(0.003)	3.208	1,393	28,455
Jan-19	3.285	3.291	3.271	3.286	(0.003)	3.287	2,524	27,263
Feb-19	3.241	3.249	3.240	3.249	(0.002)	3.255	423	8,269
Mar-19	3.168	3.179	3.161	3.177	-	3.178	1,371	21,240
Apr-19	2.783	2.791	2.772	2.787	0.004	2.790	2,240	16,350
May-19	2.734	2.735	2.734	2.735	0.003	2.742	765	5,002
Jun-19	2.756	2.756	2.756	2.756	0.002	2.763	196	4,073
Jul-19	2.778	2.784	2.778	2.784	0.002	2.785	84	3,786
Aug-19	2.771	2.775	2.771	2.775	0.002	2.785	20	2,673
Sep-19	2.755	2.765	2.755	2.765	0.002	2.768	23	2,485
Oct-19	2.792	2.792	2.776	2.790	-	2.790	513	4,131
Nov-19	-	-	-	0.000	(0.001)	2.850	5	2,664
Dec-19	-	-	-	0.000	(0.001)	2.998	2	2,693
Jan-20	-	-	-	-	(0.001)	3.099	52	1,470
Feb-20	-	-	-	-	-	3.076	-	589
Mar-20	-	-	-	-	0.002	3.022	61	858
Apr-20	-	-	-	0.000	(0.001)	2.714	61	1,017
May-20	-	-	-	0.000	(0.001)	2.689	9	627
Jun-20	-	-	-	0.000	(0.001)	2.712	9	560
Jul-20	-	-	-	0.000	(0.001)	2.738	-	505
Aug-20	0	0	0	0.000	(0.001)	2.750	-	468
Sep-20	0	0	0	0.000	(0.001)	2.750	-	469
Oct-20	-	-	-	-	(0.001)	2.776	-	517
Nov-20	-	-	-	-	(0.001)	2.849	-	501
Dec-20	-	-	-	-	(0.003)	3.002	-	780
Jan-21	3.11	3.11	3.11	3.105	(0.004)	3.114	5	265
Feb-21	-	-	-	-	(0.006)	3.091	-	186
Mar-21	-	-	-	-	-0.006	3.037	-	187
Apr-21	-	-	-	-	-0.009	2.739	-	116
May-21	-	-	-	-	-0.009	2.714	-	102
Jun-21	-	-	-	-	-0.009	2.737	-	89
Jul-21	-	-	-	-	-0.009	2.761	-	89
Aug-21	-	-	-	-	-0.009	2.777	-	92
Sep-21	-	-	2.77	2.771	-0.009	2.777	-	100
Oct-21	-	-	-	-	-0.009	2.803	-	73
Nov-21	-	-	-	-	-0.009	2.877	-	72

Atmos Energy's Demand Side Management Application October 2017

Dec-21	-	-	-	-	-0.009	3.030	0	100
Jan-22	-	-	-	-	0.000	3.142	-	18
Feb-22	-	-	-	-	-0.001	3.119	-	22
Mar-22	-	-	-	-	-0.001	3.063	-	19
Apr-22	-	-	-	-	-0.001	2.768	-	14
May-22	4.22	4.22	4.22	-	-0.001	2.750	0	20
Jun-22	-	-	-	-	-0.001	2.775	-	14
Jul-22	-	-	-	-	-0.001	2.802	-	15
Aug-22	-	-	-	-	-0.001	2.822	-	15
Sep-22	-	-	-	-	-0.001	2.822	-	14
Oct-22	-	-	-	-	-0.001	2.848	-	14
Nov-22	-	-	-	-	-0.001	2.923	-	14
Dec-22	-	-	-	-	-0.001	3.078	-	19
Jan-23	-	-	-	-	-0.001	3.201	-	4
Feb-23	-	-	-	-	-0.001	3.178	-	1
Mar-23	-	-	-	-	-0.001	3.121	-	12
Apr-23	-	-	-	-	-0.001	2.829	-	12
May-23	-	-	-	-	-0.001	2.811	-	19
Jun-23	-	-	-	-	-0.001	2.836	-	12
Jul-23	-	-	-	-	-0.001	2.863	-	12
Aug-23	-	-	-	-	-0.001	2.886	-	23
Sep-23	-	-	-	-	-0.001	2.889	-	1
Oct-23	-	-	-	-	-0.001	2.919	-	16
Nov-23	-	-	-	-	-0.001	2.994	-	12
Dec-23	-	-	-	-	-0.001	3.149	-	1
Jan-24	-	-	-	-	-0.001	3.272	-	0
Feb-24	-	-	-	-	-0.001	3.246	-	0
Mar-24	-	-	-	-	-0.001	3.184	-	0
Apr-24	-	-	-	-	-0.001	2.892	-	0
May-24	-	-	-	-	-0.001	2.874	-	2
Jun-24	-	-	-	-	-0.001	2.900	-	0
Jul-24	-	-	-	-	-0.001	2.928	-	0
Aug-24	-	-	-	-	-0.001	2.951	-	0
Sep-24	-	-	-	-	-0.001	2.955	-	0
Oct-24	-	-	-	-	-0.001	2.988	-	0
Nov-24	-	-	-	-	-0.001	3.063	-	0
Dec-24	-	-	-	-	-0.001	3.218	-	0
Jan-25	-	-	-	-	-0.001	3.341	-	0
Feb-25	-	-	-	-	-0.001	3.312	-	0
Mar-25	-	-	-	-	-0.001	3.247	-	0
Apr-25	-	-	-	-	-0.001	2.955	-	-
May-25	-	-	-	-	-0.001	2.937	-	1
Jun-25	-	-	-	-	-0.001	2.965	-	-
Jul-25	-	-	-	-	-0.001	2.995	-	0
Aug-25	-	-	-	-	-0.001	3.024	-	0
Sep-25	-	-	-	-	-0.001	3.028	-	-
Oct-25	-	-	-	-	-0.001	3.063	-	-
Nov-25	-	-	-	-	-0.001	3.138	-	-
Dec-25	-	-	-	-	-0.001	3.293	-	-
Jan-26	-	-	-	-	-0.001	3.416	-	-
Feb-26	-	-	-	-	-0.001	3.383	-	-
Mar-26	-	-	-	-	-0.001	3.311	-	0
Apr-26	-	-	-	-	-0.001	3.008	-	-
May-26	-	-	-	-	-0.001	2.990	-	-
Jun-26	-	-	-	-	-0.001	3.023	-	-

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Jul-26	-	-	-	-	-0.001	3.063	-	-
Aug-26	-	-	-	-	-0.001	3.101	-	-
Sep-26	-	-	-	-	-0.001	3.111	-	-
Oct-26	-	-	-	-	-0.001	3.156	-	-
Nov-26	-	-	-	-	-0.001	3.232	-	-
Dec-26	-	-	-	-	-0.001	3.389	-	-
Jan-27	-	-	-	-	-0.001	3.524	-	-
Feb-27	-	-	-	-	-0.001	3.489	-	-
Mar-27	-	-	-	-	-0.001	3.414	-	-
Apr-27	-	-	-	-	-0.001	3.099	-	-
May-27	-	-	-	-	-0.001	3.074	-	-
Jun-27	-	-	-	-	-0.001	3.099	-	-
Jul-27	-	-	-	-	-0.001	3.128	-	-
Aug-27	-	-	-	-	-0.001	3.156	-	-
Sep-27	-	-	-	-	-0.001	3.166	-	-
Oct-27	-	-	-	-	-0.001	3.206	-	-
Nov-27	-	-	-	-	-0.001	3.282	-	-
Dec-27	-	-	-	-	-0.001	3.439	-	-
Jan-28	-	-	-	-	-0.001	3.579	-	-
Feb-28	-	-	-	-	-0.001	3.544	-	-
Mar-28	-	-	-	-	-0.001	3.469	-	-
Apr-28	-	-	-	-	-0.001	3.139	-	-
May-28	-	-	-	-	-0.001	3.124	-	-
Jun-28	-	-	-	-	-0.001	3.159	-	-
Jul-28	-	-	-	-	-0.001	3.204	-	-
Aug-28	-	-	-	-	-0.001	3.244	-	-
Sep-28	-	-	-	-	-0.001	3.259	-	-
Oct-28	-	-	-	-	-0.001	3.314	-	-
Nov-28	-	-	-	-	-0.001	3.392	-	-
Dec-28	-	-	-	-	-0.001	3.550	-	-
Jan-29	-	-	-	-	-0.001	3.693	-	-
Feb-29	-	-	-	-	-0.001	3.658	-	-
Mar-29	-	-	-	-	-0.001	3.583	-	-
Apr-29	-	-	-	-	-0.001	3.228	-	-
May-29	-	-	-	-	-0.001	3.213	-	-
Jun-29	-	-	-	-	-0.001	3.248	-	-
Jul-29	-	-	-	-	-0.001	3.293	-	-
Aug-29	-	-	-	-	-0.001	3.333	-	-
Sep-29	-	-	-	-	-0.001	3.348	-	-
Oct-29	-	-	-	-	-0.001	3.403	-	-
Nov-29	-	-	-	-	-0.001	3.481	-	-

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy Demand Side Management (DSM) Program Participant Test

$$NPV_P = B_P - C_P$$

$B_P = \$$	46,235
$C_P =$	-
$NPV_P = \\$	46,235

Benefit-Cost Ratio #DIV/0!

Conclusion:

Since the net present value is greater than zero, the program will benefit the participants

Where:

NPV_P = Net present value to all participants

B_P = NPV of benefit to all participants

C_P = NPV of cost to all participants

$$B_P = \sum_{t=1}^N \frac{BR_t + TC_t + INC_t}{(1+d)^{t-1}}$$

$$C_P = \sum_{t=1}^N \frac{PC_t + BI_t}{(1+d)^{t-1}}$$

BR_t = Bill reductions in year t (not accounted for in participant cost test).

BI_t = Bill increases in year t

TC_t = Tax credits in year t

INC_t = Incentives paid to the participant by the Utility

PC_t = Participant costs in year t, which include
incremental capital costs

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

$$B_p = \sum_{t=1}^N \frac{BR_t + TC_t + INC_t}{(1+d)^{t-1}}$$

t	BR _t	TC _t	INC _t	B _p
1	4,060	-	-	4,060
2	4,090	-	-	4,090
3	3,925	-	-	3,925
4	3,859	-	-	3,859
5	3,882	-	-	3,882
6	3,919	-	-	3,919
7	3,981	-	-	3,981
8	4,045	-	-	4,045
9	4,112	-	-	4,112
10	4,172	-	-	4,172
11	4,233	-	-	4,233
12	4,296	-	-	4,296
13	4,360	-	-	4,360
14	4,425	-	-	4,425
15	4,492	-	-	4,492
16	4,559	-	-	4,559
17	4,629	-	-	4,629
18	4,699	-	-	4,699
19	4,771	-	-	4,771
20	4,845	-	-	4,845
21	4,920	-	-	4,920
22	4,996	-	-	4,996
23	5,074	-	-	5,074
24	5,153	-	-	5,153
25	5,235	-	-	5,235
	110,732	-	-	110,732

7.730% Discount Rate

\$46,235 NPV

- BR_t = Bill reductions in year t
- TC_t = Tax credits in year t
- INC_t = Incentives paid to the participant by the Utility

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

BR_t = Bill reductions in year t

G-1 Residential

t	(1)	(2)	(3)	(4)	(1) x (4)
	Ccf Conserved	Projected Gas Cost*	Demand Charge	(2) + (3) Combined Rate	BR _t
1	6,023	\$ 0.491	\$ 0.1825	\$ 0.67	\$ 4,060
2	6,023	\$ 0.497	\$ 0.1825	0.68	4,090
3	6,023	\$ 0.469	0.1825	0.65	3,925
4	6,023	\$ 0.458	0.1825	0.64	3,859
5	6,023	\$ 0.462	0.1825	0.64	3,882
6	6,023	\$ 0.468	0.1825	0.65	3,919
7	6,023	\$ 0.478	0.1825	0.66	3,981
8	6,023	\$ 0.489	0.1825	0.67	4,045
9	6,023	\$ 0.500	0.1825	0.68	4,112
10	6,023	\$ 0.510	0.1825	0.69	4,172
11	6,023	\$ 0.520	0.1825	0.70	4,233
12	6,023	\$ 0.531	0.1825	0.71	4,296
13	6,023	\$ 0.541	0.1825	0.72	4,360
14	6,023	\$ 0.552	0.1825	0.73	4,425
15	6,023	\$ 0.563	0.1825	0.75	4,492
16	6,023	\$ 0.574	0.1825	0.76	4,559
17	6,023	\$ 0.586	0.1825	0.77	4,629
18	6,023	\$ 0.598	0.1825	0.78	4,699
19	6,023	\$ 0.610	0.1825	0.79	4,771
20	6,023	\$ 0.622	0.1825	0.80	4,845
21	6,023	\$ 0.634	0.1825	0.82	4,920
22	6,023	\$ 0.647	0.1825	0.83	4,996
23	6,023	\$ 0.660	0.1825	0.84	5,074
24	6,023	\$ 0.673	0.1825	0.86	5,153
25	6,023	\$ 0.687	0.1825	0.87	5,235
					\$ 110,732

G-1 Commercial

t	(1)	(2)	(3)	(4)	(1) x (4)
	Ccf Conserved	Projected Gas Cost*	Demand Charge	(2) + (3) Combined Rate	BR _t
1	-	\$ 0.491	\$ 0.1825	\$ 0.67	\$ -
2	-	\$ 0.497	\$ 0.1825	\$ 0.68	\$ -
3	-	\$ 0.469	\$ 0.1825	\$ 0.65	\$ -
4	-	\$ 0.458	\$ 0.1825	\$ 0.64	\$ -
5	-	\$ 0.462	\$ 0.1825	\$ 0.64	\$ -
6	-	\$ 0.468	\$ 0.1825	\$ 0.65	\$ -
7	-	\$ 0.478	\$ 0.1825	\$ 0.66	\$ -
8	-	\$ 0.489	\$ 0.1825	\$ 0.67	\$ -
9	-	\$ 0.500	\$ 0.1825	\$ 0.68	\$ -
10	-	\$ 0.510	\$ 0.1825	\$ 0.69	\$ -
11	-	\$ 0.520	\$ 0.1825	\$ 0.70	\$ -
12	-	\$ 0.531	\$ 0.1825	\$ 0.71	\$ -
13	-	\$ 0.541	\$ 0.1825	\$ 0.72	\$ -
14	-	\$ 0.552	\$ 0.1825	\$ 0.73	\$ -
15	-	\$ 0.563	\$ 0.1825	\$ 0.75	\$ -
16	-	\$ 0.574	\$ 0.1825	\$ 0.76	\$ -
17	-	\$ 0.586	\$ 0.1825	\$ 0.77	\$ -
18	-	\$ 0.598	\$ 0.1825	\$ 0.78	\$ -
19	-	\$ 0.610	\$ 0.1825	\$ 0.79	\$ -
20	-	\$ 0.622	\$ 0.1825	\$ 0.80	\$ -
21	-	\$ 0.634	\$ 0.1825	\$ 0.82	\$ -
22	-	\$ 0.647	\$ 0.1825	\$ 0.83	\$ -
23	-	\$ 0.660	\$ 0.1825	\$ 0.84	\$ -
24	-	\$ 0.673	\$ 0.1825	\$ 0.86	\$ -
25	-	\$ 0.687	\$ 0.1825	\$ 0.87	\$ -
					\$ -

- (1) Total projected Ccf savings, based on budgeted participation levels in year one of the program.
 (2) Based on the Company's current G-1 GCA as well as NYMEX futures, converted to per ccf residential cost; where t = 1 = 2017
 (3) Volumetric charge for residential customers per Sheet No. 8 of the Company's tariff.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Participant Test

TC_t = Tax credits in year t (presently no federal tax credits are available in 2014)

	(1) Program Participants	(2) Residential Energy Credits	(1) x (2) TC_t
<u>A. High Efficiency Heating Savings</u>			
<u>B. High Efficiency Water Heating Savings</u>			
Total	-	\$	-

Note: participants are eligible for tax credits in the year they incur expenditures for high-efficiency appliances, since this is an analysis of participation in a single year, the tax credit is applicable only where $t = 1$

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Participant Test

INC_t = Incentives paid to the participant by the Utility, for $t = 1$

<u>Energy Savings by Customer Class</u>	<u>INC_t</u>
G-1 Residential Customers	\$ -
G-1 Commercial Customers	-
Total	<u>\$ -</u>

Note: rebates are given to participant in the year they elect to participate, since this is an analysis of participation in a single year, the rebate is applicable only where $t = 1$

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

$$C_p = \sum_{t=1}^N \frac{PC_t + BI_t}{(1+d)^{t-1}}$$

t	(1) BI _t	(2) PC _t	(1) + (2) C _p
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-
	-	-	-

7.730% Discount Rate

\$0 NPV

BI_t = Bill increases in year t (not accounted for in participant cost test).

PC_t = Participant costs in year t, which include
incremental capital costs

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

PC_t = Participant costs for $t = 1$

	(1) Program Participants	(2) Incremental Cost	(1) x (2) PC_t
<u>A. High Efficiency Heating Savings</u>			
Furnace AFUE 90 - 93	-	\$ 654	-
Furnace AFUE 94 - 95	-	668	-
Furnace AFUE 96 or >	-	1,238	-
Boiler AFUE 85 -89	-	1,583	-
Programmable Thermostat	-	39	-
Total	-		-
<u>B. High Efficiency Water Heating Savings</u>			
Tank W/H .62 - .66 EF	-	\$ 38	-
Tank W/H .67 or > EF	-	347	-
Tankless W/H .82 - 90 EF	-	839	-
Total	-	\$	-
<u>C. High Efficiency Commercial Kitchen Equipment</u>			
Gas Fryer	-	\$ 468	-
Gas Griddle	-	121	-
Gas Oven	-	119	-
Gas Steamer	-	2,103	-
Total	-	\$	-

IC = Incremental Costs for purchasing high-efficiency unit

(1) Based on budgeted participation levels in year one of the CEP.

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test**

$$B_{pa} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

(1)

<u>t</u>	<u>UAC_t</u>
1	\$ 2,960
2	\$ 2,991
3	\$ 2,826
4	\$ 2,760
5	\$ 2,783
6	\$ 2,820
7	\$ 2,881
8	\$ 2,946
9	\$ 3,012
10	\$ 3,073
11	\$ 3,134
12	\$ 3,197
13	\$ 3,261
14	\$ 3,326
15	\$ 3,392
16	\$ 3,460
17	\$ 3,529
18	\$ 3,600
19	\$ 3,672
20	\$ 3,745
21	\$ 3,820
22	\$ 3,897
23	\$ 3,975
24	\$ 4,054
25	\$ 4,135
	\$ 83,249

7.730% Discount Rate

\$34,225 NPV

(1) UAC_t scheduled per calculation performed for RIM test

UAC_t = Utility avoided supply costs in year t

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test**

$$C_{pa} = \sum_{t=1}^N \frac{PRC_t + INC_t + UIC_t}{(1+d)^{t-1}}$$

t	(1) PRC _t	(2) INC _t	(3) UIC _t	C _{pa}
1	180,000	-	-	180,000
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
	180,000	-	-	180,000

7.730% Discount Rate

\$167,084 NPV

PRC_t = Program Administrator Costs in year t

INC_t = Incentives paid to the participant by the Utility

UIC_t = Utility increased supply costs in year t

- (1) Program costs scheduled from PRC_t which was calculated for the RIM Test
- (2) Incentives scheduled from INC_t which was calculated for the Participant test
- (3) No known increased supply costs as a result of operating the CEP

Atmos Energy
 Demand Side Management (DSM) Program
 Ratepayer Impact Measure (RIM) Test

$$NPV_{RIM} = B_{RIM} - C_{RIM}$$

$B_{RIM} = \$$	34,225
$C_{RIM} =$	213,320
$NPV_{RIM} = \$$	<u>(179,095)</u>

Benefit-Cost Ratio 0.16

Conclusion:

Since the net present value is negative, the program will cause an increase customer rates.

Where:

- NPV_{RIM} = Net present value levels
- B_{RIM} = Benefits to rate levels or customer bills
- C_{RIM} = Costs to rate levels or customer bills

$$B_{RIM} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

$$C_{RIM} = \sum_{t=1}^N \frac{UIC_t + RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$

- UAC_t = Utility avoided supply costs in year t
- UIC_t = Utility increased supply costs in year t
- RL_t = Revenue loss from reduced sales in year t
- PRC_t = Program administrator costs in year t
- INC_t = Incentives paid to the participant by the sponsoring utility in year t

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Ratepayer Impact Measure (RIM) Test

$$B_{RIM} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

t	UAC _t
1	2,960
2	2,991
3	2,826
4	2,760
5	2,783
6	2,820
7	2,881
8	2,946
9	3,012
10	3,073
11	3,134
12	3,197
13	3,261
14	3,326
15	3,392
16	3,460
17	3,529
18	3,600
19	3,672
20	3,745
21	3,820
22	3,897
23	3,975
24	4,054
25	4,135
	83,249

7.730% Discount Rate

\$34,225 NPV

UAC_t = Utility avoided supply costs in year t

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test

UAC_t = Utility avoided supply costs in year t

t	Projected Gas Cost*	G-1 Residential		G-1 Commercial			UAC_t
		Annual Savings	Commodity Savings	Projected Gas Cost*	Annual Savings	Commodity Savings	
1	\$ 0.491	6,023	\$ 2,960	\$ 0.491	-	\$ -	\$ 2,960
2	\$ 0.497	6,023	\$ 2,991	\$ 0.497	-	\$ -	\$ 2,991
3	\$ 0.469	6,023	\$ 2,826	\$ 0.469	-	\$ -	\$ 2,826
4	\$ 0.458	6,023	\$ 2,760	\$ 0.458	-	\$ -	\$ 2,760
5	\$ 0.462	6,023	\$ 2,783	\$ 0.462	-	\$ -	\$ 2,783
6	\$ 0.468	6,023	\$ 2,820	\$ 0.468	-	\$ -	\$ 2,820
7	\$ 0.478	6,023	\$ 2,881	\$ 0.478	-	\$ -	\$ 2,881
8	\$ 0.489	6,023	\$ 2,946	\$ 0.489	-	\$ -	\$ 2,946
9	\$ 0.500	6,023	\$ 3,012	\$ 0.500	-	\$ -	\$ 3,012
10	\$ 0.510	6,023	\$ 3,073	\$ 0.510	-	\$ -	\$ 3,073
11	\$ 0.520	6,023	\$ 3,134	\$ 0.520	-	\$ -	\$ 3,134
12	\$ 0.531	6,023	\$ 3,197	\$ 0.531	-	\$ -	\$ 3,197
13	\$ 0.541	6,023	\$ 3,261	\$ 0.541	-	\$ -	\$ 3,261
14	\$ 0.552	6,023	\$ 3,326	\$ 0.552	-	\$ -	\$ 3,326
15	\$ 0.563	6,023	\$ 3,392	\$ 0.563	-	\$ -	\$ 3,392
16	\$ 0.574	6,023	\$ 3,460	\$ 0.574	-	\$ -	\$ 3,460
17	\$ 0.586	6,023	\$ 3,529	\$ 0.586	-	\$ -	\$ 3,529
18	\$ 0.598	6,023	\$ 3,600	\$ 0.598	-	\$ -	\$ 3,600
19	\$ 0.610	6,023	\$ 3,672	\$ 0.610	-	\$ -	\$ 3,672
20	\$ 0.622	6,023	\$ 3,745	\$ 0.622	-	\$ -	\$ 3,745
21	\$ 0.634	6,023	\$ 3,820	\$ 0.634	-	\$ -	\$ 3,820
22	\$ 0.647	6,023	\$ 3,897	\$ 0.647	-	\$ -	\$ 3,897
23	\$ 0.660	6,023	\$ 3,975	\$ 0.660	-	\$ -	\$ 3,975
24	\$ 0.673	6,023	\$ 4,054	\$ 0.673	-	\$ -	\$ 4,054
25	\$ 0.687	6,023	\$ 4,135	\$ 0.687	-	\$ -	\$ 4,135
Total Commodity Savings			\$ 83,249			\$ -	\$ 83,249

- (1) Total projected Ccf savings, based on budgeted participation levels in year one of the program. These amounts continue to be saved year after year.
- (2) Based on Department of Energy 2011 "Annual Energy Outlook", converted to per ccf residential cost; where t = 1 = 2012

Note: the above analysis is based on the CCF conserved from a single year of participation in the CEP

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test**

$$C_{RIM} = \sum_{t=1}^N \frac{UIC_t + RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$

t	(1) UIC _t	(2) RL _t	(3) PRC _t	(4) INC _t	(1) + (2) C _{RIM}
1	-	4,060	180,000	-	184,060
2	-	4,090		-	4,090
3	-	3,925		-	3,925
4	-	3,859		-	3,859
5	-	3,882		-	3,882
6	-	3,919		-	3,919
7	-	3,981		-	3,981
8	-	4,045		-	4,045
9	-	4,112		-	4,112
10	-	4,172		-	4,172
11	-	4,233		-	4,233
12	-	4,296		-	4,296
13	-	4,360		-	4,360
14	-	4,425		-	4,425
15	-	4,492		-	4,492
16	-	4,559		-	4,559
17	-	4,629		-	4,629
18	-	4,699		-	4,699
19	-	4,771		-	4,771
20	-	4,845		-	4,845
21	-	4,920		-	4,920
22	-	4,996		-	4,996
23	-	5,074		-	5,074
24	-	5,153		-	5,153
25	-	5,235		-	5,235
	-	110,732	180,000	-	290,732

7.730% Discount Rate

\$213,320 NPV

- UIC_t = Utility increased supply costs in year t
- RL_t = Revenue loss from reduced sales in year t
- PRC_t = Program administrator costs in year t
- INC_t = Incentives paid to the participant by the sponsoring utility in year t

- (1) No known increased supply costs
- (2) see RIM Test RG; column (2)
- (3) see RIM Test RG; column (3)
- (4) Scheduled per calculation performed for Participant Test

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$NPV_{TRC} = B_{TRC} - C_{TRC}$$

$B_{TRC} = \$$	34,225
$C_{TRC} =$	167,084
$NPV_{TRC} = \$$	<u>(132,859)</u>

Benefit-Cost Ratio 0.20

Conclusion:

Since the net present value is greater than zero, the program is a less expensive resource than the supply option upon which the marginal costs are based.

Where:

NPV_{TRC} = Net present value of total cost of the resource

B_{TRC} = NPV of benefits of the program

C_{TRC} = NPV of costs of the programs

$$B_{TRC} = \sum_{t=1}^N \frac{UAC_t + TC_t}{(1+d)^{t-1}}$$

$$C_{TRC} = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

UAC_t = Utility avoided supply costs in year t

TC_t = Tax credits in year t

UIC_t = Utility increased supply costs in year t

PRC_t = Program administrator costs in year t

PCN_t = Net participant costs

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$B_{TRC} = \sum_{t=1}^N \frac{UAC_t + TC_t}{(1+d)^{t-1}}$$

t	(1) UAC _t	(2) TC _t	B _{TRC}
1	\$ 2,960	-	\$ 2,960
2	2,991	-	2,991
3	2,826	-	2,826
4	2,760	-	2,760
5	2,783	-	2,783
6	2,820	-	2,820
7	2,881	-	2,881
8	2,946	-	2,946
9	3,012	-	3,012
10	3,073	-	3,073
11	3,134	-	3,134
12	3,197	-	3,197
13	3,261	-	3,261
14	3,326	-	3,326
15	3,392	-	3,392
16	3,460	-	3,460
17	3,529	-	3,529
18	3,600	-	3,600
19	3,672	-	3,672
20	3,745	-	3,745
21	3,820	-	3,820
22	3,897	-	3,897
23	3,975	-	3,975
24	4,054	-	4,054
25	4,135	-	4,135
	\$ 83,249	-	\$ 83,249

7.730% Discount Rate

\$34,225 NPV

UAC_t = Utility avoided supply costs in year t
 TC_t = Tax Credits in year t

- (1) Scheduled per calculation performed for RIM Test
- (2) Scheduled per calculation performed for Participant Test

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$C_{TRC} = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

t	(1) PRC _t	(2) PCN _t	(3) UIC _t	C _{TRC}
1	180,000	-	-	180,000
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
	180,000	-	-	180,000

7.730% Discount Rate

\$167,084 NPV

- PRC_t = Program administrator costs in year t
- PCN_t = Net participant costs
- UIC_t = Utility increased supply costs in year t

- (1) Scheduled per calculation performed for RIM Test
- (2) Represents net participant costs which is the incremental cost to the participant of purchasing a high-efficiency appliance versus one with standard efficiency. Amount scheduled from PC_t from the Participant Test.
- (3) No known increased supply costs as a result of operating the CEP

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Atmos Energy's Demand Side Management Application October 2017

Program Summary

		Year 1	
		G-1 Residential	G-1 Commercial
Total DSM Cost for recovery	California Tests	\$ 62,355	\$ (61,728)
Program Costs	<u>DCRC</u>	\$ 37,350	\$ 1,650
Lost Sales	<u>DLSA</u>	\$ -	\$ -
Program Incentive	<u>DIA</u>	\$ (5,600)	\$ (200)
Program Balancing Adjustment	<u>DBA</u>	\$ 30,605	\$ (63,178)
Annual Average Recovery Cost per Customer	<u>DSMRC</u>	\$ 0.39	\$ (3.54)

	Benefit/ Cost Ratio
<u>Participant Test</u>	#DIV/0!
<u>Program Admin Test</u>	-
<u>Ratepayer Impact Test (RIM)</u>	-
<u>Total Resource Cost Test (TRC)</u>	-

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Atmos Energy Variable Data

1.	# Kentucky Residential Customers	158,221		
2.	Residential Sales Volumes (Ccf)	109,894,930		
1a.	# Kentucky Commercial Customers	17,416		
2a.	Commercial Sales Volumes (Ccf)	48,854,530		
3.	Estimated Participants	Total	Residential	Commercial
a)	Furnace AFUE 90 - 93	-	0	0
b)	Furnace AFUE 94 - 95	-	0	0
c)	Furnace AFUE 96 or >	-	0	0
d)	Boiler AFUE 85 -89	-	0	0
f)	Tank Water Heater EF .62 - .66	-	0	0
g)	Tank Water Heater EF .67 or >	-	0	0
h)	Tankless/Condensing Water Heater EF >.82	-	0	0
k)	Programmable Thermostat (manual)	-	0	0
l)	Weatherization	-	-	0
m)	Commercial Fryer	-	0	0
n)	Commercial Griddle	-	0	0
o)	Commercial Oven	-	0	0
p)	Commercial Steamer	-	0	0
4.	Atmos Distribution Charge	\$ 0.183		
5.	Average Heat use (ccf) per customer	361.00		
6.	Average water heating use (ccf) per customer	148.00		
7.	Proposed Rebates			
	Furnace AFUE 90 -	\$ 250		
	Furnace AFUE 94 -	\$ 325		
	Furnace AFUE 96 c	\$ 400		
	Boiler AFUE > 85	\$ 250		
	Tank Water Heater	\$ 200		
	Tank Water Heater	\$ 300		
	Tankless/Condensi	\$ 400		
	Programmable The	\$ 25		
	Commercial Fryer I	\$ 500		
	Commercial Griddle	\$ 500		
	Commercial Oven I	\$ 500		
	Commercial Steam	\$ 500		
8.	Weatherization Pro	\$ 3,000		
9.	Incremental Cost of 90-93 AFUE furnace	\$ 654		
	Incremental Cost of 94-95 AFUE furnace	\$ 668		
	Incremental Cost of 96 or > AFUE furnace	\$ 1,238		
	Incremental Cost of 85-89 AFUE boiler	\$ 1,583		
	Incremental Cost of Programmable Thermostat	\$ 39		
	Incremental Cost of .62 EF tank W/H	\$ 38		
	Incremental Cost of .67 EF tank W/H	\$ 347		
	Incremental Cost of .82-.90 EF tankless W/H	\$ 839		
	Incremental Cost for Gas Fryer	\$ 468		
	Incremental Cost for Gas Griddle	\$ 121		
	Incremental Cost for Gas Oven	\$ 119		
	Incremental Cost for Gas Steamer	\$ 2,103		
10.	Discount Rate	7.73%		

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Deemed Savings for Measures

Measure	Efficiency Level	Kentucky	
		Savings (CCF)	Savings (Therm)
Forced Air Furnace	92% AFUE	109.5	113.6
Forced Air Furnace	94% AFUE	122.6	127.1
Forced Air Furnace	96% AFUE	135.0	140.0
Boiler	85% AFUE	42.3	43.9
Boiler	90% AFUE	79.9	82.9
Tank Water Heater	0.62 EF or greater	17.6	18.2
Tank Water Heater	0.67 EF or greater	36.6	38.0
Tankless Water Heater	0.82 - .90 EF	80.0	83.0
Tankless Water Heater	0.91 EF or greater	99.1	102.8
Condensing Water Heater	0.90 EF or greater	68.5	71.0
Programmable Thermostat	Manual	60.3	62.6
Weatherization	30% Savings	100.4	109.4
Fryer	EnergyStar	520.7	540.0
Griddle	EnergyStar	115.7	120.0
Oven	EnergyStar	217.0	225.0
Steamer	EnergyStar	1253.6	1,300.0

<https://portfoliomanager.energystar.gov/pdf/reference/Thermal%20Conversions.pdf?2b52-b268>

August of 2015 Report shows 1.026 factor

https://www.eia.gov/totalenergy/data/monthly/pdf/sec13_4.pdf

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Billing Factor Calculation**

Program Begins: May 1, 2018
 Program Year End: December 31, 2018
 Rate Effective: May 1, 2018

DCRC = DSM Cost Recovery-Current

Program Costs		G-1 Residential		G-1 Commercial
Rebates		\$ -		\$ -
Program Costs (Weatherization & Education)		\$ 34,000		\$ -
Customer Awareness		\$ -		\$ -
Program Administration		\$ -		\$ -
Supplies		\$ 3,350		\$ 1,650
Program Overhead		\$ -		\$ -
TOTAL DCRC	G-1 Residential	\$ 37,350	G-1 Commercial	\$ 1,650
Excluding Rebates		\$ 37,350		\$ 1,650

DLSA = DSM Lost Sales Adjustment

Current Year Program Participation (Schedule A)

Rate	# of Participants	CCF Conserved	Distribution Charge	Lost Sales
G-1 Residential Customers	-	-	\$ 0.1825	\$ -
G-1 Commercial Customers	-	-	\$ 0.1825	\$ -
Total Current Year Lost Sales	-	-	\$ -	\$ -
Cumulative Prior Years Participation (Schedule B)	-	0	\$ 0.1825	\$ -
TOTAL DLSC	-	-	\$ -	\$ -

DIA = DSM Incentive Adjustment

	G-1 Residential	G-1 Commercial
Program Benefits (Schedule C)	\$ -	\$ -
Less: Program Costs	\$ (37,350)	\$ (1,650)
Net Resource Savings	\$ (37,350)	\$ (1,650)
Incentive Percentage	15%	15%
DIA	\$ (5,600)	\$ (200)

DBA = DSM Balance Adjustment

	G-1 Residential		G-1 Commercial		
	Estimated Residential Sales	Balancing Adjustment	Estimated Commercial Sales	Balancing Adjustment	
Under/(Over) Recovery	30,605.45	0.0028	(63,177.88)	(0.0129)	

DSMRC = DSM Cost Recovery Component

G-1 Residential				
Estimated Residential Sales		109,894,930	Ccf	
Estimated Residential Customers		158,221		
	Recovery Amount	Rate, per Ccf	Rate, per Mcf	
DCRC	\$ 37,350	\$ 0.0003	\$ 0.0030	
DLSA	\$ -	\$ -	\$ -	
DIA	\$ (5,600)	\$ (0.0001)	\$ (0.0010)	
DBA	\$ 30,605	\$ 0.0003	\$ 0.0028	
TOTAL DSMRC	\$ 62,355	\$ 0.00048	\$ 0.0048	
Annual Cost Recovery per G-1 Residential Customers	\$	0.39		
G-1 Commercial				
Estimated Commercial Sales		48,854,530	Ccf	
Estimated Commercial Customers		17,416		
	Recovery Amount	Rate, per Ccf	Rate, per Mcf	
DCRC	\$ 1,650	\$ -	\$ -	
DLSA	\$ -	\$ -	\$ -	
DIA	\$ (200)	\$ -	\$ -	
DBA	\$ (63,178)	\$ (0.0013)	\$ (0.0129)	
TOTAL DSMRC	\$ (61,728)	\$ (0.0013)	\$ (0.0129)	
Annual Cost Recovery per G-1 Commercial Customers	\$	(3.54)		

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Schedule A - Current Year Participation Detail

Program Year End: December 31, 2018

G-1 Residential Efficiency Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Furnace AFUE 92 - 93	-	109.55	-	\$ 250	\$ -	18	DEER
Furnace AFUE 94 - 95	-	122.57	-	\$ 325	\$ -	18	DEER
Furnace AFUE 96 or >	-	135.00	-	\$ 400	\$ -	18	DEER
Boiler AFUE > 85	-	42.33	-	\$ 250	\$ -	18	DEER
Programmable Thermostat	-	60.32	-	\$ 25	\$ -	15	DEER
Totals	-	NA	-	NA	\$ -	-	-

G-1 Commercial Efficiency Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Furnace AFUE 92 - 93	-	109.55	-	\$ 250	\$ -	18	DEER
Furnace AFUE 94 - 95	-	122.57	-	\$ 325	\$ -	18	DEER
Furnace AFUE 96 or >	-	135.00	-	\$ 400	\$ -	18	DEER
Boiler AFUE >85	-	42.33	-	\$ 250	\$ -	18	DEER
Programmable Thermostat	-	60.32	-	\$ 25	\$ -	15	DEER
Totals	-	NA	-	NA	\$ -	-	-

G-1 Residential Water Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Tank Water Heater EF .62 - .66	-	17.55	-	\$ 200	\$ -	13	DEER
Tank Water Heater EF .67 or >	-	36.64	-	\$ 300	\$ -	13	DEER
Tankless/Condensing Water Heater EF >.82	-	80.04	-	\$ 400	\$ -	20	DEER
Totals	-	NA	-	NA	\$ -	-	-

G-1 Commercial Water Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Tank Water Heater EF .62 - .66	-	17.55	-	\$ 200	\$ -	13	DEER
Tank Water Heater EF .67 or >	-	36.64	-	\$ 300	\$ -	13	DEER
Tankless/Condensing Water Heater EF >.82	-	80.04	-	\$ 400	\$ -	20	DEER
Totals	-	NA	-	NA	\$ -	-	-

G-1 Commercial Cooking Equipment Saving:	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Fryer EnergyStar Rated	-	520.73	-	\$ 500	\$ -	8	Energy Star
Griddle EnergyStar Rated	-	115.72	-	\$ 500	\$ -	12	Energy Star
Oven EnergyStar Rated	-	216.97	-	\$ 500	\$ -	10	NEEP
Steamer EnergyStar Rated	0	1,253.62	-	\$ 500	\$ -	10	Energy Star
Totals	-	NA	-	NA	\$ -	-	-

Weatherization	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
	-	100.3875	-	\$ 3,000	\$ -	25	DEER

Education Program				Rebate			
				Amount	Total		
				\$	34,000		

Totals by Customer Class	Program Participants	CCF Conservation		Rebate			
		Per Participant	Total	Amount	Total		
G-1 Residential Totals	-	Varies see above	-	Varies see above	\$ 34,000		
G-1 Commercial Totals	-	Varies see above	-	Varies see above	\$ -		

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Atmos Energy
 Demand Side Management (DSM) Program
 Annual Savings

SAVINGS

Year	G-1 Res. Heating	G-1 Comm. Heating	G-1 Res. Water	G-1 Comm. Water	G-1 Comm. Cooking Equipment	Weatherization	Res. Total	Comm. Total	Total
1	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Energy Federation, Inc. Administrative Costs**

EFI Budget Estimates for Administration of Kentucky DSM Appliance Rebate Program

Annual Budget

	Unit Cost	Residential Costs	Commercial Costs	Total Cost
Estimated Rebates		0	0	
Processing fee	\$ 9.00	\$ -	\$ -	\$ -
"Cost of Money" Charge	1%	\$ -	\$ -	\$ -
Reservation Fee	\$ 4.00	\$ -	\$ -	\$ -
Customer e-mails (EFI to cust.)	\$ 2.50	\$ -	\$ -	\$ -
Customer Service Phone Chg.(hours)	\$ 39.00	\$ -	\$ -	\$ -
Program Management fee	\$ -	\$ -	\$ -	\$ -
Totals		\$ -	\$ -	\$ -

Atmos Energy
Demand Side Management (DSM) Program
DSM APPLIANCE INFORMATION

FURNACES					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 90% Efficiency	Incremental Cost
Bowling Green	York	2,000 sq. ft.	\$ 1,950	\$ 2,467	\$ 517
Bowling Green	Amana	2,000 sq. ft.	\$ 1,000	\$ 1,570	\$ 570
Bowling Green	Trane	2,000 sq. ft.	\$ 1,450	\$ 1,700	\$ 250
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 2,500	\$ 1,100
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Owensboro	York	2,000 sq. ft.	\$ 725	\$ 1,050	\$ 325
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,250	\$ 550
Average Incremental Cost					\$ 602

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 92% Efficiency	Incremental Cost
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 2,200	\$ 800
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Bowling Green	Amana	2,000 sq. ft.	\$ 1,000	\$ 2,026	\$ 1,026
Bowling Green	York	2,000 sq. ft.	\$ 1,950	\$ 2,467	\$ 517
Owensboro	Heil	2,000 sq. ft.	\$ 750	\$ 1,200	\$ 450
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,300	\$ 600
Average Incremental Cost					\$ 716
Average Incremental Cost 90-92 AFUE					\$ 654

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 94% Efficiency	Incremental Cost
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,380	\$ 680
Owensboro	York	2,000 sq. ft.	\$ 725	\$ 1,150	\$ 425
Average Incremental Cost					\$ 668

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 96% Efficiency	Incremental Cost
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 3,200	\$ 1,800
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 3,600	\$ 2,000
Owensboro	York	2,000 sq. ft.	\$ 700	\$ 1,200	\$ 500
Owensboro	Heil	2,000 sq. ft.	\$ 750	\$ 1,400	\$ 650
Average Incremental Cost					\$ 1,238

Boilers					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 85% Efficiency	Incremental Cost
Owensboro	A.O. Smith	2,000 sq. ft.	\$ 8,150	\$ 9,865	\$ 1,715
Danville	Locinar	2,000 sq. ft.	\$ 7,950	\$ 9,400	\$ 1,450
Average Incremental Cost					\$ 1,583

WATER HEATERS - TANK TYPE					
Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 62% Efficiency	Incremental Cost
2011 ASHRAE Winter Conference					\$ 38
Average Incremental Cost					\$ 38

Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 67% Efficiency	Incremental Cost
Lowe's	A.O. Smith	50 gallon	\$ 409	\$ 656	\$ 247
Home Depot	Rheem	40 gallon	\$ 400	\$ 639	\$ 239
Lowe's	State	40 gallon	\$ 379	\$ 935	\$ 556
Average Incremental Cost					\$ 347

WATER HEATERS - TANKLESS					
Contractor Location	Brand Comparison	Unit Sizing	58% Eff Tank Type	82% Eff. Tankless	Incremental Cost
Owensboro	Rinnai	180,000 Btu	\$ 404	\$ 1,000	\$ 596
Paducah	Navian	199,000 Btu	\$ 350	\$ 1,136	\$ 786
Bowling Green	Rinnai	199,000 Btu	\$ 409	\$ 1,210	\$ 801
Bowling Green	A.O. Smith	199,000 Btu	\$ 409	\$ 1,331	\$ 922
Owensboro	Navian	199,000 Btu	\$ 429	\$ 1,150	\$ 721
Paducah	Rheem	199,000 Btu	\$ 390	\$ 1,300	\$ 1,210
Average Incremental Cost					\$ 839

COMMERCIAL GAS EQUIPMENT					
Taken from Savings Calculator for EnergyStar Equipment developed by U.S. EPA & DOE					
Gas Fryer					\$ 468
Gas Griddle					\$ 121
Gas Oven					\$ 119
Gas Steamer					\$ 2,103
Average Incremental Cost					\$ 703

THERMOSTATS					
Contractor Location	Brand Comparison	Model Number	Non-Programmable	Programmable	Incremental Cost
Lowe's	Honeywell	RTH6350D1000	\$ 40	\$ 60	\$ 20
Lowe's	Lux	TX9600TS	\$ 40	\$ 68	\$ 28
Lowe's	Iris	CT-101-L	\$ 40	\$ 99	\$ 59
Lowe's	Honeywell	RTH7600D1048	\$ 40	\$ 89	\$ 49
Average Incremental Cost					\$ 39

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Atmos Energy
Demand Side Management (DSM) Program
Schedule B - Cumulative Prior Years Program Participation

Program Year End: December 31, 2018

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Cumulative Total
Program Participants											
<u>A. High Efficiency Appliances</u>	0	0	0	0	-	0	0	0	0		-
<u>B. Weatherization Program</u>	0	0	0	0	0	0	0	0	0		-
Total Participants	0	0	0	0	0	0	0	0	0		-
Total Conservation in Ccf											
<u>A. High Efficiency Appliance Savings</u>	0	0	0	0	0	0	0	0	0		-
<u>B. Weatherization Program</u>	0	0	0	0	0	0	0	0	0		-
Total Ccf Savings	0	0	0	0	0	0	0	0	0		-
Total Lost Sales	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -

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Daily Settlements for Henry Hub Natural Gas Futures (PRELIMINARY) Trade Date: 10/24/2017

http://www.cmegroup.com/trading/energy/natural-gas/natural-gas_quotes_settlements_futures.html

Month	Open	High	Low	Last	Change	Settle	Estimated Volume	Prior Day Open Interest
Nov-17	2.971	3.004	2.960	2.988	(0.017)	2.974	114,500	46,837
Dec-17	3.139	3.165	3.117	3.148	(0.021)	3.135	105,230	267,776
Jan-18	3.258	3.285	3.243	3.268	(0.023)	3.257	44,476	201,511
Feb-18	3.260	3.287	3.246	3.27	(0.024)	3.260	16,371	82,361
Mar-18	3.218	3.243	3.201	3.227	(0.024)	3.216	33,907	174,362
Apr-18	2.979	2.995	2.975	2.992	(0.003)	2.989	29,734	126,898
May-18	2.960	2.970	2.950	2.964	(0.002)	2.964	10,912	77,441
Jun-18	2.990	2.997	2.978	2.991	(0.002)	2.992	805	32,520
Jul-18	3.017	3.024	3.006	3.02	(0.002)	3.020	3,064	41,447
Aug-18	3.019	3.026	3.008	3.018	(0.002)	3.021	2,014	31,390
Sep-18	3.000	3.007	2.990	3.002	(0.003)	3.002	1,963	33,363
Oct-18	3.023	3.030	3.012	3.026	(0.002)	3.025	7,560	69,251
Nov-18	3.075	3.077	3.061	3.077	(0.003)	3.077	1,053	28,248
Dec-18	3.204	3.212	3.195	3.204	(0.003)	3.208	1,393	28,455
Jan-19	3.285	3.291	3.271	3.286	(0.003)	3.287	2,524	27,263
Feb-19	3.241	3.249	3.240	3.249	(0.002)	3.255	423	8,269
Mar-19	3.168	3.179	3.161	3.177	-	3.178	1,371	21,240
Apr-19	2.783	2.791	2.772	2.787	0.004	2.790	2,240	16,350
May-19	2.734	2.735	2.734	2.735	0.003	2.742	765	5,002
Jun-19	2.756	2.756	2.756	2.756	0.002	2.763	196	4,073
Jul-19	2.778	2.784	2.778	2.784	0.002	2.785	84	3,786
Aug-19	2.771	2.775	2.771	2.775	0.002	2.785	20	2,673
Sep-19	2.755	2.765	2.755	2.765	0.002	2.768	23	2,485
Oct-19	2.792	2.792	2.776	2.790	-	2.790	513	4,131
Nov-19	-	-	-	0.000	(0.001)	2.850	5	2,664
Dec-19	-	-	-	0.000	(0.001)	2.998	2	2,693
Jan-20	-	-	-	-	(0.001)	3.099	52	1,470
Feb-20	-	-	-	-	-	3.076	-	589
Mar-20	-	-	-	-	0.002	3.022	61	858
Apr-20	-	-	-	0.000	(0.001)	2.714	61	1,017
May-20	-	-	-	0.000	(0.001)	2.689	9	627
Jun-20	-	-	-	0.000	(0.001)	2.712	9	560
Jul-20	-	-	-	0.000	(0.001)	2.738	-	505
Aug-20	0	0	0	0.000	(0.001)	2.750	-	468
Sep-20	0	0	0	0.000	(0.001)	2.750	-	469
Oct-20	-	-	-	-	(0.001)	2.776	-	517
Nov-20	-	-	-	-	(0.001)	2.849	-	501
Dec-20	-	-	-	-	(0.003)	3.002	-	780
Jan-21	3.11	3.11	3.11	3.105	(0.004)	3.114	5	265
Feb-21	-	-	-	-	(0.006)	3.091	-	186
Mar-21	-	-	-	-	-0.006	3.037	-	187
Apr-21	-	-	-	-	-0.009	2.739	-	116
May-21	-	-	-	-	-0.009	2.714	-	102
Jun-21	-	-	-	-	-0.009	2.737	-	89
Jul-21	-	-	-	-	-0.009	2.761	-	89
Aug-21	-	-	-	-	-0.009	2.777	-	92
Sep-21	-	-	2.77	2.771	-0.009	2.777	-	100
Oct-21	-	-	-	-	-0.009	2.803	-	73
Nov-21	-	-	-	-	-0.009	2.877	-	72

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Dec-21	-	-	-	-	-0.009	3.030	0	100
Jan-22	-	-	-	-	0.000	3.142	-	18
Feb-22	-	-	-	-	-0.001	3.119	-	22
Mar-22	-	-	-	-	-0.001	3.063	-	19
Apr-22	-	-	-	-	-0.001	2.768	-	14
May-22	4.22	4.22	4.22	-	-0.001	2.750	0	20
Jun-22	-	-	-	-	-0.001	2.775	-	14
Jul-22	-	-	-	-	-0.001	2.802	-	15
Aug-22	-	-	-	-	-0.001	2.822	-	15
Sep-22	-	-	-	-	-0.001	2.822	-	14
Oct-22	-	-	-	-	-0.001	2.848	-	14
Nov-22	-	-	-	-	-0.001	2.923	-	14
Dec-22	-	-	-	-	-0.001	3.078	-	19
Jan-23	-	-	-	-	-0.001	3.201	-	4
Feb-23	-	-	-	-	-0.001	3.178	-	1
Mar-23	-	-	-	-	-0.001	3.121	-	12
Apr-23	-	-	-	-	-0.001	2.829	-	12
May-23	-	-	-	-	-0.001	2.811	-	19
Jun-23	-	-	-	-	-0.001	2.836	-	12
Jul-23	-	-	-	-	-0.001	2.863	-	12
Aug-23	-	-	-	-	-0.001	2.886	-	23
Sep-23	-	-	-	-	-0.001	2.889	-	1
Oct-23	-	-	-	-	-0.001	2.919	-	16
Nov-23	-	-	-	-	-0.001	2.994	-	12
Dec-23	-	-	-	-	-0.001	3.149	-	1
Jan-24	-	-	-	-	-0.001	3.272	-	0
Feb-24	-	-	-	-	-0.001	3.246	-	0
Mar-24	-	-	-	-	-0.001	3.184	-	0
Apr-24	-	-	-	-	-0.001	2.892	-	0
May-24	-	-	-	-	-0.001	2.874	-	2
Jun-24	-	-	-	-	-0.001	2.900	-	0
Jul-24	-	-	-	-	-0.001	2.928	-	0
Aug-24	-	-	-	-	-0.001	2.951	-	0
Sep-24	-	-	-	-	-0.001	2.955	-	0
Oct-24	-	-	-	-	-0.001	2.988	-	0
Nov-24	-	-	-	-	-0.001	3.063	-	0
Dec-24	-	-	-	-	-0.001	3.218	-	0
Jan-25	-	-	-	-	-0.001	3.341	-	0
Feb-25	-	-	-	-	-0.001	3.312	-	0
Mar-25	-	-	-	-	-0.001	3.247	-	0
Apr-25	-	-	-	-	-0.001	2.955	-	-
May-25	-	-	-	-	-0.001	2.937	-	1
Jun-25	-	-	-	-	-0.001	2.965	-	-
Jul-25	-	-	-	-	-0.001	2.995	-	0
Aug-25	-	-	-	-	-0.001	3.024	-	0
Sep-25	-	-	-	-	-0.001	3.028	-	-
Oct-25	-	-	-	-	-0.001	3.063	-	-
Nov-25	-	-	-	-	-0.001	3.138	-	-
Dec-25	-	-	-	-	-0.001	3.293	-	-
Jan-26	-	-	-	-	-0.001	3.416	-	-
Feb-26	-	-	-	-	-0.001	3.383	-	-
Mar-26	-	-	-	-	-0.001	3.311	-	0
Apr-26	-	-	-	-	-0.001	3.008	-	-
May-26	-	-	-	-	-0.001	2.990	-	-
Jun-26	-	-	-	-	-0.001	3.023	-	-

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Jul-26	-	-	-	-	-0.001	3.063	-	-
Aug-26	-	-	-	-	-0.001	3.101	-	-
Sep-26	-	-	-	-	-0.001	3.111	-	-
Oct-26	-	-	-	-	-0.001	3.156	-	-
Nov-26	-	-	-	-	-0.001	3.232	-	-
Dec-26	-	-	-	-	-0.001	3.389	-	-
Jan-27	-	-	-	-	-0.001	3.524	-	-
Feb-27	-	-	-	-	-0.001	3.489	-	-
Mar-27	-	-	-	-	-0.001	3.414	-	-
Apr-27	-	-	-	-	-0.001	3.099	-	-
May-27	-	-	-	-	-0.001	3.074	-	-
Jun-27	-	-	-	-	-0.001	3.099	-	-
Jul-27	-	-	-	-	-0.001	3.128	-	-
Aug-27	-	-	-	-	-0.001	3.156	-	-
Sep-27	-	-	-	-	-0.001	3.166	-	-
Oct-27	-	-	-	-	-0.001	3.206	-	-
Nov-27	-	-	-	-	-0.001	3.282	-	-
Dec-27	-	-	-	-	-0.001	3.439	-	-
Jan-28	-	-	-	-	-0.001	3.579	-	-
Feb-28	-	-	-	-	-0.001	3.544	-	-
Mar-28	-	-	-	-	-0.001	3.469	-	-
Apr-28	-	-	-	-	-0.001	3.139	-	-
May-28	-	-	-	-	-0.001	3.124	-	-
Jun-28	-	-	-	-	-0.001	3.159	-	-
Jul-28	-	-	-	-	-0.001	3.204	-	-
Aug-28	-	-	-	-	-0.001	3.244	-	-
Sep-28	-	-	-	-	-0.001	3.259	-	-
Oct-28	-	-	-	-	-0.001	3.314	-	-
Nov-28	-	-	-	-	-0.001	3.392	-	-
Dec-28	-	-	-	-	-0.001	3.550	-	-
Jan-29	-	-	-	-	-0.001	3.693	-	-
Feb-29	-	-	-	-	-0.001	3.658	-	-
Mar-29	-	-	-	-	-0.001	3.583	-	-
Apr-29	-	-	-	-	-0.001	3.228	-	-
May-29	-	-	-	-	-0.001	3.213	-	-
Jun-29	-	-	-	-	-0.001	3.248	-	-
Jul-29	-	-	-	-	-0.001	3.293	-	-
Aug-29	-	-	-	-	-0.001	3.333	-	-
Sep-29	-	-	-	-	-0.001	3.348	-	-
Oct-29	-	-	-	-	-0.001	3.403	-	-
Nov-29	-	-	-	-	-0.001	3.481	-	-

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Atmos Energy Demand Side Management (DSM) Program Participant Test

$$NPV_P = B_P - C_P$$

$B_P =$	\$	-
$C_P =$		-
$NPV_P =$	\$	-

Benefit-Cost Ratio **#DIV/0!**

Conclusion:

Since the net present value is greater than zero, the program will benefit the participants

Where:

- NPV_P = Net present value to all participants
- B_P = NPV of benefit to all participants
- C_P = NPV of cost to all participants

$$B_P = \sum_{t=1}^N \frac{BR_t + TC_t + INC_t}{(1+d)^{t-1}}$$

$$C_P = \sum_{t=1}^N \frac{PC_t + BI_t}{(1+d)^{t-1}}$$

- BR_t = Bill reductions in year t (not accounted for in participant cost test).
- BI_t = Bill increases in year t
- TC_t = Tax credits in year t
- INC_t = Incentives paid to the participant by the Utility
- PC_t = Participant costs in year t, which include incremental capital costs

The following calculations are based on the budgeted participation levels for year one of the program.

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Atmos Energy
Demand Side Management (DSM) Program
Participant Test

$$B_p = \sum_{t=1}^N \frac{BR_t + TC_t + INC_t}{(1+d)^{t-1}}$$

t	BR _t	TC _t	INC _t	B _p
1	-	-	-	-
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
11	-	-	-	-
12	-	-	-	-
13	-	-	-	-
14	-	-	-	-
15	-	-	-	-
16	-	-	-	-
17	-	-	-	-
18	-	-	-	-
19	-	-	-	-
20	-	-	-	-
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-

7.730% Discount Rate

\$0 NPV

- BR_t = Bill reductions in year t
- TC_t = Tax credits in year t
- INC_t = Incentives paid to the participant by the Utility

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Participant Test

BR_t = Bill reductions in year t

G-1 Residential

t	(1) Ccf Conserved	(2) Projected Gas Cost*	(3) Demand Charge	(4) (2) + (3) Combined Rate	(1) x (4) BR _t
1	-	\$ 0.491	\$ 0.1825	\$ 0.67	\$ -
2	-	\$ 0.497	0.1825	0.68	-
3	-	\$ 0.469	0.1825	0.65	-
4	-	\$ 0.458	0.1825	0.64	-
5	-	\$ 0.462	0.1825	0.64	-
6	-	\$ 0.468	0.1825	0.65	-
7	-	\$ 0.478	0.1825	0.66	-
8	-	\$ 0.489	0.1825	0.67	-
9	-	\$ 0.500	0.1825	0.68	-
10	-	\$ 0.510	0.1825	0.69	-
11	-	\$ 0.520	0.1825	0.70	-
12	-	\$ 0.531	0.1825	0.71	-
13	-	\$ 0.541	0.1825	0.72	-
14	-	\$ 0.552	0.1825	0.73	-
15	-	\$ 0.563	0.1825	0.75	-
16	-	\$ 0.574	0.1825	0.76	-
17	-	\$ 0.586	0.1825	0.77	-
18	-	\$ 0.598	0.1825	0.78	-
19	-	\$ 0.610	0.1825	0.79	-
20	-	\$ 0.622	0.1825	0.80	-
21	-	\$ 0.634	0.1825	0.82	-
22	-	\$ 0.647	0.1825	0.83	-
23	-	\$ 0.660	0.1825	0.84	-
24	-	\$ 0.673	0.1825	0.86	-
25	-	\$ 0.687	0.1825	0.87	-
				\$	-

G-1 Commercial

t	(1) Ccf Conserved	(2) Projected Gas Cost*	(3) Demand Charge	(4) (2) + (3) Combined Rate	(1) x (4) BR _t
1	-	\$ 0.491	\$ 0.1825	\$ 0.67	\$ -
2	-	\$ 0.497	\$ 0.1825	\$ 0.68	\$ -
3	-	\$ 0.469	\$ 0.1825	\$ 0.65	\$ -
4	-	\$ 0.458	\$ 0.1825	\$ 0.64	\$ -
5	-	\$ 0.462	\$ 0.1825	\$ 0.64	\$ -
6	-	\$ 0.468	\$ 0.1825	\$ 0.65	\$ -
7	-	\$ 0.478	\$ 0.1825	\$ 0.66	\$ -
8	-	\$ 0.489	\$ 0.1825	\$ 0.67	\$ -
9	-	\$ 0.500	\$ 0.1825	\$ 0.68	\$ -
10	-	\$ 0.510	\$ 0.1825	\$ 0.69	\$ -
11	-	\$ 0.520	\$ 0.1825	\$ 0.70	\$ -
12	-	\$ 0.531	\$ 0.1825	\$ 0.71	\$ -
13	-	\$ 0.541	\$ 0.1825	\$ 0.72	\$ -
14	-	\$ 0.552	\$ 0.1825	\$ 0.73	\$ -
15	-	\$ 0.563	\$ 0.1825	\$ 0.75	\$ -
16	-	\$ 0.574	\$ 0.1825	\$ 0.76	\$ -
17	-	\$ 0.586	\$ 0.1825	\$ 0.77	\$ -
18	-	\$ 0.598	\$ 0.1825	\$ 0.78	\$ -
19	-	\$ 0.610	\$ 0.1825	\$ 0.79	\$ -
20	-	\$ 0.622	\$ 0.1825	\$ 0.80	\$ -
21	-	\$ 0.634	\$ 0.1825	\$ 0.82	\$ -
22	-	\$ 0.647	\$ 0.1825	\$ 0.83	\$ -
23	-	\$ 0.660	\$ 0.1825	\$ 0.84	\$ -
24	-	\$ 0.673	\$ 0.1825	\$ 0.86	\$ -
25	-	\$ 0.687	\$ 0.1825	\$ 0.87	\$ -
				\$	-

(1) Total projected Ccf savings, based on budgeted participation levels in year one of the program.

(2) Based on the Company's current G-1 GCA as well as NYMEX futures, converted to per ccf residential cost; where t = 1 = 2017

(3) Volumetric charge for residential customers per Sheet No. 8 of the Company's tariff.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Participant Test

TC_t = Tax credits in year t (presently no federal tax credits are available in 2014)

	(1) Program Participants	(2) Residential Energy Credits	(1) x (2) TC _t
<u>A. High Efficiency Heating Savings</u>			
<u>B. High Efficiency Water Heating Savings</u>			
Total	-		\$ -

Note: participants are eligible for tax credits in the year they incur expenditures for high-efficiency appliances, since this is an analysis of participation in a single year, the tax credit is applicable only where t = 1

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

INC_t = Incentives paid to the participant by the Utility, for $t = 1$

<u>Energy Savings by Customer Class</u>	<u>INC_t</u>
G-1 Residential Customers	\$ -
G-1 Commercial Customers	-
Total	<u>\$ -</u>

Note: rebates are given to participant in the year they elect to participate, since this is an analysis of participation in a single year, the rebate is applicable only where $t = 1$

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

$$C_p = \sum_{t=1}^N \frac{PC_t + BI_t}{(1+d)^{t-1}}$$

t	(1) BI _t	(2) PC _t	(1) + (2) C _p
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-
	-	-	-

7.730% Discount Rate

\$0 NPV

BI_t = Bill increases in year t (not accounted for in participant cost test).

PC_t = Participant costs in year t, which include
incremental capital costs

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

PC_t = Participant costs for t = 1

	(1) Program Participants	(2) Incremental Cost	(1) x (2) PC _t
<u>A. High Efficiency Heating Savings</u>			
Furnace AFUE 90 - 93	-	\$ 654	\$ -
Furnace AFUE 94 - 95	-	668	-
Furnace AFUE 96 or >	-	1,238	-
Boiler AFUE 85 -89	-	1,583	-
Programmable Thermostat	-	39	-
Total	-		-
<u>B. High Efficiency Water Heating Savings</u>			
Tank W/H .62 - .66 EF	-	\$ 38	\$ -
Tank W/H .67 or > EF	-	347	-
Tankless W/H .82 - 90 EF	-	839	-
Total	-	\$	-
<u>C. High Efficiency Commercial Kitchen Equipment</u>			
Gas Fryer	-	\$ 468	\$ -
Gas Griddle	-	121	-
Gas Oven	-	119	-
Gas Steamer	-	2,103	-
Total	-	\$	-

IC = Incremental Costs for purchasing high-efficiency unit

(1) Based on budgeted participation levels in year one of the CEP.

Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test

$$NPV_{pa} = B_{pa} - C_{pa}$$

$B_{pa} = \$$	-
$C_{pa} =$	36,202
$NPV_{pa} = \$$	<u>(36,202)</u>

Benefit-Cost Ratio -

Conclusion:

Since the net present value is greater than zero, the program would decrease costs to the utility

Where:

NPV_{pa} = Net present value of total cost of the resource

B_{pa} = NPV of benefits of the program

C_{pa} = NPV of costs of the programs

$$B_{pa} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

$$C_{pa} = \sum_{t=1}^N \frac{PRC_t + INC_t + UIC_t}{(1+d)^{t-1}}$$

UAC_t = Utility avoided supply costs in year t

PRC_t = Program Administrator Costs in year t

INC_t = Incentives paid to the participant by the Utility

UIC_t = Utility increased supply costs in year t

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test**

$$B_{pa} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

(1)

t	UAC _t
1	\$ -
2	\$ -
3	\$ -
4	\$ -
5	\$ -
6	\$ -
7	\$ -
8	\$ -
9	\$ -
10	\$ -
11	\$ -
12	\$ -
13	\$ -
14	\$ -
15	\$ -
16	\$ -
17	\$ -
18	\$ -
19	\$ -
20	\$ -
21	\$ -
22	\$ -
23	\$ -
24	\$ -
25	\$ -
\$	-

7.730% Discount Rate

\$0 NPV

(1) UAC_t scheduled per calculation performed for RIM test

UAC_t = Utility avoided supply costs in year t

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test

$$C_{pa} = \sum_{t=1}^N \frac{PRC_t + INC_t + UIC_t}{(1+d)^{t-1}}$$

t	(1) PRC _t	(2) INC _t	(3) UIC _t	C _{pa}
1	39,000	-	-	39,000
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
	39,000	-	-	39,000

7.730% Discount Rate

\$36,202 NPV

- PRC_t = Program Administrator Costs in year t
- INC_t = Incentives paid to the participant by the Utility
- UIC_t = Utility increased supply costs in year t

- (1) Program costs scheduled from PRC_t which was calculated for the RIM Test
- (2) Incentives scheduled from INC_t which was calculated for the Participant test
- (3) No known increased supply costs as a result of operating the CEP

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Ratepayer Impact Measure (RIM) Test

$$NPV_{RIM} = B_{RIM} - C_{RIM}$$

$B_{RIM} = \$$	-
$C_{RIM} =$	36,202
$NPV_{RIM} = \$$	<u>(36,202)</u>

Benefit-Cost Ratio -

Conclusion:

Since the net present value is negative, the program will cause an increase customer rates.

Where:

- NPV_{RIM} = Net present value levels
- B_{RIM} = Benefits to rate levels or customer bills
- C_{RIM} = Costs to rate levels or customer bills

$$B_{RIM} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

$$C_{RIM} = \sum_{t=1}^N \frac{UIC_t + RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$

- UAC_t = Utility avoided supply costs in year t
- UIC_t = Utility increased supply costs in year t
- RL_t = Revenue loss from reduced sales in year t
- PRC_t = Program administrator costs in year t
- INC_t = Incentives paid to the participant by the sponsoring utility in year t

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test

$$B_{RIM} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

t	UAC _t
1	-
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	-
13	-
14	-
15	-
16	-
17	-
18	-
19	-
20	-
21	-
22	-
23	-
24	-
25	-
	-

7.730% Discount Rate

\$0 NPV

UAC_t = Utility avoided supply costs in year t

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Ratepayer Impact Measure (RIM) Test

$UAC_t =$ Utility avoided supply costs in year t

t	Projected Gas Cost*	G-1 Residential		Commodity Savings	Projected Gas Cost*	G-1 Commercial		UAC _t
		Annual Savings	Commodity Savings			Annual Savings	Commodity Savings	
1	\$ 0.491	-	\$ -	-	\$ 0.491	-	\$ -	\$ -
2	\$ 0.497	-	\$ -	-	\$ 0.497	-	\$ -	\$ -
3	\$ 0.469	-	\$ -	-	\$ 0.469	-	\$ -	\$ -
4	\$ 0.458	-	\$ -	-	\$ 0.458	-	\$ -	\$ -
5	\$ 0.462	-	\$ -	-	\$ 0.462	-	\$ -	\$ -
6	\$ 0.468	-	\$ -	-	\$ 0.468	-	\$ -	\$ -
7	\$ 0.478	-	\$ -	-	\$ 0.478	-	\$ -	\$ -
8	\$ 0.489	-	\$ -	-	\$ 0.489	-	\$ -	\$ -
9	\$ 0.500	-	\$ -	-	\$ 0.500	-	\$ -	\$ -
10	\$ 0.510	-	\$ -	-	\$ 0.510	-	\$ -	\$ -
11	\$ 0.520	-	\$ -	-	\$ 0.520	-	\$ -	\$ -
12	\$ 0.531	-	\$ -	-	\$ 0.531	-	\$ -	\$ -
13	\$ 0.541	-	\$ -	-	\$ 0.541	-	\$ -	\$ -
14	\$ 0.552	-	\$ -	-	\$ 0.552	-	\$ -	\$ -
15	\$ 0.563	-	\$ -	-	\$ 0.563	-	\$ -	\$ -
16	\$ 0.574	-	\$ -	-	\$ 0.574	-	\$ -	\$ -
17	\$ 0.586	-	\$ -	-	\$ 0.586	-	\$ -	\$ -
18	\$ 0.598	-	\$ -	-	\$ 0.598	-	\$ -	\$ -
19	\$ 0.610	-	\$ -	-	\$ 0.610	-	\$ -	\$ -
20	\$ 0.622	-	\$ -	-	\$ 0.622	-	\$ -	\$ -
21	\$ 0.634	-	\$ -	-	\$ 0.634	-	\$ -	\$ -
22	\$ 0.647	-	\$ -	-	\$ 0.647	-	\$ -	\$ -
23	\$ 0.660	-	\$ -	-	\$ 0.660	-	\$ -	\$ -
24	\$ 0.673	-	\$ -	-	\$ 0.673	-	\$ -	\$ -
25	\$ 0.687	-	\$ -	-	\$ 0.687	-	\$ -	\$ -
Total Commodity Savings			\$ -	\$ -			\$ -	\$ -

- (1) Total projected Ccf savings, based on budgeted participation levels in year one of the program. These amounts continue to be saved year after year.
- (2) Based on Department of Energy 2011 "Annual Energy Outlook", converted to per ccf residential cost; where t = 1 = 2012

Note: the above analysis is based on the CCF conserved from a single year of participation in the CEP

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test**

$$C_{RIM} = \sum_{t=1}^N \frac{UIC_t + RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$

t	(1) UIC _t	(2) RL _t	(3) PRC _t	(4) INC _t	(1) + (2) C _{RIM}
1	-	-	39,000	-	39,000
2	-	-		-	-
3	-	-		-	-
4	-	-		-	-
5	-	-		-	-
6	-	-		-	-
7	-	-		-	-
8	-	-		-	-
9	-	-		-	-
10	-	-		-	-
11	-	-		-	-
12	-	-		-	-
13	-	-		-	-
14	-	-		-	-
15	-	-		-	-
16	-	-		-	-
17	-	-		-	-
18	-	-		-	-
19	-	-		-	-
20	-	-		-	-
21	-	-		-	-
22	-	-		-	-
23	-	-		-	-
24	-	-		-	-
25	-	-		-	-
	-	-	39,000	-	39,000

7.730% Discount Rate

\$36,202 NPV

- UIC_t = Utility increased supply costs in year t
- RL_t = Revenue loss from reduced sales in year t
- PRC_t = Program administrator costs in year t
- INC_t = Incentives paid to the participant by the sponsoring utility in year t

- (1) No known increased supply costs
- (2) see RIM Test RG; column (2)
- (3) see RIM Test RG; column (3)
- (4) Scheduled per calculation performed for Participant Test

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Total Resource Cost (TRC) Test

$$NPV_{TRC} = B_{TRC} - C_{TRC}$$

$B_{TRC} = \$$	-
$C_{TRC} =$	36,202
$NPV_{TRC} = \$$	(36,202)

Benefit-Cost Ratio -

Conclusion:

Since the net present value is greater than zero, the program is a less expensive resource than the supply option upon which the marginal costs are based.

Where:

- NPV_{TRC} = Net present value of total cost of the resource
- B_{TRC} = NPV of benefits of the program
- C_{TRC} = NPV of costs of the programs

$$B_{TRC} = \sum_{t=1}^N \frac{UAC_t + TC_t}{(1+d)^{t-1}}$$

$$C_{TRC} = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

- UAC_t = Utility avoided supply costs in year t
- TC_t = Tax credits in year t
- UIC_t = Utility increased supply costs in year t
- PRC_t = Program administrator costs in year t
- PCN_t = Net participant costs

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$B_{TRC} = \sum_{t=1}^N \frac{UAC_t + TC_t}{(1+d)^{t-1}}$$

t	(1) UAC _t	(2) TC _t	B _{TRC}
1	\$ -	-	\$ -
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-
11	-	-	-
12	-	-	-
13	-	-	-
14	-	-	-
15	-	-	-
16	-	-	-
17	-	-	-
18	-	-	-
19	-	-	-
20	-	-	-
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-
25	-	-	-
	\$ -	-	\$ -

7.730% Discount Rate

\$0 NPV

UAC_t = Utility avoided supply costs in year t

TC_t = Tax Credits in year t

- (1) Scheduled per calculation performed for RIM Test
- (2) Scheduled per calculation performed for Participant Test

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$C_{TRC} = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

t	(1) PRC _t	(2) PCN _t	(3) UIC _t	C _{TRC}
1	39,000	-	-	39,000
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
	39,000	-	-	39,000

7.730% Discount Rate

\$36,202 NPV

- PRC_t = Program administrator costs in year t
- PCN_t = Net participant costs
- UIC_t = Utility increased supply costs in year t

- (1) Scheduled per calculation performed for RIM Test
- (2) Represents net participant costs which is the incremental cost to the participant of purchasing a high-efficiency appliance versus one with standard efficiency. Amount scheduled from PC_t from the Participant Test.
- (3) No known increased supply costs as a result of operating the CEP

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Atmos Energy's Demand Side Management Application October 2017

Program Summary

		Year 1	
Total DSM Cost for recovery	California Tests	G-1 Residential	G-1 Commercial
		\$ 591,499	\$ (63,178)
Program Costs	<u>DCRC</u>	\$ 518,266	\$ -
Lost Sales	<u>DLSA</u>	\$ 24,628	\$ -
Program Incentive	<u>DIA</u>	\$ 18,000	\$ -
Program Balancing Adjustment	<u>DBA</u>	\$ 30,605	\$ (63,178)
Annual Average Recovery Cost per Customer	<u>DSMRC</u>	\$ 3.74	\$ (3.63)

	<u>Benefit/ Cost Ratio</u>
<u>Participant Test</u>	1.47
<u>Program Admin Test</u>	1.33
<u>Ratepayer Impact Test (RIM)</u>	0.47
<u>Total Resource Cost Test (TRC)</u>	0.67

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Atmos Energy Variable Data

1.	# Kentucky Residential Customers	158,221		
2.	Residential Sales Volumes (Ccf)	109,894,930		
1a.	# Kentucky Commercial Customers	17,416		
2a.	Commercial Sales Volumes (Ccf)	48,854,530		
3.	Estimated Participants	Total	Residential	Commercial
a)	Furnace AFUE 90 - 93	225	225	0
b)	Furnace AFUE 94 - 95	125	125	0
c)	Furnace AFUE 96 or >	350	350	0
d)	Boiler AFUE 85 -89	-	0	0
f)	Tank Water Heater EF .62 - .66	330	330	0
g)	Tank Water Heater EF .67 or >	50	50	0
h)	Tankless/Condensing Water Heater EF > .82	275	275	0
k)	Programmable Thermostat (manual)	300	300	0
l)	Weatherization	-	-	0
m)	Commercial Fryer	-	0	0
n)	Commercial Griddle	-	0	0
o)	Commercial Oven	-	0	0
p)	Commercial Steamer	-	0	0
4.	Atmos Distribution Charge \$	0.183		
5.	Average Heat use (ccf) per customer	361.00		
6.	Average water heating use (ccf) per customer	148.00		
7.	Proposed Rebates			
	Furnace AFUE 90 - \$	250		
	Furnace AFUE 94 - \$	325		
	Furnace AFUE 96 c \$	400		
	Boiler AFUE > 85 \$	250		
	Tank Water Heater \$	200		
	Tank Water Heater \$	300		
	Tankless/Condensi \$	400		
	Programmable The \$	25		
	Commercial Fryer \$	500		
	Commercial Griddle \$	500		
	Commercial Oven I \$	500		
	Commercial Steam \$	500		
8.	Weatherization Pro \$	3,000		
9.	Incremental Cost of 90-93 AFUE furnace \$	654		
	Incremental Cost of 94-95 AFUE furnace \$	668		
	Incremental Cost of 96 or > AFUE furnace \$	1,238		
	Incremental Cost of 85-89 AFUE boiler \$	1,583		
	Incremental Cost of Programmable Thermostat \$	39		
	Incremental Cost of .62 EF tank W/H \$	38		
	Incremental Cost of .67 EF tank W/H \$	347		
	Incremental Cost of .82-.90 EF tankless W/H \$	839		
	Incremental Cost for Gas Fryer \$	468		
	Incremental Cost for Gas Griddle \$	121		
	Incremental Cost for Gas Oven \$	119		
	Incremental Cost for Gas Steamer \$	2,103		
10.	Discount Rate	7.73%		

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Deemed Savings for Measures**

Measure	Efficiency Level	Kentucky	
		Savings (CCF)	Savings (Therm)
Forced Air Furnace	92% AFUE	109.5	113.6
Forced Air Furnace	94% AFUE	122.6	127.1
Forced Air Furnace	96% AFUE	135.0	140.0
Boiler	85% AFUE	42.3	43.9
Boiler	90% AFUE	79.9	82.9
Tank Water Heater	0.62 EF or greater	17.6	18.2
Tank Water Heater	0.67 EF or greater	36.6	38.0
Tankless Water Heater	0.82 - .90 EF	80.0	83.0
Tankless Water Heater	0.91 EF or greater	99.1	102.8
Condensing Water Heater	0.90 EF or greater	68.5	71.0
Programmable Thermostat	Manual	60.3	62.6
Weatherization	30% Savings	100.4	109.4
Fryer	EnergyStar	520.7	540.0
Griddle	EnergyStar	115.7	120.0
Oven	EnergyStar	217.0	225.0
Steamer	EnergyStar	1253.6	1,300.0

<https://portfoliomanager.energystar.gov/pdf/reference/Thermal%20Conversions.pdf?2b52-b268>

August of 2015 Report shows 1.026 factor

https://www.eia.gov/totalenergy/data/monthly/pdf/sec13_4.pdf

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Billing Factor Calculation**

Program Begins: May 1, 2018
 Program Year End: December 31, 2018
 Rate Effective: May 1, 2018

DCRC = DSM Cost Recovery-Current

Program Costs	G-1 Residential	G-1 Commercial
Rebates	\$ 435,375	\$ -
Program Costs (Weatherization & Education)	\$ -	\$ -
Customer Awareness	\$ 50,000	\$ -
Program Administration	\$ 29,541	\$ -
Supplies	\$ 3,350	\$ -
Program Overhead	\$ -	\$ -
TOTAL DCRC	\$ 518,266	\$ -
Excluding Rebates	\$ 82,891	\$ -

DLSA = DSM Lost Sales Adjustment

Current Year Program Participation (Schedule A)

Rate	# of Participants	CCF Conserved	Distribution Charge	Lost Sales
G-1 Residential Customers	1,655	134,950	\$ 0.1825	\$ 24,628
G-1 Commercial Customers	-	-	\$ 0.1825	\$ -
Total Current Year Lost Sales	1,655	134,950		\$ 24,628
Cumulative Prior Years Participation (Schedule B)	-	0	\$ 0.1825	\$ -
TOTAL DLSC	1,655	134,950		\$ 24,600

DIA = DSM Incentive Adjustment

	G-1 Residential	G-1 Commercial
Program Benefits (Schedule C)	\$ 638,005	\$ -
Less: Program Costs	\$ (518,266)	\$ -
Net Resource Savings	\$ 119,739	\$ -
Incentive Percentage	15%	15%
DIA	\$ 18,000	\$ -

DBA = DSM Balance Adjustment

	G-1 Residential		G-1 Commercial	
<u>Under/(Over) Recovery</u>	<u>Estimated Residential Sales</u>	<u>Balancing Adjustment</u>	<u>Under/(Over) Recovery</u>	<u>Estimated Commercial Sales</u>
\$ 30,605.45	109,894,930	\$ 0.00028	\$ (63,177.88)	48,854,530
				\$ (0.00129)

DSMRC = DSM Cost Recovery Component

		G-1 Residential		
Estimated Residential Sales		109,894,930	Ccf	
Estimated Residential Customers		158,221		
	Recovery Amount	Rate, per Ccf	Rate, per Mcf	
DCRC	\$ 518,266	\$ 0.0047	\$ 0.0470	
DLSA	\$ 24,628	\$ 0.0002	\$ 0.0020	
DIA	\$ 18,000	\$ 0.0002	\$ 0.0020	
DBA	\$ 30,605	\$ 0.0003	\$ 0.0028	
TOTAL DSMRC	\$ 591,499	\$ 0.00538	\$ 0.0538	
Annual Cost Recovery per G-1 Residential Customers		\$ 3.74		
		G-1 Commercial		
Estimated Commercial Sales		48,854,530	Ccf	
Estimated Commercial Customers		17,416		
	Recovery Amount	Rate, per Ccf	Rate, per Mcf	
DCRC	\$ -	\$ -	\$ -	
DLSA	\$ -	\$ -	\$ -	
DIA	\$ -	\$ -	\$ -	
DBA	\$ (63,178)	\$ (0.0013)	\$ (0.0129)	
TOTAL DSMRC	\$ (63,178)	\$ (0.0013)	\$ (0.0129)	
Annual Cost Recovery per G-1 Commercial Customers		\$ (3.63)		

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Schedule A - Current Year Participation Detail

Program Year End: December 31, 2018

G-1 Residential Efficiency Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Furnace AFUE 92 - 93	225	109.55	24,648	\$ 250	\$ 56,250	18	DEER
Furnace AFUE 94 - 95	125	122.57	15,321	\$ 325	\$ 40,625	18	DEER
Furnace AFUE 96 or >	350	135.00	47,252	\$ 400	\$ 140,000	18	DEER
Boiler AFUE > 85	-	42.33	-	\$ 250	\$ -	18	DEER
Programmable Thermostat	300	60.32	18,095	\$ 25	\$ 7,500	15	DEER
Totals	1,000	NA	105,316	NA	\$ 244,375		

G-1 Commercial Efficiency Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Furnace AFUE 92 - 93	-	109.55	-	\$ 250	\$ -	18	DEER
Furnace AFUE 94 - 95	-	122.57	-	\$ 325	\$ -	18	DEER
Furnace AFUE 96 or >	-	135.00	-	\$ 400	\$ -	18	DEER
Boiler AFUE >85	-	42.33	-	\$ 250	\$ -	18	DEER
Programmable Thermostat	-	60.32	-	\$ 25	\$ -	15	DEER
Totals	-	NA	-	NA	\$ -		

G-1 Residential Water Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Tank Water Heater EF .62 - .66	330	17.55	5,792	\$ 200	\$ 66,000	13	DEER
Tank Water Heater EF .67 or >	50	36.64	1,832	\$ 300	\$ 15,000	13	DEER
Tankless/Condensing Water Heater EF >.82	275	80.04	22,011	\$ 400	\$ 110,000	20	DEER
Totals	655	NA	29,635	NA	\$ 191,000		

G-1 Commercial Water Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Tank Water Heater EF .62 - .66	-	17.55	-	\$ 200	\$ -	13	DEER
Tank Water Heater EF .67 or >	-	36.64	-	\$ 300	\$ -	13	DEER
Tankless/Condensing Water Heater EF >.82	-	80.04	-	\$ 400	\$ -	20	DEER
Totals	-	NA	-	NA	\$ -		

G-1 Commercial Cooking Equipment Saving:	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Fryer EnergyStar Rated	-	520.73	-	\$ 500	\$ -	8	Energy Star
Griddle EnergyStar Rated	-	115.72	-	\$ 500	\$ -	12	Energy Star
Oven EnergyStar Rated	-	216.97	-	\$ 500	\$ -	10	NEEP
Steamer EnergyStar Rated	0	1,253.62	-	\$ 500	\$ -	10	Energy Star
Totals	-	NA	-	NA	\$ -		

Weatherization	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
	-	100.3875	-	\$ 3,000	\$ -	25	DEER

Education Program

Totals by Customer Class	Program Participants	CCF Conservation		Rebate	
		Per Participant	Total	Amount	Total
G-1 Residential Totals	1,655	Varies see above	134,950	Varies see above	\$ 435,375
G-1 Commercial Totals	-	Varies see above	-	Varies see above	\$ -

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Annual Savings

SAVINGS

Year	G-1 Res. Heating	G-1 Comm. Heating	G-1 Res. Water	G-1 Comm. Water	G-1 Comm. Cooking Equipment	Weather-ization	Res. Total	Comm. Total	Total
1	105,316	-	29,635	-	-	-	134,950	-	134,950
2	105,316	-	29,635	-	-	-	134,950	-	134,950
3	105,316	-	29,635	-	-	-	134,950	-	134,950
4	105,316	-	29,635	-	-	-	134,950	-	134,950
5	105,316	-	29,635	-	-	-	134,950	-	134,950
6	105,316	-	29,635	-	-	-	134,950	-	134,950
7	105,316	-	29,635	-	-	-	134,950	-	134,950
8	105,316	-	29,635	-	-	-	134,950	-	134,950
9	105,316	-	29,635	-	-	-	134,950	-	134,950
10	105,316	-	29,635	-	-	-	134,950	-	134,950
11	105,316	-	29,635	-	-	-	134,950	-	134,950
12	105,316	-	29,635	-	-	-	134,950	-	134,950
13	105,316	-	29,635	-	-	-	134,950	-	134,950
14	105,316	-	22,011	-	-	-	127,326	-	127,326
15	105,316	-	22,011	-	-	-	127,326	-	127,326
16	87,220	-	22,011	-	-	-	109,231	-	109,231
17	87,220	-	22,011	-	-	-	109,231	-	109,231
18	87,220	-	22,011	-	-	-	109,231	-	109,231
19	-	-	22,011	-	-	-	22,011	-	22,011
20	-	-	22,011	-	-	-	22,011	-	22,011
21	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Energy Federation, Inc. Administrative Costs**

EFI Budget Estimates for Administration of Kentucky DSM Appliance Rebate Program

Annual Budget

	Unit Cost	Residential Costs	Commercial Costs	Total Cost
Estimated Rebates		1,655	0	
Processing fee	\$ 9.00	\$ 14,895	\$ -	\$ 14,895
"Cost of Money" Charge	1%	\$ 4,354	\$ -	\$ 4,354
Reservation Fee	\$ 4.00	\$ 6,620	\$ -	\$ 6,620
Customer e-mails (EFI to cust.)	\$ 2.50	\$ 828	\$ -	\$ 828
Customer Service Phone Chg.(hours)	\$ 39.00	\$ 1,345	\$ -	\$ 1,345
Program Management fee	\$ 1,500	\$ 1,500	\$ -	\$ 1,500
Totals		\$ 29,541	\$ -	\$ 29,541

Atmos Energy
Demand Side Management (DSM) Program
DSM APPLIANCE INFORMATION

FURNACES					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 90% Efficiency	Incremental Cost
Bowling Green	York	2,000 sq. ft.	\$ 1,950	\$ 2,467	\$ 517
Bowling Green	Amana	2,000 sq. ft.	\$ 1,000	\$ 1,570	\$ 570
Bowling Green	Trane	2,000 sq. ft.	\$ 1,450	\$ 1,700	\$ 250
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 2,500	\$ 1,100
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Owensboro	York	2,000 sq. ft.	\$ 725	\$ 1,050	\$ 325
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,250	\$ 550
Average Incremental Cost					\$ 602

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 92% Efficiency	Incremental Cost
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 2,200	\$ 800
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Bowling Green	Amana	2,000 sq. ft.	\$ 1,000	\$ 2,026	\$ 1,026
Bowling Green	York	2,000 sq. ft.	\$ 1,950	\$ 2,467	\$ 517
Owensboro	Heil	2,000 sq. ft.	\$ 750	\$ 1,200	\$ 450
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,300	\$ 600
Average Incremental Cost					\$ 716
Average Incremental Cost 90-92 AFUE					\$ 654

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 94% Efficiency	Incremental Cost
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,380	\$ 680
Owensboro	York	2,000 sq. ft.	\$ 725	\$ 1,150	\$ 425
Average Incremental Cost					\$ 668

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 96% Efficiency	Incremental Cost
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 3,200	\$ 1,800
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 3,600	\$ 2,000
Owensboro	York	2,000 sq. ft.	\$ 700	\$ 1,200	\$ 500
Owensboro	Heil	2,000 sq. ft.	\$ 750	\$ 1,400	\$ 650
Average Incremental Cost					\$ 1,238

Boilers					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 85% Efficiency	Incremental Cost
Owensboro	A.O. Smith	2,000 sq. ft.	\$ 8,150	\$ 9,865	\$ 1,715
Danville	Locinar	2,000 sq. ft.	\$ 7,950	\$ 9,400	\$ 1,450
Average Incremental Cost					\$ 1,583

WATER HEATERS - TANK TYPE					
Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 62% Efficiency	Incremental Cost
2011 ASHRAE Winter Conference					\$ 38
Average Incremental Cost					\$ 38

Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 67% Efficiency	Incremental Cost
Lowe's	A.O. Smith	50 gallon	\$ 409	\$ 656	\$ 247
Home Depot	Rheem	40 gallon	\$ 400	\$ 639	\$ 239
Lowe's	State	40 gallon	\$ 379	\$ 935	\$ 556
Average Incremental Cost					\$ 347

WATER HEATERS - TANKLESS					
Contractor Location	Brand Comparison	Unit Sizing	58% Eff Tank Type	82% Eff. Tankless	Incremental Cost
Owensboro	Rinnai	180,000 Btu	\$ 404	\$ 1,000	\$ 596
Paducah	Navian	199,000 Btu	\$ 350	\$ 1,136	\$ 786
Bowling Green	Rinnai	199,000 Btu	\$ 409	\$ 1,210	\$ 801
Bowling Green	A.O. Smith	199,000 Btu	\$ 409	\$ 1,331	\$ 922
Owensboro	Navian	199,000 Btu	\$ 429	\$ 1,150	\$ 721
Paducah	Rheem	199,000 Btu	\$ 390	\$ 1,300	\$ 1,210
Average Incremental Cost					\$ 839

COMMERCIAL GAS EQUIPMENT					
Taken from Savings Calculator for EnergyStar Equipment developed by U.S. EPA & DOE					
Gas Fryer					\$ 468
Gas Griddle					\$ 121
Gas Oven					\$ 119
Gas Steamer					\$ 2,103
Average Incremental Cost					\$ 703

THERMOSTATS					
Contractor Location	Brand Comparison	Model Number	Non-Programmable	Programmable	Incremental Cost
Lowe's	Honeywell	RTH6350D1000	\$ 40	\$ 60	\$ 20
Lowe's	Lux	TX9600TS	\$ 40	\$ 68	\$ 28
Lowe's	Iris	CT-101-L	\$ 40	\$ 99	\$ 59
Lowe's	Honeywell	RTH7600D1048	\$ 40	\$ 89	\$ 49
Average Incremental Cost					\$ 39

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Atmos Energy
Demand Side Management (DSM) Program
Schedule B - Cumulative Prior Years Program Participation

Program Year End: December 31, 2018

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Cumulative Total
Program Participants											
<u>A. High Efficiency Appliances</u>	0	0	0	0	-	0	0	0			-
<u>B. Weatherization Program</u>	0	0	0	0	0	0	0	0			-
Total Participants	0	0	0	0	0	0	0	0			-
Total Conservation in Ccf											
<u>A. High Efficiency Appliance Savings</u>	0	0	0	0	0	0	0	0			-
<u>B. Weatherization Program</u>	0	0	0	0	0	0	0	0			-
Total Ccf Savings	0	0	0	0	0	0	0	0			-
Total Lost Sales	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			\$ -

Atmos Energy's Demand Side Management Application October 2017

Daily Settlements for Henry Hub Natural Gas Futures (PRELIMINARY) Trade Date: 10/24/2017

http://www.cmegroup.com/trading/energy/natural-gas/natural-gas_quotes_settlements_futures.html

Month	Open	High	Low	Last	Change	Settle	Estimated Volume	Prior Day Open Interest
Nov-17	2.971	3.004	2.960	2.988	(0.017)	2.974	114,500	46,837
Dec-17	3.139	3.165	3.117	3.148	(0.021)	3.135	105,230	267,776
Jan-18	3.258	3.285	3.243	3.268	(0.023)	3.257	44,476	201,511
Feb-18	3.260	3.287	3.246	3.27	(0.024)	3.260	16,371	82,361
Mar-18	3.218	3.243	3.201	3.227	(0.024)	3.216	33,907	174,362
Apr-18	2.979	2.995	2.975	2.992	(0.003)	2.989	29,734	126,898
May-18	2.960	2.970	2.950	2.964	(0.002)	2.964	10,912	77,441
Jun-18	2.990	2.997	2.978	2.991	(0.002)	2.992	805	32,520
Jul-18	3.017	3.024	3.006	3.02	(0.002)	3.020	3,064	41,447
Aug-18	3.019	3.026	3.008	3.018	(0.002)	3.021	2,014	31,390
Sep-18	3.000	3.007	2.990	3.002	(0.003)	3.002	1,963	33,363
Oct-18	3.023	3.030	3.012	3.026	(0.002)	3.025	7,560	69,251
Nov-18	3.075	3.077	3.061	3.077	(0.003)	3.077	1,053	28,248
Dec-18	3.204	3.212	3.195	3.204	(0.003)	3.208	1,393	28,455
Jan-19	3.285	3.291	3.271	3.286	(0.003)	3.287	2,524	27,263
Feb-19	3.241	3.249	3.240	3.249	(0.002)	3.255	423	8,269
Mar-19	3.168	3.179	3.161	3.177	-	3.178	1,371	21,240
Apr-19	2.783	2.791	2.772	2.787	0.004	2.790	2,240	16,350
May-19	2.734	2.735	2.734	2.735	0.003	2.742	765	5,002
Jun-19	2.756	2.756	2.756	2.756	0.002	2.763	196	4,073
Jul-19	2.778	2.784	2.778	2.784	0.002	2.785	84	3,786
Aug-19	2.771	2.775	2.771	2.775	0.002	2.785	20	2,673
Sep-19	2.755	2.765	2.755	2.765	0.002	2.768	23	2,485
Oct-19	2.792	2.792	2.776	2.790	-	2.790	513	4,131
Nov-19	-	-	-	0.000	(0.001)	2.850	5	2,664
Dec-19	-	-	-	0.000	(0.001)	2.998	2	2,693
Jan-20	-	-	-	-	(0.001)	3.099	52	1,470
Feb-20	-	-	-	-	-	3.076	-	589
Mar-20	-	-	-	-	0.002	3.022	61	858
Apr-20	-	-	-	0.000	(0.001)	2.714	61	1,017
May-20	-	-	-	0.000	(0.001)	2.689	9	627
Jun-20	-	-	-	0.000	(0.001)	2.712	9	560
Jul-20	-	-	-	0.000	(0.001)	2.738	-	505
Aug-20	0	0	0	0.000	(0.001)	2.750	-	468
Sep-20	0	0	0	0.000	(0.001)	2.750	-	469
Oct-20	-	-	-	-	(0.001)	2.776	-	517
Nov-20	-	-	-	-	(0.001)	2.849	-	501
Dec-20	-	-	-	-	(0.003)	3.002	-	780
Jan-21	3.11	3.11	3.11	3.105	(0.004)	3.114	5	265
Feb-21	-	-	-	-	(0.006)	3.091	-	186
Mar-21	-	-	-	-	-0.006	3.037	-	187
Apr-21	-	-	-	-	-0.009	2.739	-	116
May-21	-	-	-	-	-0.009	2.714	-	102
Jun-21	-	-	-	-	-0.009	2.737	-	89
Jul-21	-	-	-	-	-0.009	2.761	-	89
Aug-21	-	-	-	-	-0.009	2.777	-	92
Sep-21	-	-	2.77	2.771	-0.009	2.777	-	100
Oct-21	-	-	-	-	-0.009	2.803	-	73
Nov-21	-	-	-	-	-0.009	2.877	-	72

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Dec-21	-	-	-	-	-0.009	3.030	0	100
Jan-22	-	-	-	-	0.000	3.142	-	18
Feb-22	-	-	-	-	-0.001	3.119	-	22
Mar-22	-	-	-	-	-0.001	3.063	-	19
Apr-22	-	-	-	-	-0.001	2.768	-	14
May-22	4.22	4.22	4.22	-	-0.001	2.750	0	20
Jun-22	-	-	-	-	-0.001	2.775	-	14
Jul-22	-	-	-	-	-0.001	2.802	-	15
Aug-22	-	-	-	-	-0.001	2.822	-	15
Sep-22	-	-	-	-	-0.001	2.822	-	14
Oct-22	-	-	-	-	-0.001	2.848	-	14
Nov-22	-	-	-	-	-0.001	2.923	-	14
Dec-22	-	-	-	-	-0.001	3.078	-	19
Jan-23	-	-	-	-	-0.001	3.201	-	4
Feb-23	-	-	-	-	-0.001	3.178	-	1
Mar-23	-	-	-	-	-0.001	3.121	-	12
Apr-23	-	-	-	-	-0.001	2.829	-	12
May-23	-	-	-	-	-0.001	2.811	-	19
Jun-23	-	-	-	-	-0.001	2.836	-	12
Jul-23	-	-	-	-	-0.001	2.863	-	12
Aug-23	-	-	-	-	-0.001	2.886	-	23
Sep-23	-	-	-	-	-0.001	2.889	-	1
Oct-23	-	-	-	-	-0.001	2.919	-	16
Nov-23	-	-	-	-	-0.001	2.994	-	12
Dec-23	-	-	-	-	-0.001	3.149	-	1
Jan-24	-	-	-	-	-0.001	3.272	-	0
Feb-24	-	-	-	-	-0.001	3.246	-	0
Mar-24	-	-	-	-	-0.001	3.184	-	0
Apr-24	-	-	-	-	-0.001	2.892	-	0
May-24	-	-	-	-	-0.001	2.874	-	2
Jun-24	-	-	-	-	-0.001	2.900	-	0
Jul-24	-	-	-	-	-0.001	2.928	-	0
Aug-24	-	-	-	-	-0.001	2.951	-	0
Sep-24	-	-	-	-	-0.001	2.955	-	0
Oct-24	-	-	-	-	-0.001	2.988	-	0
Nov-24	-	-	-	-	-0.001	3.063	-	0
Dec-24	-	-	-	-	-0.001	3.218	-	0
Jan-25	-	-	-	-	-0.001	3.341	-	0
Feb-25	-	-	-	-	-0.001	3.312	-	0
Mar-25	-	-	-	-	-0.001	3.247	-	0
Apr-25	-	-	-	-	-0.001	2.955	-	-
May-25	-	-	-	-	-0.001	2.937	-	1
Jun-25	-	-	-	-	-0.001	2.965	-	-
Jul-25	-	-	-	-	-0.001	2.995	-	0
Aug-25	-	-	-	-	-0.001	3.024	-	0
Sep-25	-	-	-	-	-0.001	3.028	-	-
Oct-25	-	-	-	-	-0.001	3.063	-	-
Nov-25	-	-	-	-	-0.001	3.138	-	-
Dec-25	-	-	-	-	-0.001	3.293	-	-
Jan-26	-	-	-	-	-0.001	3.416	-	-
Feb-26	-	-	-	-	-0.001	3.383	-	-
Mar-26	-	-	-	-	-0.001	3.311	-	0
Apr-26	-	-	-	-	-0.001	3.008	-	-
May-26	-	-	-	-	-0.001	2.990	-	-
Jun-26	-	-	-	-	-0.001	3.023	-	-

Atmos Energy's Demand Side Management Application October 2017

Jul-26	-	-	-	-	-0.001	3.063	-	-
Aug-26	-	-	-	-	-0.001	3.101	-	-
Sep-26	-	-	-	-	-0.001	3.111	-	-
Oct-26	-	-	-	-	-0.001	3.156	-	-
Nov-26	-	-	-	-	-0.001	3.232	-	-
Dec-26	-	-	-	-	-0.001	3.389	-	-
Jan-27	-	-	-	-	-0.001	3.524	-	-
Feb-27	-	-	-	-	-0.001	3.489	-	-
Mar-27	-	-	-	-	-0.001	3.414	-	-
Apr-27	-	-	-	-	-0.001	3.099	-	-
May-27	-	-	-	-	-0.001	3.074	-	-
Jun-27	-	-	-	-	-0.001	3.099	-	-
Jul-27	-	-	-	-	-0.001	3.128	-	-
Aug-27	-	-	-	-	-0.001	3.156	-	-
Sep-27	-	-	-	-	-0.001	3.166	-	-
Oct-27	-	-	-	-	-0.001	3.206	-	-
Nov-27	-	-	-	-	-0.001	3.282	-	-
Dec-27	-	-	-	-	-0.001	3.439	-	-
Jan-28	-	-	-	-	-0.001	3.579	-	-
Feb-28	-	-	-	-	-0.001	3.544	-	-
Mar-28	-	-	-	-	-0.001	3.469	-	-
Apr-28	-	-	-	-	-0.001	3.139	-	-
May-28	-	-	-	-	-0.001	3.124	-	-
Jun-28	-	-	-	-	-0.001	3.159	-	-
Jul-28	-	-	-	-	-0.001	3.204	-	-
Aug-28	-	-	-	-	-0.001	3.244	-	-
Sep-28	-	-	-	-	-0.001	3.259	-	-
Oct-28	-	-	-	-	-0.001	3.314	-	-
Nov-28	-	-	-	-	-0.001	3.392	-	-
Dec-28	-	-	-	-	-0.001	3.550	-	-
Jan-29	-	-	-	-	-0.001	3.693	-	-
Feb-29	-	-	-	-	-0.001	3.658	-	-
Mar-29	-	-	-	-	-0.001	3.583	-	-
Apr-29	-	-	-	-	-0.001	3.228	-	-
May-29	-	-	-	-	-0.001	3.213	-	-
Jun-29	-	-	-	-	-0.001	3.248	-	-
Jul-29	-	-	-	-	-0.001	3.293	-	-
Aug-29	-	-	-	-	-0.001	3.333	-	-
Sep-29	-	-	-	-	-0.001	3.348	-	-
Oct-29	-	-	-	-	-0.001	3.403	-	-
Nov-29	-	-	-	-	-0.001	3.481	-	-

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

$$NPV_P = B_P - C_P$$

$B_P = \$$	1,274,302
$C_P =$	869,202
$NPV_P = \$$	405,100

Benefit-Cost Ratio **1.47**

Conclusion:

Since the net present value is greater than zero, the program will benefit the participants

Where:

- NPV_P = Net present value to all participants
- B_P = NPV of benefit to all participants
- C_P = NPV of cost to all participants

$$B_P = \sum_{t=1}^N \frac{BR_t + TC_t + INC_t}{(1+d)^{t-1}}$$

$$C_P = \sum_{t=1}^N \frac{PC_t + BI_t}{(1+d)^{t-1}}$$

- BR_t = Bill reductions in year t (not accounted for in participant cost test).
- BI_t = Bill increases in year t
- TC_t = Tax credits in year t
- INC_t = Incentives paid to the participant by the Utility
- PC_t = Participant costs in year t, which include incremental capital costs

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

$$B_p = \sum_{t=1}^N \frac{BR_t + TC_t + INC_t}{(1+d)^{t-1}}$$

t	BR _t	TC _t	INC _t	B _p
1	90,954	-	435,375	526,329
2	91,636	-	-	91,636
3	87,945	-	-	87,945
4	86,472	-	-	86,472
5	86,978	-	-	86,978
6	87,802	-	-	87,802
7	89,184	-	-	89,184
8	90,623	-	-	90,623
9	92,119	-	-	92,119
10	93,469	-	-	93,469
11	94,846	-	-	94,846
12	96,250	-	-	96,250
13	97,683	-	-	97,683
14	93,543	-	-	93,543
15	94,949	-	-	94,949
16	82,685	-	-	82,685
17	83,940	-	-	83,940
18	85,220	-	-	85,220
19	17,435	-	-	17,435
20	17,704	-	-	17,704
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
	1,661,437	-	435,375	2,096,812

7.730% Discount Rate

\$1,274,302 NPV

- BR_t = Bill reductions in year t
 TC_t = Tax credits in year t
 INC_t = Incentives paid to the participant by the Utility

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Participant Test

BR_t = Bill reductions in year t

G-1 Residential					
t	(1) Ccf Conserved	(2) Projected Gas Cost*	(3) Demand Charge	(4) (2) + (3) Combined Rate	(1) x (4) BR _t
1	134,950	\$ 0.491	\$ 0.1825	\$ 0.67	\$ 90,954
2	134,950	\$ 0.497	0.1825	0.68	91,636
3	134,950	\$ 0.469	0.1825	0.65	87,945
4	134,950	\$ 0.458	0.1825	0.64	86,472
5	134,950	\$ 0.462	0.1825	0.64	86,978
6	134,950	\$ 0.468	0.1825	0.65	87,802
7	134,950	\$ 0.478	0.1825	0.66	89,184
8	134,950	\$ 0.489	0.1825	0.67	90,623
9	134,950	\$ 0.500	0.1825	0.68	92,119
10	134,950	\$ 0.510	0.1825	0.69	93,469
11	134,950	\$ 0.520	0.1825	0.70	94,846
12	134,950	\$ 0.531	0.1825	0.71	96,250
13	134,950	\$ 0.541	0.1825	0.72	97,683
14	127,326	\$ 0.552	0.1825	0.73	93,543
15	127,326	\$ 0.563	0.1825	0.75	94,949
16	109,231	\$ 0.574	0.1825	0.76	82,685
17	109,231	\$ 0.586	0.1825	0.77	83,940
18	109,231	\$ 0.598	0.1825	0.78	85,220
19	22,011	\$ 0.610	0.1825	0.79	17,435
20	22,011	\$ 0.622	0.1825	0.80	17,704
21	-	\$ 0.634	0.1825	0.82	-
22	-	\$ 0.647	0.1825	0.83	-
23	-	\$ 0.660	0.1825	0.84	-
24	-	\$ 0.673	0.1825	0.86	-
25	-	\$ 0.687	0.1825	0.87	-
					\$ 1,661,437

G-1 Commercial					
t	(1) Ccf Conserved	(2) Projected Gas Cost*	(3) Demand Charge	(4) (2) + (3) Combined Rate	(1) x (4) BR _t
1	-	\$ 0.491	\$ 0.1825	\$ 0.67	\$ -
2	-	\$ 0.497	\$ 0.1825	\$ 0.68	\$ -
3	-	\$ 0.469	\$ 0.1825	\$ 0.65	\$ -
4	-	\$ 0.458	\$ 0.1825	\$ 0.64	\$ -
5	-	\$ 0.462	\$ 0.1825	\$ 0.64	\$ -
6	-	\$ 0.468	\$ 0.1825	\$ 0.65	\$ -
7	-	\$ 0.478	\$ 0.1825	\$ 0.66	\$ -
8	-	\$ 0.489	\$ 0.1825	\$ 0.67	\$ -
9	-	\$ 0.500	\$ 0.1825	\$ 0.68	\$ -
10	-	\$ 0.510	\$ 0.1825	\$ 0.69	\$ -
11	-	\$ 0.520	\$ 0.1825	\$ 0.70	\$ -
12	-	\$ 0.531	\$ 0.1825	\$ 0.71	\$ -
13	-	\$ 0.541	\$ 0.1825	\$ 0.72	\$ -
14	-	\$ 0.552	\$ 0.1825	\$ 0.73	\$ -
15	-	\$ 0.563	\$ 0.1825	\$ 0.75	\$ -
16	-	\$ 0.574	\$ 0.1825	\$ 0.76	\$ -
17	-	\$ 0.586	\$ 0.1825	\$ 0.77	\$ -
18	-	\$ 0.598	\$ 0.1825	\$ 0.78	\$ -
19	-	\$ 0.610	\$ 0.1825	\$ 0.79	\$ -
20	-	\$ 0.622	\$ 0.1825	\$ 0.80	\$ -
21	-	\$ 0.634	\$ 0.1825	\$ 0.82	\$ -
22	-	\$ 0.647	\$ 0.1825	\$ 0.83	\$ -
23	-	\$ 0.660	\$ 0.1825	\$ 0.84	\$ -
24	-	\$ 0.673	\$ 0.1825	\$ 0.86	\$ -
25	-	\$ 0.687	\$ 0.1825	\$ 0.87	\$ -
					\$ -

- (1) Total projected Ccf savings, based on budgeted participation levels in year one of the program.
 (2) Based on the Company's current G-1 GCA as well as NYMEX futures, converted to per ccf residential cost; where t = 1 = 2017
 (3) Volumetric charge for residential customers per Sheet No. 8 of the Company's tariff.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Participant Test

TC_t = Tax credits in year t (presently no federal tax credits are available in 2014)

	(1) Program Participants	(2) Residential Energy Credits	(1) x (2) TC_t
<u>A. High Efficiency Heating Savings</u>			
<u>B. High Efficiency Water Heating Savings</u>			
Total	-	\$	-

Note: participants are eligible for tax credits in the year they incur expenditures for high-efficiency appliances, since this is an analysis of participation in a single year, the tax credit is applicable only where $t = 1$

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

INC_t = Incentives paid to the participant by the Utility, for $t = 1$

<u>Energy Savings by Customer Class</u>	<u>INC_t</u>
G-1 Residential Customers	\$ 435,375
G-1 Commercial Customers	-
Total	\$ 435,375

Note: rebates are given to participant in the year they elect to participate, since this is an analysis of participation in a single year, the rebate is applicable only where $t = 1$

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

$$C_P = \sum_{t=1}^N \frac{PC_t + BI_t}{(1+d)^{t-1}}$$

t	(1) BI _t	(2) PC _t	(1) + (2) C _P
1	-	936,391	936,391
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-
	-	936,391	936,391

7.730% Discount Rate

\$869,202 NPV

BI_t = Bill increases in year t (not accounted for in participant cost test).

PC_t = Participant costs in year t, which include
incremental capital costs

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

PC_t = Participant costs for $t = 1$

	(1) Program Participants	(2) Incremental Cost	(1) x (2) PC_t
<u>A. High Efficiency Heating Savings</u>			
Furnace AFUE 90 - 93	225	\$ 654	\$ 147,202
Furnace AFUE 94 - 95	125	668	83,542
Furnace AFUE 96 or >	350	1,238	433,125
Boiler AFUE 85 -89	-	1,583	-
Programmable Thermostat	300	39	11,799
Total	1,000		675,668
<u>B. High Efficiency Water Heating Savings</u>			
Tank W/H .62 - .66 EF	330	\$ 38	\$ 12,540
Tank W/H .67 or > EF	50	347	17,367
Tankless W/H .82 - 90 EF	275	839	230,817
Total	655		\$ 260,723
<u>C. High Efficiency Commercial Kitchen Equipment</u>			
Gas Fryer	-	\$ 468	\$ -
Gas Griddle	-	121	-
Gas Oven	-	119	-
Gas Steamer	-	2,103	-
Total	-		\$ -

IC = Incremental Costs for purchasing high-efficiency unit

(1) Based on budgeted participation levels in year one of the CEP.

Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test

$$NPV_{pa} = B_{pa} - C_{pa}$$

$B_{pa} = \$$	638,005
$C_{pa} =$	481,079
$NPV_{pa} = \$$	156,926

Benefit-Cost Ratio 1.33

Conclusion:

Since the net present value is greater than zero, the program would decrease costs to the utility

Where:

- NPV_{pa} = Net present value of total cost of the resource
- B_{pa} = NPV of benefits of the program
- C_{pa} = NPV of costs of the programs

$$B_{pa} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

$$C_{pa} = \sum_{t=1}^N \frac{PRC_t + INC_t + UIC_t}{(1+d)^{t-1}}$$

- UAC_t = Utility avoided supply costs in year t
- PRC_t = Program Administrator Costs in year t
- INC_t = Incentives paid to the participant by the Utility
- UIC_t = Utility increased supply costs in year t

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test**

$$B_{pa} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

(1)

<u>t</u>	<u>UAC_t</u>
1	\$ 66,325
2	\$ 67,008
3	\$ 63,316
4	\$ 61,843
5	\$ 62,350
6	\$ 63,173
7	\$ 64,556
8	\$ 65,994
9	\$ 67,491
10	\$ 68,841
11	\$ 70,217
12	\$ 71,622
13	\$ 73,054
14	\$ 70,306
15	\$ 71,712
16	\$ 62,750
17	\$ 64,005
18	\$ 65,286
19	\$ 13,418
20	\$ 13,687
21	\$ -
22	\$ -
23	\$ -
24	\$ -
25	\$ -
<u>\$</u>	<u>1,226,954</u>

7.730% Discount Rate

\$638,005 NPV

(1) UAC_t scheduled per calculation performed for RIM test

UAC_t = Utility avoided supply costs in year t

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test**

$$C_{pa} = \sum_{t=1}^N \frac{PRC_t + INC_t + UIC_t}{(1+d)^{t-1}}$$

t	(1) PRC _t	(2) INC _t	(3) UIC _t	C _{pa}
1	82,891	435,375	-	518,266
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
	82,891	435,375	-	518,266

7.730% Discount Rate

\$481,079 NPV

- PRC_t = Program Administrator Costs in year t
- INC_t = Incentives paid to the participant by the Utility
- UIC_t = Utility increased supply costs in year t

- (1) Program costs scheduled from PRC_t which was calculated for the RIM Test
- (2) Incentives scheduled from INC_t which was calculated for the Participant test
- (3) No known increased supply costs as a result of operating the CEP

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test**

$$NPV_{RIM} = B_{RIM} - C_{RIM}$$

$B_{RIM} = \$$	638,005
$C_{RIM} =$	1,351,245
$NPV_{RIM} = \$$	(713,240)

Benefit-Cost Ratio **0.47**

Conclusion:

Since the net present value is negative, the program will cause an increase customer rates.

Where:

- NPV_{RIM} = Net present value levels
- B_{RIM} = Benefits to rate levels or customer bills
- C_{RIM} = Costs to rate levels or customer bills

$$B_{RIM} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

$$C_{RIM} = \sum_{t=1}^N \frac{UIC_t + RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$

- UAC_t = Utility avoided supply costs in year t
- UIC_t = Utility increased supply costs in year t
- RL_t = Revenue loss from reduced sales in year t
- PRC_t = Program administrator costs in year t
- INC_t = Incentives paid to the participant by the sponsoring utility in year t

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test**

$$B_{RIM} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

t	UAC _t
1	66,325
2	67,008
3	63,316
4	61,843
5	62,350
6	63,173
7	64,556
8	65,994
9	67,491
10	68,841
11	70,217
12	71,622
13	73,054
14	70,306
15	71,712
16	62,750
17	64,005
18	65,286
19	13,418
20	13,687
21	-
22	-
23	-
24	-
25	-
	1,226,954

7.730% Discount Rate

\$638,005 NPV

UAC_t = Utility avoided supply costs in year t

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test

UAC_t = Utility avoided supply costs in year t

t	Projected Gas Cost*	G-1 Residential		G-1 Commercial			UAC_t
		Annual Savings	Commodity Savings	Projected Gas Cost*	Annual Savings	Commodity Savings	
1	\$ 0.491	134,950	\$ 66,325	\$ 0.491	-	\$ -	\$ 66,325
2	\$ 0.497	134,950	\$ 67,008	\$ 0.497	-	\$ -	\$ 67,008
3	\$ 0.469	134,950	\$ 63,316	\$ 0.469	-	\$ -	\$ 63,316
4	\$ 0.458	134,950	\$ 61,843	\$ 0.458	-	\$ -	\$ 61,843
5	\$ 0.462	134,950	\$ 62,350	\$ 0.462	-	\$ -	\$ 62,350
6	\$ 0.468	134,950	\$ 63,173	\$ 0.468	-	\$ -	\$ 63,173
7	\$ 0.478	134,950	\$ 64,556	\$ 0.478	-	\$ -	\$ 64,556
8	\$ 0.489	134,950	\$ 65,994	\$ 0.489	-	\$ -	\$ 65,994
9	\$ 0.500	134,950	\$ 67,491	\$ 0.500	-	\$ -	\$ 67,491
10	\$ 0.510	134,950	\$ 68,841	\$ 0.510	-	\$ -	\$ 68,841
11	\$ 0.520	134,950	\$ 70,217	\$ 0.520	-	\$ -	\$ 70,217
12	\$ 0.531	134,950	\$ 71,622	\$ 0.531	-	\$ -	\$ 71,622
13	\$ 0.541	134,950	\$ 73,054	\$ 0.541	-	\$ -	\$ 73,054
14	\$ 0.552	127,326	\$ 70,306	\$ 0.552	-	\$ -	\$ 70,306
15	\$ 0.563	127,326	\$ 71,712	\$ 0.563	-	\$ -	\$ 71,712
16	\$ 0.574	109,231	\$ 62,750	\$ 0.574	-	\$ -	\$ 62,750
17	\$ 0.586	109,231	\$ 64,005	\$ 0.586	-	\$ -	\$ 64,005
18	\$ 0.598	109,231	\$ 65,286	\$ 0.598	-	\$ -	\$ 65,286
19	\$ 0.610	22,011	\$ 13,418	\$ 0.610	-	\$ -	\$ 13,418
20	\$ 0.622	22,011	\$ 13,687	\$ 0.622	-	\$ -	\$ 13,687
21	\$ 0.634	-	\$ -	\$ 0.634	-	\$ -	\$ -
22	\$ 0.647	-	\$ -	\$ 0.647	-	\$ -	\$ -
23	\$ 0.660	-	\$ -	\$ 0.660	-	\$ -	\$ -
24	\$ 0.673	-	\$ -	\$ 0.673	-	\$ -	\$ -
25	\$ 0.687	-	\$ -	\$ 0.687	-	\$ -	\$ -
Total Commodity Savings			\$ 1,226,954			\$ -	\$ 1,226,954

- (1) Total projected Ccf savings, based on budgeted participation levels in year one of the program. These amounts continue to be saved year after year.
- (2) Based on Department of Energy 2011 "Annual Energy Outlook", converted to per ccf residential cost; where t = 1 = 2012

Note: the above analysis is based on the CCF conserved from a single year of participation in the CEP

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test

$$C_{RIM} = \sum_{t=1}^N \frac{UIC_t + RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$

t	(1) UIC _t	(2) RL _t	(3) PRC _t	(4) INC _t	(1) + (2) C _{RIM}
1	-	90,954	82,891	435,375	609,220
2	-	91,636		-	91,636
3	-	87,945		-	87,945
4	-	86,472		-	86,472
5	-	86,978		-	86,978
6	-	87,802		-	87,802
7	-	89,184		-	89,184
8	-	90,623		-	90,623
9	-	92,119		-	92,119
10	-	93,469		-	93,469
11	-	94,846		-	94,846
12	-	96,250		-	96,250
13	-	97,683		-	97,683
14	-	93,543		-	93,543
15	-	94,949		-	94,949
16	-	82,685		-	82,685
17	-	83,940		-	83,940
18	-	85,220		-	85,220
19	-	17,435		-	17,435
20	-	17,704		-	17,704
21	-	-		-	-
22	-	-		-	-
23	-	-		-	-
24	-	-		-	-
25	-	-		-	-
	-	1,661,437	82,891	435,375	2,179,703

7.730% Discount Rate

\$1,351,245 NPV

- UIC_t = Utility increased supply costs in year t
- RL_t = Revenue loss from reduced sales in year t
- PRC_t = Program administrator costs in year t
- INC_t = Incentives paid to the participant by the sponsoring utility in year t

- (1) No known increased supply costs
- (2) see RIM Test RG; column (2)
- (3) see RIM Test RG; column (3)
- (4) Scheduled per calculation performed for Participant Test

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Total Resource Cost (TRC) Test

$$NPV_{TRC} = B_{TRC} - C_{TRC}$$

$B_{TRC} =$	\$	638,005
$C_{TRC} =$		946,145
$NPV_{TRC} =$	\$	(308,140)

Benefit-Cost Ratio **0.67**

Conclusion:

Since the net present value is greater than zero, the program is a less expensive resource than the supply option upon which the marginal costs are based.

Where:

- NPV_{TRC} = Net present value of total cost of the resource
- B_{TRC} = NPV of benefits of the program
- C_{TRC} = NPV of costs of the programs

$$B_{TRC} = \sum_{t=1}^N \frac{UAC_t + TC_t}{(1+d)^{t-1}}$$

$$C_{TRC} = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

- UAC_t = Utility avoided supply costs in year t
- TC_t = Tax credits in year t
- UIC_t = Utility increased supply costs in year t
- PRC_t = Program administrator costs in year t
- PCN_t = Net participant costs

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$B_{TRC} = \sum_{t=1}^N \frac{UAC_t + TC_t}{(1+d)^{t-1}}$$

t	(1) UAC _t	(2) TC _t	B _{TRC}
1	\$ 66,325	-	\$ 66,325
2	67,008	-	67,008
3	63,316	-	63,316
4	61,843	-	61,843
5	62,350	-	62,350
6	63,173	-	63,173
7	64,556	-	64,556
8	65,994	-	65,994
9	67,491	-	67,491
10	68,841	-	68,841
11	70,217	-	70,217
12	71,622	-	71,622
13	73,054	-	73,054
14	70,306	-	70,306
15	71,712	-	71,712
16	62,750	-	62,750
17	64,005	-	64,005
18	65,286	-	65,286
19	13,418	-	13,418
20	13,687	-	13,687
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-
25	-	-	-
	\$ 1,226,954	-	\$ 1,226,954

7.730% Discount Rate

\$638,005 NPV

UAC_t = Utility avoided supply costs in year t

TC_t = Tax Credits in year t

- (1) Scheduled per calculation performed for RIM Test
- (2) Scheduled per calculation performed for Participant Test

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test**

$$C_{TRC} = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

t	(1) PRC _t	(2) PCN _t	(3) UIC _t	C _{TRC}
1	82,891	936,391	-	1,019,282
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
	82,891	936,391	-	1,019,282

7.730% Discount Rate

\$946,145 NPV

- PRC_t = Program administrator costs in year t
- PCN_t = Net participant costs
- UIC_t = Utility increased supply costs in year t

- (1) Scheduled per calculation performed for RIM Test
- (2) Represents net participant costs which is the incremental cost to the participant of purchasing a high-efficiency appliance versus one with standard efficiency. Amount scheduled from PC_t from the Participant Test.
- (3) No known increased supply costs as a result of operating the CEP

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Atmos Energy's Demand Side Management Application October 2017

Program Summary

Total DSM Cost for recovery	California Tests	Year 1	
		G-1 Residential	G-1 Commercial
		\$	\$
		30,605	6,082
Program Costs	<u>DCRC</u>	\$ -	\$ 66,077
Lost Sales	<u>DLSA</u>	\$ -	\$ 3,183
Program Incentive	<u>DIA</u>	\$ -	\$ -
Program Balancing Adjustment	<u>DBA</u>	\$ 30,605	\$ (63,178)
Annual Average Recovery Cost per Customer	<u>DSMRC</u>	\$ 0.19	\$ 0.35

	<u>Benefit/ Cost Ratio</u>
<u>Participant Test</u>	1.83
<u>Program Admin Test</u>	1.08
<u>Ratepayer Impact Test (RIM)</u>	0.44
<u>Total Resource Cost Test (TRC)</u>	0.68

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Atmos Energy Variable Data

1.	# Kentucky Residential Customers	158,221		
2.	Residential Sales Volumes (Ccf)	109,894,930		
1a.	# Kentucky Commercial Customers	17,416		
2a.	Commercial Sales Volumes (Ccf)	48,854,530		
3.	Estimated Participants	Total	Residential	Commercial
a)	Furnace AFUE 90 - 93	10	0	10
b)	Furnace AFUE 94 - 95	10	0	10
c)	Furnace AFUE 96 or >	20	0	20
d)	Boiler AFUE 85 -89	5	0	5
f)	Tank Water Heater EF .62 - .66	5	0	5
g)	Tank Water Heater EF .67 or >	5	0	5
h)	Tankless/Condensing Water Heater EF >.82	10	0	10
k)	Programmable Thermostat (manual)	10	0	10
l)	Weatherization	-	-	0
m)	Commercial Fryer	5	0	5
n)	Commercial Griddle	5	0	5
o)	Commercial Oven	5	0	5
p)	Commercial Steamer	5	0	5
4.	Atmos Distribution Charge \$	0.183		
5.	Average Heat use (ccf) per customer	361.00		
6.	Average water heating use (ccf) per customer	148.00		
7.	Proposed Rebates			
	Furnace AFUE 90 - \$	250		
	Furnace AFUE 94 - \$	325		
	Furnace AFUE 96 c \$	400		
	Boiler AFUE > 85 \$	250		
	Tank Water Heater \$	200		
	Tank Water Heater \$	300		
	Tankless/Condensi \$	400		
	Programmable The \$	25		
	Commercial Fryer \$	500		
	Commercial Griddle \$	500		
	Commercial Oven \$	500		
	Commercial Steam \$	500		
8.	Weatherization Pro \$	3,000		
9.	Incremental Cost of 90-93 AFUE furnace \$	654		
	Incremental Cost of 94-95 AFUE furnace \$	668		
	Incremental Cost of 96 or > AFUE furnace \$	1,238		
	Incremental Cost of 85-89 AFUE boiler \$	1,583		
	Incremental Cost of Programmable Thermostat \$	39		
	Incremental Cost of .62 EF tank W/H \$	38		
	Incremental Cost of .67 EF tank W/H \$	347		
	Incremental Cost of .82-.90 EF tankless W/H \$	839		
	Incremental Cost for Gas Fryer \$	468		
	Incremental Cost for Gas Griddle \$	121		
	Incremental Cost for Gas Oven \$	119		
	Incremental Cost for Gas Steamer \$	2,103		
10.	Discount Rate	7.73%		

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Deemed Savings for Measures

Measure	Efficiency Level	Kentucky	
		Savings (CCF)	Savings (Therm)
Forced Air Furnace	92% AFUE	109.5	113.6
Forced Air Furnace	94% AFUE	122.6	127.1
Forced Air Furnace	96% AFUE	135.0	140.0
Boiler	85% AFUE	42.3	43.9
Boiler	90% AFUE	79.9	82.9
Tank Water Heater	0.62 EF or greater	17.6	18.2
Tank Water Heater	0.67 EF or greater	36.6	38.0
Tankless Water Heater	0.82 - .90 EF	80.0	83.0
Tankless Water Heater	0.91 EF or greater	99.1	102.8
Condensing Water Heater	0.90 EF or greater	68.5	71.0
Programmable Thermostat	Manual	60.3	62.6
Weatherization	30% Savings	100.4	109.4
Fryer	EnergyStar	520.7	540.0
Griddle	EnergyStar	115.7	120.0
Oven	EnergyStar	217.0	225.0
Steamer	EnergyStar	1253.6	1,300.0

<https://portfoliomanager.energystar.gov/pdf/reference/Thermal%20Conversions.pdf?2b52-b268>

August of 2015 Report shows 1.026 factor

https://www.eia.gov/totalenergy/data/monthly/pdf/sec13_4.pdf

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Billing Factor Calculation

Program Begins: May 1, 2018
Program Year End: December 31, 2018
Rate Effective: May 1, 2018

DCRC = DSM Cost Recovery-Current

Program Costs	G-1 Residential	G-1 Commercial
Rebates	\$ -	\$ 31,750
Program Costs (Weatherization & Education)	\$ -	\$ -
Customer Awareness	\$ -	\$ 25,000
Program Administration	\$ -	\$ 7,677
Supplies	\$ -	\$ 1,650
Program Overhead	\$ -	\$ -
TOTAL DCRC	G-1 Residential \$ -	G-1 Commercial \$ 66,077
Excluding Rebates	\$ -	\$ 34,327

DLSA = DSM Lost Sales Adjustment

Current Year Program Participation (Schedule A)

Rate	# of Participants	CCF Conserved	Distribution Charge	Lost Sales
G-1 Residential Customers	-	-	\$ 0.1825	\$ -
G-1 Commercial Customers	95	17,443	\$ 0.1825	\$ 3,183
Total Current Year Lost Sales	95	17,443		\$ 3,183

Cumulative Prior Years Participation (Schedule B)

	-	0	\$ 0.1825	\$ -
TOTAL DLSC	95	17,443		\$ 3,200

DIA = DSM Incentive Adjustment

	G-1 Residential	G-1 Commercial
Program Benefits (Schedule C)	\$ -	\$ 66,230
Less: Program Costs	\$ -	\$ (66,077)
Net Resource Savings	\$ -	\$ 153
Incentive Percentage	15%	15%
DIA	\$ -	\$ -

DBA = DSM Balance Adjustment

	G-1 Residential		Balancing Adjustment	G-1 Commercial		Balancing Adjustment
	Under/(Over) Recovery	Estimated Residential Sales		Under/(Over) Recovery	Estimated Commercial Sales	
\$	30,605.45	109,894,930	\$ 0.00028	(63,177.88)	48,854,530	\$ (0.00129)

DSMRC = DSM Cost Recovery Component

G-1 Residential				
	Recovery Amount	Rate, per Ccf	Rate, per Mcf	
Estimated Residential Sales		109,894,930	Ccf	
Estimated Residential Customers		158,221		
DCRC	\$ -	\$ -	\$ -	
DLSA	\$ -	\$ -	\$ -	
DIA	\$ -	\$ -	\$ -	
DBA	\$ 30,605	\$ 0.0003	\$ 0.0028	
TOTAL DSMRC	\$ 30,605	\$ 0.00028	\$ 0.0028	

Annual Cost Recovery per G-1 Residential Customers \$ 0.19

G-1 Commercial				
	Recovery Amount	Rate, per Ccf	Rate, per Mcf	
Estimated Commercial Sales		48,854,530	Ccf	
Estimated Commercial Customers		17,416		
DCRC	\$ 66,077	\$ 0.0014	\$ 0.0140	
DLSA	\$ 3,183	\$ 0.0001	\$ 0.0010	
DIA	\$ -	\$ -	\$ -	
DBA	\$ (63,178)	\$ (0.0013)	\$ (0.0129)	
TOTAL DSMRC	\$ 6,082	\$ 0.0002	\$ 0.0021	

Annual Cost Recovery per G-1 Commercial Customers \$ 0.35

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Schedule A - Current Year Participation Detail

Program Year End: December 31, 2018

G-1 Residential Efficiency Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Furnace AFUE 92 - 93	-	109.55	-	\$ 250	\$ -	18	DEER
Furnace AFUE 94 - 95	-	122.57	-	\$ 325	\$ -	18	DEER
Furnace AFUE 96 or >	-	135.00	-	\$ 400	\$ -	18	DEER
Boiler AFUE > 85	-	42.33	-	\$ 250	\$ -	18	DEER
Programmable Thermostat	-	60.32	-	\$ 25	\$ -	15	DEER
Totals	-	NA	-	NA	\$ -		

G-1 Commercial Efficiency Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Furnace AFUE 92 - 93	10	109.55	1,095	\$ 250	\$ 2,500	18	DEER
Furnace AFUE 94 - 95	10	122.57	1,226	\$ 325	\$ 3,250	18	DEER
Furnace AFUE 96 or >	20	135.00	2,700	\$ 400	\$ 8,000	18	DEER
Boiler AFUE >85	5	42.33	212	\$ 250	\$ 1,250	18	DEER
Programmable Thermostat	10	60.32	603	\$ 25	\$ 250	15	DEER
Totals	55	NA	5,836	NA	\$ 15,250		

G-1 Residential Water Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Tank Water Heater EF .62 - .66	-	17.55	-	\$ 200	\$ -	13	DEER
Tank Water Heater EF .67 or >	-	36.64	-	\$ 300	\$ -	13	DEER
Tankless/Condensing Water Heater EF >.82	-	80.04	-	\$ 400	\$ -	20	DEER
Totals	-	NA	-	NA	\$ -		

G-1 Commercial Water Heating Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Tank Water Heater EF .62 - .66	5	17.55	88	\$ 200	\$ 1,000	13	DEER
Tank Water Heater EF .67 or >	5	36.64	183	\$ 300	\$ 1,500	13	DEER
Tankless/Condensing Water Heater EF >.82	10	80.04	800	\$ 400	\$ 4,000	20	DEER
Totals	20	NA	1,071	NA	\$ 6,500		

G-1 Commercial Cooking Equipment Savings	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
Fryer EnergyStar Rated	5	520.73	2,604	\$ 500	\$ 2,500	8	Energy Star
Griddle EnergyStar Rated	5	115.72	579	\$ 500	\$ 2,500	12	Energy Star
Oven EnergyStar Rated	5	216.97	1,085	\$ 500	\$ 2,500	10	NEEP
Steamer EnergyStar Rated	5	1,253.62	6,268	\$ 500	\$ 2,500	10	Energy Star
Totals	20	NA	10,535	NA	\$ 10,000		

Weatherization	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
	-	100.3875	-	\$ 3,000	\$ -	25	DEER

Education Program	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
	-			\$ -	\$ -		

Totals by Customer Class	Program Participants	CCF Conservation		Rebate		Measure	
		Per Participant	Total	Amount	Total	Life	Source
G-1 Residential Totals	-	Varies see above	-	Varies see above	\$ -		
G-1 Commercial Totals	95	Varies see above	17,443	Varies see above	\$ 31,750		

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Annual Savings

SAVINGS

Year	G-1 Res. Heating	G-1 Comm. Heating	G-1 Res. Water	G-1 Comm. Water	G-1 Comm. Cooking Equipment	Weather-ization	Res. Total	Comm. Total	Total
1	-	5,836	-	1,071	10,535	-	-	17,443	17,443
2	-	5,836	-	1,071	10,535	-	-	17,443	17,443
3	-	5,836	-	1,071	10,535	-	-	17,443	17,443
4	-	5,836	-	1,071	10,535	-	-	17,443	17,443
5	-	5,836	-	1,071	10,535	-	-	17,443	17,443
6	-	5,836	-	1,071	10,535	-	-	17,443	17,443
7	-	5,836	-	1,071	10,535	-	-	17,443	17,443
8	-	5,836	-	1,071	10,535	-	-	17,443	17,443
9	-	5,836	-	1,071	7,932	-	-	14,839	14,839
10	-	5,836	-	1,071	7,932	-	-	14,839	14,839
11	-	5,836	-	1,071	579	-	-	7,486	7,486
12	-	5,836	-	1,071	579	-	-	7,486	7,486
13	-	5,836	-	1,071	-	-	-	6,907	6,907
14	-	5,836	-	800	-	-	-	6,636	6,636
15	-	5,836	-	800	-	-	-	6,636	6,636
16	-	5,233	-	800	-	-	-	6,033	6,033
17	-	5,233	-	800	-	-	-	6,033	6,033
18	-	5,233	-	800	-	-	-	6,033	6,033
19	-	-	-	800	-	-	-	800	800
20	-	-	-	800	-	-	-	800	800
21	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Energy Federation, Inc. Administrative Costs

EFI Budget Estimates for Administration of Kentucky DSM Appliance Rebate Program

Annual Budget

	Unit Cost	Residential Costs	Commercial Costs	Total Cost
Estimated Rebates		0	95	
Processing fee	\$ 9.00	\$ -	\$ 855	\$ 855
"Cost of Money" Charge	1%	\$ -	\$ 318	\$ 318
Reservation Fee	\$ 4.00	\$ -	\$ 380	\$ 380
Customer e-mails (EFI to cust.)	\$ 2.50	\$ -	\$ 48	\$ 48
Customer Service Phone Chg.(hours)	\$ 39.00	\$ -	\$ 77	\$ 77
Program Management fee	\$ 1,500	\$ -	\$ 6,000	\$ 6,000
Totals		\$ -	\$ 7,677	\$ 7,677

Atmos Energy
Demand Side Management (DSM) Program
DSM APPLIANCE INFORMATION

FURNACES					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 90% Efficiency	Incremental Cost
Bowling Green	York	2,000 sq. ft.	\$ 1,950	\$ 2,467	\$ 517
Bowling Green	Amana	2,000 sq. ft.	\$ 1,000	\$ 1,570	\$ 570
Bowling Green	Trane	2,000 sq. ft.	\$ 1,450	\$ 1,700	\$ 250
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 2,500	\$ 1,100
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Owensboro	York	2,000 sq. ft.	\$ 725	\$ 1,050	\$ 325
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,250	\$ 550
Average Incremental Cost					\$ 602

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 92% Efficiency	Incremental Cost
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 2,200	\$ 800
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Bowling Green	Amana	2,000 sq. ft.	\$ 1,000	\$ 2,026	\$ 1,026
Bowling Green	York	2,000 sq. ft.	\$ 1,950	\$ 2,467	\$ 517
Owensboro	Heil	2,000 sq. ft.	\$ 750	\$ 1,200	\$ 450
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,300	\$ 600
Average Incremental Cost					\$ 716
Average Incremental Cost 90-92 AFUE					\$ 654

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 94% Efficiency	Incremental Cost
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 2,500	\$ 900
Owensboro	Carrier	2,000 sq. ft.	\$ 700	\$ 1,380	\$ 680
Owensboro	York	2,000 sq. ft.	\$ 725	\$ 1,150	\$ 425
Average Incremental Cost					\$ 668

Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 96% Efficiency	Incremental Cost
Danville	Lennox	2,000 sq. ft.	\$ 1,400	\$ 3,200	\$ 1,800
Danville	Trane	2,000 sq. ft.	\$ 1,600	\$ 3,600	\$ 2,000
Owensboro	York	2,000 sq. ft.	\$ 700	\$ 1,200	\$ 500
Owensboro	Heil	2,000 sq. ft.	\$ 750	\$ 1,400	\$ 650
Average Incremental Cost					\$ 1,238

Boilers					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency	Avg. 85% Efficiency	Incremental Cost
Owensboro	A.O. Smith	2,000 sq. ft.	\$ 8,150	\$ 9,865	\$ 1,715
Danville	Locinar	2,000 sq. ft.	\$ 7,950	\$ 9,400	\$ 1,450
Average Incremental Cost					\$ 1,583

WATER HEATERS - TANK TYPE					
Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 62% Efficiency	Incremental Cost
2011 ASHRAE Winter Conference					
Average Incremental Cost					\$ 38

Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 67% Efficiency	Incremental Cost
Lowe's	A.O. Smith	50 gallon	\$ 409	\$ 656	\$ 247
Home Depot	Rheem	40 gallon	\$ 400	\$ 639	\$ 239
Lowe's	State	40 gallon	\$ 379	\$ 935	\$ 556
Average Incremental Cost					\$ 347

WATER HEATERS - TANKLESS					
Contractor Location	Brand Comparison	Unit Sizing	58% Eff Tank Type	82% Eff. Tankless	Incremental Cost
Owensboro	Rinnai	180,000 Btu	\$ 404	\$ 1,000	\$ 596
Paducah	Navian	199,000 Btu	\$ 350	\$ 1,136	\$ 786
Bowling Green	Rinnai	199,000 Btu	\$ 409	\$ 1,210	\$ 801
Bowling Green	A.O. Smith	199,000 Btu	\$ 409	\$ 1,331	\$ 922
Owensboro	Navian	199,000 Btu	\$ 429	\$ 1,150	\$ 721
Paducah	Rheem	199,000 Btu	\$ 390	\$ 1,300	\$ 1,210
Average Incremental Cost					\$ 839

COMMERCIAL GAS EQUIPMENT					
Taken from Savings Calculator for EnergyStar Equipment developed by U.S. EPA & DOE					
Gas Fryer					\$ 468
Gas Griddle					\$ 121
Gas Oven					\$ 119
Gas Steamer					\$ 2,103
Average Incremental Cost					\$ 703

THERMOSTATS					
Contractor Location	Brand Comparison	Model Number	Non-Programmable	Programmable	Incremental Cost
Lowe's	Honeywell	RTH6350D1000	\$ 40	\$ 60	\$ 20
Lowe's	Lux	TX9600TS	\$ 40	\$ 68	\$ 28
Lowe's	Iris	CT-101-L	\$ 40	\$ 99	\$ 59
Lowe's	Honeywell	RTH7600D1048	\$ 40	\$ 89	\$ 49
Average Incremental Cost					\$ 39

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Schedule B - Cumulative Prior Years Program Participation

Program Year End: December 31, 2018

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Cumulative Total
Program Participants											
<u>A. High Efficiency Appliances</u>	0	0	0	0	-	0	0	0			-
<u>B. Weatherization Program</u>	0	0	0	0	0	0	0	0			-
Total Participants	0	0	0	0	0	0	0	0			-
 Total Conservation in Ccf											
<u>A. High Efficiency Appliance Savings</u>	0	0	0	0	0	0	0	0			-
<u>B. Weatherization Program</u>	0	0	0	0	0	0	0	0			-
Total Ccf Savings	0	0	0	0	0	0	0	0			-
 Total Lost Sales	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			\$ -

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Schedule C - Calculation of Program Benefits

Program Year End: December 31, 2018

Current Year Conservation (Ccf)

Year	G-1 Residential			G-1 Commercial			NYMEX Futures Prices		
	Projected Gas Cost*	Annual Savings	Commodity Savings	Projected Gas Cost*	Annual Savings	Commodity Savings	Year	Average Cost	Escalation
2017	\$ 0.491	-	\$ -	\$ 0.491	17,443	\$ 8,573	2017	3.05	
2018	\$ 0.497	-	\$ -	\$ 0.497	17,443	\$ 8,661	2018	3.09	101.0%
2019	\$ 0.469	-	\$ -	\$ 0.469	17,443	\$ 8,184	2019	2.92	94.5%
2020	\$ 0.458	-	\$ -	\$ 0.458	17,443	\$ 7,993	2020	2.85	97.7%
2021	\$ 0.462	-	\$ -	\$ 0.462	17,443	\$ 8,059	2021	2.87	100.8%
2022	\$ 0.468	-	\$ -	\$ 0.468	17,443	\$ 8,165	2022	2.91	101.3%
2023	\$ 0.478	-	\$ -	\$ 0.478	17,443	\$ 8,344	2023	2.97	102.2%
2024	\$ 0.489	-	\$ -	\$ 0.489	17,443	\$ 8,530	2024	3.04	102.2%
2025	\$ 0.500	-	\$ -	\$ 0.500	14,839	\$ 7,421	2025	3.11	102.3%
2026	\$ 0.510	-	\$ -	\$ 0.510	14,839	\$ 7,570			
2027	\$ 0.520	-	\$ -	\$ 0.520	7,486	\$ 3,895			
2028	\$ 0.531	-	\$ -	\$ 0.531	7,486	\$ 3,973			
2029	\$ 0.541	-	\$ -	\$ 0.541	6,907	\$ 3,739			
2030	\$ 0.552	-	\$ -	\$ 0.552	6,636	\$ 3,664			
2031	\$ 0.563	-	\$ -	\$ 0.563	6,636	\$ 3,738			
2032	\$ 0.574	-	\$ -	\$ 0.574	6,033	\$ 3,466			
2033	\$ 0.586	-	\$ -	\$ 0.586	6,033	\$ 3,535			
2034	\$ 0.598	-	\$ -	\$ 0.598	6,033	\$ 3,606			
2035	\$ 0.610	-	\$ -	\$ 0.610	800	\$ 488			
2036	\$ 0.622	-	\$ -	\$ 0.622	800	\$ 498			
2037	\$ 0.634	-	\$ -	\$ 0.634	-	\$ -			
2038	\$ 0.647	-	\$ -	\$ 0.647	-	\$ -			
2039	\$ 0.660	-	\$ -	\$ 0.660	-	\$ -			
2040	\$ 0.673	-	\$ -	\$ 0.673	-	\$ -			
2041	\$ 0.687	-	\$ -	\$ 0.687	-	\$ -			
Total Commodity Savings			\$ -			\$ 112,102			
Discount Rate			7.73%			7.73%			
Program Benefits			\$0			\$66,230			
(present value of commodity savings)									

*Atmos GCA, escalated using NYMEX futures prices at Henry Hub

Atmos Energy's Demand Side Management Application October 2017

Daily Settlements for Henry Hub Natural Gas Futures (PRELIMINARY) Trade Date: 10/24/2017

http://www.cmegroup.com/trading/energy/natural-gas/natural-gas_quotes_settlements_futures.html

Month	Open	High	Low	Last	Change	Settle	Estimated Volume	Prior Day Open Interest
Nov-17	2.971	3.004	2.960	2.988	(0.017)	2.974	114,500	46,837
Dec-17	3.139	3.165	3.117	3.148	(0.021)	3.135	105,230	267,776
Jan-18	3.258	3.285	3.243	3.268	(0.023)	3.257	44,476	201,511
Feb-18	3.260	3.287	3.246	3.27	(0.024)	3.260	16,371	82,361
Mar-18	3.218	3.243	3.201	3.227	(0.024)	3.216	33,907	174,362
Apr-18	2.979	2.995	2.975	2.992	(0.003)	2.989	29,734	126,898
May-18	2.960	2.970	2.950	2.964	(0.002)	2.964	10,912	77,441
Jun-18	2.990	2.997	2.978	2.991	(0.002)	2.992	805	32,520
Jul-18	3.017	3.024	3.006	3.02	(0.002)	3.020	3,064	41,447
Aug-18	3.019	3.026	3.008	3.018	(0.002)	3.021	2,014	31,390
Sep-18	3.000	3.007	2.990	3.002	(0.003)	3.002	1,963	33,363
Oct-18	3.023	3.030	3.012	3.026	(0.002)	3.025	7,560	69,251
Nov-18	3.075	3.077	3.061	3.077	(0.003)	3.077	1,053	28,248
Dec-18	3.204	3.212	3.195	3.204	(0.003)	3.208	1,393	28,455
Jan-19	3.285	3.291	3.271	3.286	(0.003)	3.287	2,524	27,263
Feb-19	3.241	3.249	3.240	3.249	(0.002)	3.255	423	8,269
Mar-19	3.168	3.179	3.161	3.177	-	3.178	1,371	21,240
Apr-19	2.783	2.791	2.772	2.787	0.004	2.790	2,240	16,350
May-19	2.734	2.735	2.734	2.735	0.003	2.742	765	5,002
Jun-19	2.756	2.756	2.756	2.756	0.002	2.763	196	4,073
Jul-19	2.778	2.784	2.778	2.784	0.002	2.785	84	3,786
Aug-19	2.771	2.775	2.771	2.775	0.002	2.785	20	2,673
Sep-19	2.755	2.765	2.755	2.765	0.002	2.768	23	2,485
Oct-19	2.792	2.792	2.776	2.790	-	2.790	513	4,131
Nov-19	-	-	-	0.000	(0.001)	2.850	5	2,664
Dec-19	-	-	-	0.000	(0.001)	2.998	2	2,693
Jan-20	-	-	-	-	(0.001)	3.099	52	1,470
Feb-20	-	-	-	-	-	3.076	-	589
Mar-20	-	-	-	-	0.002	3.022	61	858
Apr-20	-	-	-	0.000	(0.001)	2.714	61	1,017
May-20	-	-	-	0.000	(0.001)	2.689	9	627
Jun-20	-	-	-	0.000	(0.001)	2.712	9	560
Jul-20	-	-	-	0.000	(0.001)	2.738	-	505
Aug-20	0	0	0	0.000	(0.001)	2.750	-	468
Sep-20	0	0	0	0.000	(0.001)	2.750	-	469
Oct-20	-	-	-	-	(0.001)	2.776	-	517
Nov-20	-	-	-	-	(0.001)	2.849	-	501
Dec-20	-	-	-	-	(0.003)	3.002	-	780
Jan-21	3.11	3.11	3.11	3.105	(0.004)	3.114	5	265
Feb-21	-	-	-	-	(0.006)	3.091	-	186
Mar-21	-	-	-	-	-0.006	3.037	-	187
Apr-21	-	-	-	-	-0.009	2.739	-	116
May-21	-	-	-	-	-0.009	2.714	-	102
Jun-21	-	-	-	-	-0.009	2.737	-	89
Jul-21	-	-	-	-	-0.009	2.761	-	89
Aug-21	-	-	-	-	-0.009	2.777	-	92
Sep-21	-	-	2.77	2.771	-0.009	2.777	-	100
Oct-21	-	-	-	-	-0.009	2.803	-	73
Nov-21	-	-	-	-	-0.009	2.877	-	72

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Dec-21	-	-	-	-	-0.009	3.030	0	100
Jan-22	-	-	-	-	0.000	3.142	-	18
Feb-22	-	-	-	-	-0.001	3.119	-	22
Mar-22	-	-	-	-	-0.001	3.063	-	19
Apr-22	-	-	-	-	-0.001	2.768	-	14
May-22	4.22	4.22	4.22	-	-0.001	2.750	0	20
Jun-22	-	-	-	-	-0.001	2.775	-	14
Jul-22	-	-	-	-	-0.001	2.802	-	15
Aug-22	-	-	-	-	-0.001	2.822	-	15
Sep-22	-	-	-	-	-0.001	2.822	-	14
Oct-22	-	-	-	-	-0.001	2.848	-	14
Nov-22	-	-	-	-	-0.001	2.923	-	14
Dec-22	-	-	-	-	-0.001	3.078	-	19
Jan-23	-	-	-	-	-0.001	3.201	-	4
Feb-23	-	-	-	-	-0.001	3.178	-	1
Mar-23	-	-	-	-	-0.001	3.121	-	12
Apr-23	-	-	-	-	-0.001	2.829	-	12
May-23	-	-	-	-	-0.001	2.811	-	19
Jun-23	-	-	-	-	-0.001	2.836	-	12
Jul-23	-	-	-	-	-0.001	2.863	-	12
Aug-23	-	-	-	-	-0.001	2.886	-	23
Sep-23	-	-	-	-	-0.001	2.889	-	1
Oct-23	-	-	-	-	-0.001	2.919	-	16
Nov-23	-	-	-	-	-0.001	2.994	-	12
Dec-23	-	-	-	-	-0.001	3.149	-	1
Jan-24	-	-	-	-	-0.001	3.272	-	0
Feb-24	-	-	-	-	-0.001	3.246	-	0
Mar-24	-	-	-	-	-0.001	3.184	-	0
Apr-24	-	-	-	-	-0.001	2.892	-	0
May-24	-	-	-	-	-0.001	2.874	-	2
Jun-24	-	-	-	-	-0.001	2.900	-	0
Jul-24	-	-	-	-	-0.001	2.928	-	0
Aug-24	-	-	-	-	-0.001	2.951	-	0
Sep-24	-	-	-	-	-0.001	2.955	-	0
Oct-24	-	-	-	-	-0.001	2.988	-	0
Nov-24	-	-	-	-	-0.001	3.063	-	0
Dec-24	-	-	-	-	-0.001	3.218	-	0
Jan-25	-	-	-	-	-0.001	3.341	-	0
Feb-25	-	-	-	-	-0.001	3.312	-	0
Mar-25	-	-	-	-	-0.001	3.247	-	0
Apr-25	-	-	-	-	-0.001	2.955	-	-
May-25	-	-	-	-	-0.001	2.937	-	1
Jun-25	-	-	-	-	-0.001	2.965	-	-
Jul-25	-	-	-	-	-0.001	2.995	-	0
Aug-25	-	-	-	-	-0.001	3.024	-	0
Sep-25	-	-	-	-	-0.001	3.028	-	-
Oct-25	-	-	-	-	-0.001	3.063	-	-
Nov-25	-	-	-	-	-0.001	3.138	-	-
Dec-25	-	-	-	-	-0.001	3.293	-	-
Jan-26	-	-	-	-	-0.001	3.416	-	-
Feb-26	-	-	-	-	-0.001	3.383	-	-
Mar-26	-	-	-	-	-0.001	3.311	-	0
Apr-26	-	-	-	-	-0.001	3.008	-	-
May-26	-	-	-	-	-0.001	2.990	-	-
Jun-26	-	-	-	-	-0.001	3.023	-	-

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Jul-26	-	-	-	-	-0.001	3.063	-	-
Aug-26	-	-	-	-	-0.001	3.101	-	-
Sep-26	-	-	-	-	-0.001	3.111	-	-
Oct-26	-	-	-	-	-0.001	3.156	-	-
Nov-26	-	-	-	-	-0.001	3.232	-	-
Dec-26	-	-	-	-	-0.001	3.389	-	-
Jan-27	-	-	-	-	-0.001	3.524	-	-
Feb-27	-	-	-	-	-0.001	3.489	-	-
Mar-27	-	-	-	-	-0.001	3.414	-	-
Apr-27	-	-	-	-	-0.001	3.099	-	-
May-27	-	-	-	-	-0.001	3.074	-	-
Jun-27	-	-	-	-	-0.001	3.099	-	-
Jul-27	-	-	-	-	-0.001	3.128	-	-
Aug-27	-	-	-	-	-0.001	3.156	-	-
Sep-27	-	-	-	-	-0.001	3.166	-	-
Oct-27	-	-	-	-	-0.001	3.206	-	-
Nov-27	-	-	-	-	-0.001	3.282	-	-
Dec-27	-	-	-	-	-0.001	3.439	-	-
Jan-28	-	-	-	-	-0.001	3.579	-	-
Feb-28	-	-	-	-	-0.001	3.544	-	-
Mar-28	-	-	-	-	-0.001	3.469	-	-
Apr-28	-	-	-	-	-0.001	3.139	-	-
May-28	-	-	-	-	-0.001	3.124	-	-
Jun-28	-	-	-	-	-0.001	3.159	-	-
Jul-28	-	-	-	-	-0.001	3.204	-	-
Aug-28	-	-	-	-	-0.001	3.244	-	-
Sep-28	-	-	-	-	-0.001	3.259	-	-
Oct-28	-	-	-	-	-0.001	3.314	-	-
Nov-28	-	-	-	-	-0.001	3.392	-	-
Dec-28	-	-	-	-	-0.001	3.550	-	-
Jan-29	-	-	-	-	-0.001	3.693	-	-
Feb-29	-	-	-	-	-0.001	3.658	-	-
Mar-29	-	-	-	-	-0.001	3.583	-	-
Apr-29	-	-	-	-	-0.001	3.228	-	-
May-29	-	-	-	-	-0.001	3.213	-	-
Jun-29	-	-	-	-	-0.001	3.248	-	-
Jul-29	-	-	-	-	-0.001	3.293	-	-
Aug-29	-	-	-	-	-0.001	3.333	-	-
Sep-29	-	-	-	-	-0.001	3.348	-	-
Oct-29	-	-	-	-	-0.001	3.403	-	-
Nov-29	-	-	-	-	-0.001	3.481	-	-

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy Demand Side Management (DSM) Program Participant Test

$$NPV_P = B_P - C_P$$

$B_P = \$$	120,321
$C_P =$	65,587
$NPV_P = \\$	54,734

Benefit-Cost Ratio **1.83**

Conclusion:

Since the net present value is greater than zero, the program will benefit the participants

Where:

NPV_P = Net present value to all participants

B_P = NPV of benefit to all participants

C_P = NPV of cost to all participants

$$B_P = \sum_{t=1}^N \frac{BR_t + TC_t + INC_t}{(1+d)^{t-1}}$$

$$C_P = \sum_{t=1}^N \frac{PC_t + BI_t}{(1+d)^{t-1}}$$

BR_t = Bill reductions in year t (not accounted for in participant cost test).

BI_t = Bill increases in year t

TC_t = Tax credits in year t

INC_t = Incentives paid to the participant by the Utility

PC_t = Participant costs in year t, which include
incremental capital costs

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

$$B_p = \sum_{t=1}^N \frac{BR_t + TC_t + INC_t}{(1+d)^{t-1}}$$

t	BR _t	TC _t	INC _t	B _p
1	11,756	-	31,750	43,506
2	11,844	-	-	11,844
3	11,367	-	-	11,367
4	11,177	-	-	11,177
5	11,242	-	-	11,242
6	11,349	-	-	11,349
7	11,527	-	-	11,527
8	11,713	-	-	11,713
9	10,129	-	-	10,129
10	10,278	-	-	10,278
11	5,261	-	-	5,261
12	5,339	-	-	5,339
13	5,000	-	-	5,000
14	4,876	-	-	4,876
15	4,949	-	-	4,949
16	4,567	-	-	4,567
17	4,636	-	-	4,636
18	4,707	-	-	4,707
19	634	-	-	634
20	644	-	-	644
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
	152,995	-	31,750	184,745

7.730% Discount Rate

\$120,321 NPV

- BR_t = Bill reductions in year t
 TC_t = Tax credits in year t
 INC_t = Incentives paid to the participant by the Utility

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

BR_t = Bill reductions in year t

G-1 Residential

t	(1) Ccf Conserved	(2) Projected Gas Cost*	(3) Demand Charge	(4) (2) + (3) Combined Rate	(1) x (4) BR _t
1	-	\$ 0.491	\$ 0.1825	\$ 0.67	\$ -
2	-	\$ 0.497	0.1825	0.68	-
3	-	\$ 0.469	0.1825	0.65	-
4	-	\$ 0.458	0.1825	0.64	-
5	-	\$ 0.462	0.1825	0.64	-
6	-	\$ 0.468	0.1825	0.65	-
7	-	\$ 0.478	0.1825	0.66	-
8	-	\$ 0.489	0.1825	0.67	-
9	-	\$ 0.500	0.1825	0.68	-
10	-	\$ 0.510	0.1825	0.69	-
11	-	\$ 0.520	0.1825	0.70	-
12	-	\$ 0.531	0.1825	0.71	-
13	-	\$ 0.541	0.1825	0.72	-
14	-	\$ 0.552	0.1825	0.73	-
15	-	\$ 0.563	0.1825	0.75	-
16	-	\$ 0.574	0.1825	0.76	-
17	-	\$ 0.586	0.1825	0.77	-
18	-	\$ 0.598	0.1825	0.78	-
19	-	\$ 0.610	0.1825	0.79	-
20	-	\$ 0.622	0.1825	0.80	-
21	-	\$ 0.634	0.1825	0.82	-
22	-	\$ 0.647	0.1825	0.83	-
23	-	\$ 0.660	0.1825	0.84	-
24	-	\$ 0.673	0.1825	0.86	-
25	-	\$ 0.687	0.1825	0.87	-
				\$	-

G-1 Commercial

t	(1) Ccf Conserved	(2) Projected Gas Cost*	(3) Demand Charge	(4) (2) + (3) Combined Rate	(1) x (4) BR _t
1	17,443	\$ 0.491	\$ 0.1825	\$ 0.67	\$ 11,756
2	17,443	\$ 0.497	\$ 0.1825	\$ 0.68	\$ 11,844
3	17,443	\$ 0.469	\$ 0.1825	\$ 0.65	\$ 11,367
4	17,443	\$ 0.458	\$ 0.1825	\$ 0.64	\$ 11,177
5	17,443	\$ 0.462	\$ 0.1825	\$ 0.64	\$ 11,242
6	17,443	\$ 0.468	\$ 0.1825	\$ 0.65	\$ 11,349
7	17,443	\$ 0.478	\$ 0.1825	\$ 0.66	\$ 11,527
8	17,443	\$ 0.489	\$ 0.1825	\$ 0.67	\$ 11,713
9	14,839	\$ 0.500	\$ 0.1825	\$ 0.68	\$ 10,129
10	14,839	\$ 0.510	\$ 0.1825	\$ 0.69	\$ 10,278
11	7,486	\$ 0.520	\$ 0.1825	\$ 0.70	\$ 5,261
12	7,486	\$ 0.531	\$ 0.1825	\$ 0.71	\$ 5,339
13	6,907	\$ 0.541	\$ 0.1825	\$ 0.72	\$ 5,000
14	6,636	\$ 0.552	\$ 0.1825	\$ 0.73	\$ 4,876
15	6,636	\$ 0.563	\$ 0.1825	\$ 0.75	\$ 4,949
16	6,033	\$ 0.574	\$ 0.1825	\$ 0.76	\$ 4,567
17	6,033	\$ 0.586	\$ 0.1825	\$ 0.77	\$ 4,636
18	6,033	\$ 0.598	\$ 0.1825	\$ 0.78	\$ 4,707
19	800	\$ 0.610	\$ 0.1825	\$ 0.79	\$ 634
20	800	\$ 0.622	\$ 0.1825	\$ 0.80	\$ 644
21	-	\$ 0.634	\$ 0.1825	\$ 0.82	\$ -
22	-	\$ 0.647	\$ 0.1825	\$ 0.83	\$ -
23	-	\$ 0.660	\$ 0.1825	\$ 0.84	\$ -
24	-	\$ 0.673	\$ 0.1825	\$ 0.86	\$ -
25	-	\$ 0.687	\$ 0.1825	\$ 0.87	\$ -
				\$	152,995

- (1) Total projected Ccf savings, based on budgeted participation levels in year one of the program.
 (2) Based on the Company's current G-1 GCA as well as NYMEX futures, converted to per ccf residential cost; where t = 1 = 2017
 (3) Volumetric charge for residential customers per Sheet No. 8 of the Company's tariff.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
 Demand Side Management (DSM) Program
 Participant Test

TC_t = Tax credits in year t (presently no federal tax credits are available in 2014)

	(1) Program Participants	(2) Residential Energy Credits	(1) x (2) TC_t
<u>A. High Efficiency Heating Savings</u>			
<u>B. High Efficiency Water Heating Savings</u>			
Total	-	\$	-

Note: participants are eligible for tax credits in the year they incur expenditures for high-efficiency appliances, since this is an analysis of participation in a single year, the tax credit is applicable only where $t = 1$

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

INC_t = Incentives paid to the participant by the Utility, for $t = 1$

<u>Energy Savings by Customer Class</u>	<u>INC_t</u>
G-1 Residential Customers	\$ -
G-1 Commercial Customers	31,750
Total	\$ 31,750

Note: rebates are given to participant in the year they elect to participate, since this is an analysis of participation in a single year, the rebate is applicable only where $t = 1$

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Participant Test

$$C_p = \sum_{t=1}^N \frac{PC_t + BI_t}{(1+d)^{t-1}}$$

t	(1) BI _t	(2) PC _t	(1) + (2) C _p
1	-	70,656	70,656
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-
	-	70,656	70,656

7.730% Discount Rate

\$65,587 NPV

BI_t = Bill increases in year t (not accounted for in participant cost test).

PC_t = Participant costs in year t, which include
incremental capital costs

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Participant Test**

PC_t = Participant costs for $t = 1$

	(1) Program Participants	(2) Incremental Cost	(1) x (2) PC_t
<u>A. High Efficiency Heating Savings</u>			
Furnace AFUE 90 - 93	10	\$ 654	\$ 6,542
Furnace AFUE 94 - 95	10	668	6,683
Furnace AFUE 96 or >	20	1,238	24,750
Boiler AFUE 85 -89	5	1,583	7,913
Programmable Thermostat	10	39	393
Total	55		46,281
<u>B. High Efficiency Water Heating Savings</u>			
Tank W/H .62 - .66 EF	5	\$ 38	\$ 190
Tank W/H .67 or > EF	5	347	1,737
Tankless W/H .82 - 90 EF	10	839	8,393
Total	20	\$	10,320
<u>C. High Efficiency Commercial Kitchen Equipment</u>			
Gas Fryer	5	\$ 468	\$ 2,340
Gas Griddle	5	121	605
Gas Oven	5	119	595
Gas Steamer	5	2,103	10,515
Total	20	\$	14,055

IC = Incremental Costs for purchasing high-efficiency unit

(1) Based on budgeted participation levels in year one of the CEP.

Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test

$$NPV_{pa} = B_{pa} - C_{pa}$$

$B_{pa} = \$$	66,230
$C_{pa} =$	61,336
$NPV_{pa} = \$$	4,894

Benefit-Cost Ratio 1.08

Conclusion:

Since the net present value is greater than zero, the program would decrease costs to the utility

Where:

- NPV_{pa} = Net present value of total cost of the resource
- B_{pa} = NPV of benefits of the program
- C_{pa} = NPV of costs of the programs

$$B_{pa} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

$$C_{pa} = \sum_{t=1}^N \frac{PRC_t + INC_t + UIC_t}{(1+d)^{t-1}}$$

- UAC_t = Utility avoided supply costs in year t
- PRC_t = Program Administrator Costs in year t
- INC_t = Incentives paid to the participant by the Utility
- UIC_t = Utility increased supply costs in year t

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test**

$$B_{pa} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

(1)

<u>t</u>	<u>UAC_t</u>
1	\$ 8,573
2	\$ 8,661
3	\$ 8,184
4	\$ 7,993
5	\$ 8,059
6	\$ 8,165
7	\$ 8,344
8	\$ 8,530
9	\$ 7,421
10	\$ 7,570
11	\$ 3,895
12	\$ 3,973
13	\$ 3,739
14	\$ 3,664
15	\$ 3,738
16	\$ 3,466
17	\$ 3,535
18	\$ 3,606
19	\$ 488
20	\$ 498
21	\$ -
22	\$ -
23	\$ -
24	\$ -
25	\$ -
<hr/>	<hr/>
\$	112,102

7.730% Discount Rate

\$66,230 NPV

(1) UAC_t scheduled per calculation performed for RIM test

UAC_t = Utility avoided supply costs in year t

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Program Administrator Cost Test**

$$C_{pa} = \sum_{t=1}^N \frac{PRC_t + INC_t + UIC_t}{(1+d)^{t-1}}$$

t	(1) PRC _t	(2) INC _t	(3) UIC _t	C _{pa}
1	34,327	31,750	-	66,077
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
	34,327	31,750	-	66,077

7.730% Discount Rate

\$61,336 NPV

- PRC_t = Program Administrator Costs in year t
- INC_t = Incentives paid to the participant by the Utility
- UIC_t = Utility increased supply costs in year t

- (1) Program costs scheduled from PRC_t which was calculated for the RIM Test
- (2) Incentives scheduled from INC_t which was calculated for the Participant test
- (3) No known increased supply costs as a result of operating the CEP

Atmos Energy
 Demand Side Management (DSM) Program
 Ratepayer Impact Measure (RIM) Test

$$NPV_{RIM} = B_{RIM} - C_{RIM}$$

$B_{RIM} = \$$	66,230
$C_{RIM} =$	152,185
$NPV_{RIM} = \$$	<u>(85,955)</u>

Benefit-Cost Ratio 0.44

Conclusion:

Since the net present value is negative, the program will cause an increase customer rates.

Where:

- NPV_{RIM} = Net present value levels
- B_{RIM} = Benefits to rate levels or customer bills
- C_{RIM} = Costs to rate levels or customer bills

$$B_{RIM} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

$$C_{RIM} = \sum_{t=1}^N \frac{UIC_t + RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$

- UAC_t = Utility avoided supply costs in year t
- UIC_t = Utility increased supply costs in year t
- RL_t = Revenue loss from reduced sales in year t
- PRC_t = Program administrator costs in year t
- INC_t = Incentives paid to the participant by the sponsoring utility in year t

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test**

$$B_{RIM} = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

t	UAC _t
1	8,573
2	8,661
3	8,184
4	7,993
5	8,059
6	8,165
7	8,344
8	8,530
9	7,421
10	7,570
11	3,895
12	3,973
13	3,739
14	3,664
15	3,738
16	3,466
17	3,535
18	3,606
19	488
20	498
21	-
22	-
23	-
24	-
25	-
	112,102

7.730% Discount Rate

\$66,230 NPV

UAC_t = Utility avoided supply costs in year t

Atmos Energy's Demand Side Management Application October 2017

**Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test**

$UAC_t =$ Utility avoided supply costs in year t

t	Projected Gas Cost*	G-1 Residential		G-1 Commercial			UAC _t
		Annual Savings	Commodity Savings	Projected Gas Cost*	Annual Savings	Commodity Savings	
1	\$ 0.491	-	\$ -	\$ 0.491	17,443	\$ 8,573	\$ 8,573
2	\$ 0.497	-	\$ -	\$ 0.497	17,443	\$ 8,661	\$ 8,661
3	\$ 0.469	-	\$ -	\$ 0.469	17,443	\$ 8,184	\$ 8,184
4	\$ 0.458	-	\$ -	\$ 0.458	17,443	\$ 7,993	\$ 7,993
5	\$ 0.462	-	\$ -	\$ 0.462	17,443	\$ 8,059	\$ 8,059
6	\$ 0.468	-	\$ -	\$ 0.468	17,443	\$ 8,165	\$ 8,165
7	\$ 0.478	-	\$ -	\$ 0.478	17,443	\$ 8,344	\$ 8,344
8	\$ 0.489	-	\$ -	\$ 0.489	17,443	\$ 8,530	\$ 8,530
9	\$ 0.500	-	\$ -	\$ 0.500	14,839	\$ 7,421	\$ 7,421
10	\$ 0.510	-	\$ -	\$ 0.510	14,839	\$ 7,570	\$ 7,570
11	\$ 0.520	-	\$ -	\$ 0.520	7,486	\$ 3,895	\$ 3,895
12	\$ 0.531	-	\$ -	\$ 0.531	7,486	\$ 3,973	\$ 3,973
13	\$ 0.541	-	\$ -	\$ 0.541	6,907	\$ 3,739	\$ 3,739
14	\$ 0.552	-	\$ -	\$ 0.552	6,636	\$ 3,664	\$ 3,664
15	\$ 0.563	-	\$ -	\$ 0.563	6,636	\$ 3,738	\$ 3,738
16	\$ 0.574	-	\$ -	\$ 0.574	6,033	\$ 3,466	\$ 3,466
17	\$ 0.586	-	\$ -	\$ 0.586	6,033	\$ 3,535	\$ 3,535
18	\$ 0.598	-	\$ -	\$ 0.598	6,033	\$ 3,606	\$ 3,606
19	\$ 0.610	-	\$ -	\$ 0.610	800	\$ 488	\$ 488
20	\$ 0.622	-	\$ -	\$ 0.622	800	\$ 498	\$ 498
21	\$ 0.634	-	\$ -	\$ 0.634	-	\$ -	\$ -
22	\$ 0.647	-	\$ -	\$ 0.647	-	\$ -	\$ -
23	\$ 0.660	-	\$ -	\$ 0.660	-	\$ -	\$ -
24	\$ 0.673	-	\$ -	\$ 0.673	-	\$ -	\$ -
25	\$ 0.687	-	\$ -	\$ 0.687	-	\$ -	\$ -
Total Commodity Savings			\$ -			\$ 112,102	\$ 112,102

- (1) Total projected Ccf savings, based on budgeted participation levels in year one of the program. These amounts continue to be saved year after year.
- (2) Based on Department of Energy 2011 "Annual Energy Outlook", converted to per ccf residential cost; where t = 1 = 2012

Note: the above analysis is based on the CCF conserved from a single year of participation in the CEP

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test

$$C_{RIM} = \sum_{t=1}^N \frac{UIC_t + RL_t + PRC_t + INC_t}{(1+d)^{t-1}}$$

t	(1) UIC _t	(2) RL _t	(3) PRC _t	(4) INC _t	(1) + (2) C _{RIM}
1	-	11,756	34,327	31,750	77,833
2	-	11,844		-	11,844
3	-	11,367		-	11,367
4	-	11,177		-	11,177
5	-	11,242		-	11,242
6	-	11,349		-	11,349
7	-	11,527		-	11,527
8	-	11,713		-	11,713
9	-	10,129		-	10,129
10	-	10,278		-	10,278
11	-	5,261		-	5,261
12	-	5,339		-	5,339
13	-	5,000		-	5,000
14	-	4,876		-	4,876
15	-	4,949		-	4,949
16	-	4,567		-	4,567
17	-	4,636		-	4,636
18	-	4,707		-	4,707
19	-	634		-	634
20	-	644		-	644
21	-	-		-	-
22	-	-		-	-
23	-	-		-	-
24	-	-		-	-
25	-	-		-	-
	-	152,995	34,327	31,750	219,072

7.730% Discount Rate

\$152,185 NPV

- UIC_t = Utility increased supply costs in year t
- RL_t = Revenue loss from reduced sales in year t
- PRC_t = Program administrator costs in year t
- INC_t = Incentives paid to the participant by the sponsoring utility in year t

- (1) No known increased supply costs
- (2) see RIM Test RG; column (2)
- (3) see RIM Test RG; column (3)
- (4) Scheduled per calculation performed for Participant Test

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$NPV_{TRC} = B_{TRC} - C_{TRC}$$

$B_{TRC} = \$$	66,230
$C_{TRC} =$	97,451
$NPV_{TRC} = \$$	<u>(31,221)</u>

Benefit-Cost Ratio 0.68

Conclusion:

Since the net present value is greater than zero, the program is a less expensive resource than the supply option upon which the marginal costs are based.

Where:

NPV_{TRC} = Net present value of total cost of the resource

B_{TRC} = NPV of benefits of the program

C_{TRC} = NPV of costs of the programs

$$B_{TRC} = \sum_{t=1}^N \frac{UAC_t + TC_t}{(1+d)^{t-1}}$$

$$C_{TRC} = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

UAC_t = Utility avoided supply costs in year t

TC_t = Tax credits in year t

UIC_t = Utility increased supply costs in year t

PRC_t = Program administrator costs in year t

PCN_t = Net participant costs

The following calculations are based on the budgeted participation levels for year one of the program.

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$B_{TRC} = \sum_{t=1}^N \frac{UAC_t + TC_t}{(1+d)^{t-1}}$$

t	(1) UAC _t	(2) TC _t	B _{TRC}
1	\$ 8,573	-	\$ 8,573
2	8,661	-	8,661
3	8,184	-	8,184
4	7,993	-	7,993
5	8,059	-	8,059
6	8,165	-	8,165
7	8,344	-	8,344
8	8,530	-	8,530
9	7,421	-	7,421
10	7,570	-	7,570
11	3,895	-	3,895
12	3,973	-	3,973
13	3,739	-	3,739
14	3,664	-	3,664
15	3,738	-	3,738
16	3,466	-	3,466
17	3,535	-	3,535
18	3,606	-	3,606
19	488	-	488
20	498	-	498
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-
25	-	-	-
	\$ 112,102	-	\$ 112,102

7.730% Discount Rate

\$66,230 NPV

UAC_t = Utility avoided supply costs in year t
 TC_t = Tax Credits in year t

- (1) Scheduled per calculation performed for RIM Test
- (2) Scheduled per calculation performed for Participant Test

Atmos Energy's Demand Side Management Application October 2017

Atmos Energy
Demand Side Management (DSM) Program
Total Resource Cost (TRC) Test

$$C_{TRC} = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

t	(1) PRC _t	(2) PCN _t	(3) UIC _t	C _{TRC}
1	34,327	70,656	-	104,984
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
	34,327	70,656	-	104,984

7.730% Discount Rate

\$97,451 NPV

- PRC_t = Program administrator costs in year t
- PCN_t = Net participant costs
- UIC_t = Utility increased supply costs in year t

- (1) Scheduled per calculation performed for RIM Test
- (2) Represents net participant costs which is the incremental cost to the participant of purchasing a high-efficiency appliance versus one with standard efficiency. Amount scheduled from PC_t from the Participant Test.
- (3) No known increased supply costs as a result of operating the CEP

ATMOS ENERGY CORPORATION

(NAME OF UTILITY)

Demand-Side Management Low-Income Weatherization Program

DSM

Applicable

Applicable to Rate G-1 Sales Service, residential class only.

Purpose

The Company offers a low-income weatherization program in order to improve efficiency and household safety for eligible customers. The program does not rehabilitate homes and does not include home additions, paint, carpet or lead-based paint and asbestos abatements. The program may include, but not be limited to, the replacement of doors and windows, caulking, window stripping, installation of insulation, and/or the maintenance/replacement of natural gas appliances.

Eligibility Requirements

- 1. Atmos' Kentucky customers with an income at or below 150 percent of the federal poverty level may be eligible for home-weatherization assistance.
- 2. Verification of all sources of personal and household income for the purpose of determining eligibility.
- 3. Verification of ownership of the residence to be weatherized or a landlord agreement.
- 4. Copies of energy and heating bills or print outs from respective utility providers.
- 5. Qualified homeowners can earn up to \$3,000 in weatherization improvements.

Term

This program is effective until April 30, 2021 or by order of the Public Service Commission.

(T)

DATE OF ISSUE October 30, 2017
Month/Date/Year

DATE EFFECTIVE May 1, 2018
Month/Date/Year

Issued by Authority of an Order of the Public Service Commission in
Case No.

ISSUED BY /s/ Mark A. Martin
Signature of Officer

TITLE Vice President – Rates and Regulatory Affairs

ATMOS ENERGY CORPORATION

(NAME OF UTILITY)

Demand-Side Management Rebate Program

DSM

- 8. High efficiency ENERGY STAR® natural gas heating and water heating equipment is included within the program.
9. The type of equipment qualifying, the required efficiency level, BTU Input and corresponding rebate amounts are as follows:

Table with 4 columns: Equipment Type, Efficiency Level, BTU Input, Rebate Amount. Rows include Forced Air Furnace, Boiler, Programmable Thermostat, Tank Water Heater, and Tankless Water Heater.

- 10. For new or existing commercial cooking customers, the Company is offering a \$500 rebate to change their current fryer, griddle, oven, or steamer to an ENERGY STAR® model.

Term

This program is effective until April 30, 2021 of by order of the Public Service Commission

(T)

DATE OF ISSUE October 30, 2017
Month/Date/Year

DATE EFFECTIVE May 1, 2018
Month/Date/Year

Issued by Authority of an Order of the Public Service Commission in Case No.

ISSUED BY /s/ Mark A. Martin
Signature of Officer

TITLE Vice President – Rates and Regulatory Affairs

ATMOS ENERGY CORPORATION
(NAME OF UTILITY)

Demand-Side Management Cost Recovery Mechanism

DSM

1. Applicable

Applicable to Rate G-1 Sales Service, residential and commercial classes only.

The Distribution Charge under Residential and Commercial Rate G-1 Sales Service, shall be increased or decreased for an annual period beginning January 2018 and continuing through April 30, 2021 by the (T) DSM Cost Recovery Component (DSMRC) at a rate per Mcf in accordance with the following formula:

$$DSMRC = DCRC + DLSA + DIA + DBA$$

Where:

DCRC = DSM Cost Recovery-Current. The DCRC shall include all actual costs, direct and indirect, under this program which has been approved by the Commission. This includes all direct costs associated with the program including rebates paid under the program, the cost of educational supplies, and customer awareness related to conservation/efficiency. In addition, indirect costs shall include the costs of planning, developing, implementing, monitoring, and evaluating DSM programs. In addition, all costs incurred by or on behalf of the program, including but not limited to, costs for consultants and administrative expenses, will be recovered through the DCRC.

DLSA = DSM Lost Sales Adjustment. To effectively promote and execute the program, the Company shall recover the annual lost sales attributable to customer conservation/efficiency created as a result of the Program. This aligns the Company's interest with that of its customers by reducing the correlation between volume and revenue for those customers who elect to participate in the program. The lost sales are the estimated conservation, per participant, times the base rate for the applicable customer. The goal is to make the Company whole for promoting the program. Lost sales are based on the cumulative lost sales since the program inception and will reset when the Company completes a general rate case.

DATE OF ISSUE October 20, 2017
Month/Date/Year

DATE EFFECTIVE May 1, 2018
Month/Date/Year

Issued by Authority of an Order of the Public Service Commission in
Case No.

ISSUED BY /s/ Mark A. Martin
Signature of Officer

TITLE Vice President – Rates and Regulatory Affairs

ATMOS ENERGY CORPORATION

(NAME OF UTILITY)

Demand-Side Management Cost Recovery Mechanism

DSM

DSM Cost Recovery Component (DSMRC-R):

DSM Cost Recovery – Current:	\$0.00067 per Mcf	(R)
DSM Lost Sales Adjustment	\$0.0002 per Mcf	(R)
DSM Incentive Adjustment	(\$0.0001) per Mcf	(R)
DSM Balance Adjustment:	<u>\$0.0003 per Mcf</u>	(R)
DSMRC Residential Rate G-1	\$0.0078 per Mcf	(R)

DSM Cost Recovery Component (DSMRC-C):

DSM Cost Recovery – Current:	\$0.0013 per Mcf	(R)
DSM Lost Sales Adjustment	\$0.0001 per Mcf	(-)
DSM Incentive Adjustment	\$0.0000 per Mcf	(R)
DSM Balance Adjustment:	<u>(\$0.0013) per Mcf</u>	(I)
DSMRC Residential Rate G-1	\$0.0001 per Mcf	(R)

DATE OF ISSUE October 30, 2017
Month/Date/Year

DATE EFFECTIVE May 1, 2018
Month/Date/Year

Issued by Authority of an Order of the Public Service Commission in
Case No.

ISSUED BY /s/ Mark A. Martin
Signature of Officer

TITLE Vice President – Rates and Regulatory Affairs

Atmos Cares Report 2000 thru Current Month

ATMOS CARES ANNUAL TOTALS

Weatherization				Residential Rebates						Education			Monthly Totals		Commercial Rebates						
Payment Month	Expenses	Ccf Savings	Houses	Rebate Expenses	Rebates Issued	Ccf Savings	Promo & Misc.	Qtly. Fees	Monthly Totals	Presentations	# of Students	Expenses	Expenditures	Ccf Savings	Rebate Expenses	Rebates Issued	Ccf Savings	Promo & Misc.	Qtly. Fees	Monthly Totals	
Jan-00	\$ 20,035.50	2,317	14										\$ 20,035.50	2,317							
Feb-00	\$ 5,739.72	828	5										\$ 5,739.72	828							
Mar-00	\$ 8,496.71	1,324	8										\$ 8,496.71	1,324							
Apr-00	\$ 18,762.90	2,317	14										\$ 18,762.90	2,317							
May-00	\$ 11,573.54	1,490	9										\$ 11,573.54	1,490							
Jun-00	\$ 7,396.73	1,159	7										\$ 7,396.73	1,159							
Jul-00	\$ 4,154.31	828	5										\$ 4,154.31	828							
Aug-00	\$ 12,973.03	1,821	11										\$ 12,973.03	1,821							
Sep-00	\$ 12,627.73	1,655	10										\$ 12,627.73	1,655							
Oct-00	\$ 8,125.69	1,324	8										\$ 8,125.69	1,324							
Nov-00	\$ 14,839.30	2,317	14										\$ 14,839.30	2,317							
Dec-00	\$ 2,881.78	662	4										\$ 2,881.78	662							
2000 Totals	\$ 127,606.94	18,043	109	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 127,606.94	18,043	\$ -	0	0		\$ -	\$ -	
Cum. Totals	\$ 127,606.94	18,043	109	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 127,606.94	18,043	\$ -	0	0		\$ -	\$ -	
Jan-01	\$ 8,567.83	1,490	9										\$ 8,567.83	1,490							
Feb-01	\$ 14,791.75	1,821	11										\$ 14,791.75	1,821							
Mar-01	\$ 13,078.09	1,655	10										\$ 13,078.09	1,655							
Apr-01	\$ 18,341.19	2,317	14										\$ 18,341.19	2,317							
May-01	\$ 19,408.59	2,648	16										\$ 19,408.59	2,648							
Jun-01	\$ 34,873.85	4,138	25										\$ 34,873.85	4,138							
Jul-01	\$ 14,398.72	1,821	11										\$ 14,398.72	1,821							
Aug-01	\$ 11,578.57	1,655	10										\$ 11,578.57	1,655							
Sep-01	\$ 7,736.57	1,324	8										\$ 7,736.57	1,324							
Oct-01	\$ 9,103.17	1,324	8										\$ 9,103.17	1,324							
Nov-01	\$ 17,506.89	2,317	14										\$ 17,506.89	2,317							
Dec-01	\$ 26,983.09	3,311	20										\$ 26,983.09	3,311							
2001 Totals	\$ 196,356.31	25,823	156	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 196,356.31	25,823	\$ -	0	0		\$ -	\$ -	
Cum. Totals	\$ 323,963.25	43,865	265	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 323,963.25	43,865	\$ -	0	0		\$ -	\$ -	
Jan-02	\$ 21,222.28	2,980	18										\$ 21,222.28	2,980							
Feb-02	\$ 20,566.12	2,483	15										\$ 20,566.12	2,483							
Mar-02	\$ 16,330.10	2,152	13										\$ 16,330.10	2,152							
Apr-02	\$ 27,149.37	3,311	20										\$ 27,149.37	3,311							
May-02	\$ 18,256.86	2,317	14										\$ 18,256.86	2,317							
Jun-02	\$ 26,051.68	3,145	19										\$ 26,051.68	3,145							
Jul-02	\$ 18,516.82	2,317	14										\$ 18,516.82	2,317							
Aug-02	\$ 11,449.86	1,490	9										\$ 11,449.86	1,490							
Sep-02	\$ 13,743.29	1,655	10										\$ 13,743.29	1,655							
Oct-02	\$ 13,208.46	1,490	9										\$ 13,208.46	1,490							
Nov-02	\$ 11,997.19	1,324	8										\$ 11,997.19	1,324							
Dec-02	\$ 1,500.00	166	1										\$ 1,500.00	166							
2002 Totals	\$ 199,992.03	24,830	150	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 199,992.03	24,830	\$ -	0	0		\$ -	\$ -	
Cum. Totals	\$ 523,955.28	68,695	415	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 523,955.28	68,695	\$ -	0	0		\$ -	\$ -	
Jan-03	\$ 17,596.91	1,986	12										\$ 17,596.91	1,986							
Feb-03	\$ 7,996.11	993	6										\$ 7,996.11	993							
Mar-03	\$ 10,119.31	1,324	8										\$ 10,119.31	1,324							
Apr-03	\$ 22,161.59	2,317	14										\$ 22,161.59	2,317							
May-03	\$ 13,969.39	1,821	11										\$ 13,969.39	1,821							
Jun-03	\$ 6,547.15	662	4										\$ 6,547.15	662							
Jul-03	\$ 4,357.30	497	3										\$ 4,357.30	497							
Aug-03	\$ 10,414.70	1,324	8										\$ 10,414.70	1,324							
Sep-03	\$ 8,577.02	1,159	7										\$ 8,577.02	1,159							
Oct-03	\$ 16,703.38	1,986	12										\$ 16,703.38	1,986							
Nov-03	\$ 14,629.94	1,821	11										\$ 14,629.94	1,821							
Dec-03	\$ 11,487.21	1,159	7										\$ 11,487.21	1,159							
2003 Totals	\$ 144,560.01	17,050	103	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 144,560.01	17,050	\$ -	0	0		\$ -	\$ -	
Cum. Totals	\$ 668,515.29	85,745	518	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 668,515.29	85,745	\$ -	0	0		\$ -	\$ -	
Jan-04	\$ 10,757.10	1,159	7										\$ 10,757.10	1,159							
Feb-04	\$ 14,497.95	1,490	9										\$ 14,497.95	1,490							
Mar-04	\$ 23,181.08	2,648	16										\$ 23,181.08	2,648							
Apr-04	\$ 16,843.44	1,821	11										\$ 16,843.44	1,821							
May-04	\$ 17,738.85	1,821	11										\$ 17,738.85	1,821							
Jun-04	\$ 18,301.54	1,986	12										\$ 18,301.54	1,986							
Jul-04	\$ 12,525.03	1,490	9										\$ 12,525.03	1,490							
Aug-04	\$ 8,395.00	828	5										\$ 8,395.00	828							
Sep-04	\$ 15,337.19	1,986	12										\$ 15,337.19	1,986							
Oct-04	\$ 12,748.01	1,324	8										\$ 12,748.01	1,324							
Nov-04	\$ 10,177.65	1,159	7										\$ 10,177.65	1,159							
Dec-04	\$ 12,580.47	1,324	8										\$ 12,580.47	1,324							
2004 Totals	\$ 173,084.31	19,036	115	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 173,084.31	19,036	\$ -	0	0		\$ -	\$ -	
Cum. Totals	\$ 841,599.60	104,780	633	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 841,599.60	104,780	\$ -	0	0		\$ -	\$ -	

Atmos Cares Report 2000 thru Current Month

ATMOS CARES ANNUAL TOTALS

Weatherization				Residential Rebates					Education			Monthly Totals		Commercial Rebates							
Payment Month	Expenses	Ccf Savings	Houses	Rebate Expenses	Rebates Issued	Ccf Savings	Promo & Misc.	Qtly. Fees	Monthly Totals	Presentations	# of Students	Expenses	Expenditures	Ccf Savings	Rebate Expenses	Rebates Issued	Ccf Savings	Promo & Misc.	Qtly. Fees	Monthly Totals	
Jan-05	\$ 23,366.02	2,317	14										\$ 23,366.02	2,317							
Feb-05	\$ 22,121.83	2,483	15										\$ 22,121.83	2,483							
Mar-05	\$ 18,675.61	2,152	13										\$ 18,675.61	2,152							
Apr-05	\$ 28,094.00	3,145	19										\$ 28,094.00	3,145							
May-05	\$ 27,951.09	2,980	18										\$ 27,951.09	2,980							
Jun-05	\$ 18,668.02	1,986	12										\$ 18,668.02	1,986							
Jul-05	\$ 5,014.29	497	3										\$ 5,014.29	497							
Aug-05	\$ 5,615.40	662	4										\$ 5,615.40	662							
Sep-05	\$ 13,032.57	1,490	9										\$ 13,032.57	1,490							
Oct-05	\$ 11,183.31	1,159	7										\$ 11,183.31	1,159							
Nov-05	\$ 8,319.13	993	6										\$ 8,319.13	993							
Dec-05	\$ 11,224.40	1,324	8										\$ 11,224.40	1,324							
2005 Totals	\$ 193,265.67	21,188	128	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 193,265.67	21,188	\$ -	0	0		\$ -	\$ -	
Cum. Totals	\$ 1,034,865.27	125,968	761	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 1,034,865.27	125,968	\$ -	0	0		\$ -	\$ -	
Jan-06	\$ 7,727.22	828	5										\$ 7,727.22	828							
Feb-06	\$ 20,189.02	2,152	13										\$ 20,189.02	2,152							
Mar-06	\$ 24,264.95	2,648	16										\$ 24,264.95	2,648							
Apr-06	\$ 18,546.27	2,152	13										\$ 18,546.27	2,152							
May-06	\$ 22,690.10	2,648	16										\$ 22,690.10	2,648							
Jun-06	\$ 22,507.85	2,483	15										\$ 22,507.85	2,483							
Jul-06	\$ 10,656.37	1,159	7										\$ 10,656.37	1,159							
Aug-06	\$ 9,470.36	1,159	7										\$ 9,470.36	1,159							
Sep-06	\$ 20,453.75	2,152	13										\$ 20,453.75	2,152							
Oct-06	\$ 10,813.07	1,324	8										\$ 10,813.07	1,324							
Nov-06	\$ 15,527.99	2,152	13										\$ 15,527.99	2,152							
Dec-06	\$ 15,014.38	1,655	10										\$ 15,014.38	1,655							
2006 Totals	\$ 197,863.33	22,512	136	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 197,863.33	22,512	\$ -	0	0		\$ -	\$ -	
Cum. Totals	\$ 1,232,728.60	148,480	897	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 1,232,728.60	148,480	\$ -	0	0		\$ -	\$ -	
Jan-07	\$ 18,174.85	1,986	12										\$ 18,174.85	1,986							
Feb-07	\$ 4,858.87	497	3										\$ 4,858.87	497							
Mar-07	\$ 13,685.29	1,490	9										\$ 13,685.29	1,490							
Apr-07	\$ 9,441.01	993	6										\$ 9,441.01	993							
May-07	\$ 12,938.53	1,324	8										\$ 12,938.53	1,324							
Jun-07	\$ 14,555.36	1,490	9										\$ 14,555.36	1,490							
Jul-07	\$ 11,232.27	1,324	8										\$ 11,232.27	1,324							
Aug-07	\$ 8,806.27	1,159	7										\$ 8,806.27	1,159							
Sep-07	\$ 9,016.69	1,159	7										\$ 9,016.69	1,159							
Oct-07	\$ 13,814.23	1,490	9										\$ 13,814.23	1,490							
Nov-07	\$ 16,773.21	1,986	12										\$ 16,773.21	1,986							
Dec-07	\$ 7,351.17	828	5										\$ 7,351.17	828							
2007 Totals	\$ 140,647.75	15,725	99	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 140,647.75	15,725	\$ -	0	0		\$ -	\$ -	
Cum. Totals	\$ 1,373,376.35	164,206	992	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 1,373,376.35	164,206	\$ -	0	0		\$ -	\$ -	
Jan-08	\$ 12,738.11	1,324	8										\$ 12,738.11	1,324							
Feb-08	\$ 9,682.69	1,159	7										\$ 9,682.69	1,159							
Mar-08	\$ 12,055.53	1,490	9										\$ 12,055.53	1,490							
Apr-08	\$ 9,632.38	1,159	7										\$ 9,632.38	1,159							
May-08	\$ 2,882.82	331	2										\$ 2,882.82	331							
Jun-08	\$ 4,855.90	662	4										\$ 4,855.90	662							
Jul-08	\$ 5,791.40	662	4										\$ 5,791.40	662							
Aug-08	\$ 4,858.75	662	4										\$ 4,858.75	662							
Sep-08	\$ 8,302.17	1,324	8										\$ 8,302.17	1,324							
Oct-08	\$ 7,823.76	993	6										\$ 7,823.76	993							
Nov-08	\$ 11,501.85	1,324	8										\$ 11,501.85	1,324							
Dec-08	\$ 9,151.33	993	6										\$ 9,151.33	993							
2008 Totals	\$ 99,176.69	12,084	73	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 99,176.69	12,084	\$ -	0	0		\$ -	\$ -	
Cum. Totals	\$ 1,472,553.04	176,289	1,065	\$ -	0	0		\$ -	\$ -	0	0	\$ -	\$ 1,472,553.04	176,289	\$ -	0	0		\$ -	\$ -	
Jan-09	\$ 11,220.78	1,159	7										\$ 11,220.78	1,159							
Feb-09	\$ 18,302.80	2,152	13										\$ 18,302.80	2,152							
Mar-09	\$ 8,158.05	993	6										\$ 8,158.05	993							
Apr-09	\$ 14,214.36	1,490	9										\$ 14,214.36	1,490							
May-09	\$ 21,464.36	2,648	16										\$ 21,464.36	2,648							
Jun-09	\$ 13,424.55	1,490	9										\$ 13,424.55	1,490							
Jul-09	\$ 3,199.38	497	3										\$ 3,199.38	497							
Aug-09	\$ 12,860.06	1,324	8										\$ 12,860.06	1,324							
Sep-09	\$ 10,901.51	1,159	7										\$ 10,901.51	1,159							
Oct-09	\$ 14,981.10	1,655	10										\$ 14,981.10	1,655							
Nov-09	\$ 19,703.09	1,655	10										\$ 19,703.09	1,655							
Dec-09	\$ 16,790.79	1,655	10	\$ 4,392.00	20	2,187	\$ -	\$ 1,200.00	\$ 5,592.00	10	234	\$ 1,351.82	\$ 24,148.29	3,842							
2009 Totals	\$ 165,210.83	17,877	108	\$ 4,392.00	20	2,187	\$ -	\$ 1,200.00	\$ 5,592.00	10	234	\$ 3,127.32	\$ 173,930.15	20,064							
Cum. Totals	\$ 1,637,763.87	194,167	1,173	\$ 4,392.00	20	2,187	\$ -	\$ 1,200.00	\$ 5,592.00	10	234	\$ 3,127.32	\$ 1,646,463.19	196,354							

Atmos Cares Report 2000 thru Current Month

ATMOS CARES ANNUAL TOTALS

Weatherization				Residential Rebates						Education			Monthly Totals			Commercial Rebates					
Payment Month	Expenses	Ccf Savings	Houses	Rebate Expenses	Rebates Issued	Ccf Savings	Promo & Misc.	Qty. Fees	Monthly Totals	Presentations	# of Students	Expenses	Expenditures	Ccf Savings	Rebate Expenses	Rebates Issued	Ccf Savings	Promo & Misc.	Qty. Fees	Monthly Totals	
Jan-10	\$ 28,096.20	1,821	11	\$ 5,548.00	26	2,603	\$ 21,576.92		\$ 27,124.92	1	60	\$ -	\$ 55,221.12	4,424							
Feb-10	\$ 25,871.11	1,655	10	\$ 19,786.50	93	9,731	\$ -		\$ 19,786.50	0	0	\$ -	\$ 45,657.61	11,386							
Mar-10	\$ 31,157.30	3,642	22	\$ 10,972.50	49	4,229	\$ 4,592.32	\$ 3,586.35	\$ 19,151.17	0	0	\$ -	\$ 50,308.47	7,871							
Apr-10	\$ 33,157.61	2,483	15	\$ 20,890.00	92	8,629	\$ 13,324.38		\$ 34,214.38	1	56	\$ -	\$ 67,371.99	11,112							
May-10	\$ 24,547.98	1,821	11	\$ 19,315.00	84	7,310	\$ 1,109.24		\$ 20,424.24	0	0	\$ -	\$ 44,972.22	9,131							
Jun-10	\$ 34,758.55	1,986	12	\$ 25,708.50	115	9,888	\$ -	\$ 3,604.75	\$ 28,313.25	0	0	\$ -	\$ 64,071.80	11,875							
Jul-10	\$ 8,895.25	662	4	\$ 26,554.00	120	11,227	\$ 10,578.00		\$ 37,132.00	0	0	\$ -	\$ 46,027.25	11,889							
Aug-10	\$ 14,624.63	993	6	\$ 23,389.00	102	9,551	\$ -		\$ 23,389.00	0	0	\$ 161.16	\$ 38,174.79	10,544							
Sep-10	\$ 17,251.50	1,159	7	\$ 23,808.00	104	8,890	\$ -	\$ 3,471.15	\$ 27,279.15	4	74	\$ 1,218.97	\$ 45,749.62	10,049							
Oct-10	\$ 22,476.75	1,490	9	\$ 17,156.50	79	7,123	\$ 9,524.74		\$ 26,681.24	2	623	\$ 3,679.87	\$ 52,837.86	8,613							
Nov-10	\$ 27,577.00	2,483	15	\$ 14,743.50	67	6,130	\$ -		\$ 14,743.50	2	345	\$ 69.56	\$ 42,390.06	8,613							
Dec-10	\$ 28,185.35	2,317	14	\$ 30,744.00	140	13,775	\$ 540.00		\$ 34,562.65	1	120	\$ 121.50	\$ 62,969.50	16,092							
2010 Totals	\$ 286,599.23	22,512	136	\$ 238,615.50	1,071	99,087	\$ 61,245.60	\$ 13,940.90	\$ 313,802.00	11	1,277	\$ 5,251.06	\$ 615,452.29	121,599							
Cum. Totals	\$ 1,934,963.10	216,679	1,309	\$ 243,007.50	1,091	101,274	\$ 61,245.60	\$ 15,140.90	\$ 319,394.00	21	1,511	\$ 8,378.38	\$ 2,282,135.48	317,456							
Jan-11	\$ 21,962.79	1,490	9	\$ 25,989.00	112	10,406	\$ 819.65		\$ 26,808.65	1	50	\$ 79.26	\$ 48,850.70	11,895							
Feb-11	\$ 7,023.05	993	6	\$ 29,939.50	127	11,810	\$ 21,174.50		\$ 51,114.00	1	50	\$ 1,393.72	\$ 59,530.77	12,803							
Mar-11	\$ 21,569.00	1,324	8	\$ 20,774.00	90	8,208	\$ 16,293.26	\$ 3,401.63	\$ 40,468.89	3	156	\$ 47.97	\$ 62,085.86	9,532							
Apr-11	\$ 8,063.21	1,159	7	\$ 16,094.00	72	5,288	\$ 1,667.09		\$ 17,761.09	0	0	\$ 19.57	\$ 25,843.87	6,447							
May-11	\$ 29,133.87	1,986	12	\$ 21,589.50	91	8,258	\$ 5,544.76		\$ 27,134.26	0	0	\$ -	\$ 56,268.13	10,245							
Jun-11	\$ 50,274.40	4,304	26	\$ 15,667.50	69	5,022	\$ -	\$ 3,615.30	\$ 19,282.80	0	0	\$ -	\$ 69,557.20	9,326							
Jul-11	\$ 21,444.96	1,821	11	\$ 16,483.00	70	6,522	\$ 1,920.00		\$ 18,403.00	0	0	\$ 60.68	\$ 39,908.64	8,343							
Aug-11	\$ 15,935.10	2,317	14	\$ 11,586.00	50	4,580	\$ -		\$ 11,586.00	0	0	\$ -	\$ 27,191.10	6,997							
Sep-11	\$ 32,864.48	2,483	15	\$ 7,519.50	33	2,303	\$ -	\$ 3,153.80	\$ 10,673.30	0	0	\$ 63.36	\$ 43,801.14	4,786							
Oct-11	\$ 15,902.20	1,324	8	\$ 13,333.00	64	4,822	\$ 3,540.00		\$ 16,873.00	2	63	\$ 477.40	\$ 33,252.60	6,146							
Nov-11	\$ 12,248.96	1,324	8	\$ 15,450.50	57	5,805	\$ -		\$ 15,450.50	6	402	\$ 77.07	\$ 27,776.53	7,129							
Dec-11	\$ 18,874.90	1,986	12	\$ 25,454.00	108	10,445	\$ -	\$ 3,304.80	\$ 28,758.80	5	295	\$ 5,736.79	\$ 40,065.04	10,942							
2011 Totals	\$ 254,966.92	22,512	136	\$ 219,879.50	943	83,469	\$ 50,959.26	\$ 13,475.53	\$ 284,314.29	18	1,016	\$ 7,955.82	\$ 533,931.58	104,492							
Cum. Totals	\$ 2,189,330.02	239,191	1,445	\$ 462,887.00	2,034	184,743	\$ 112,204.86	\$ 28,616.43	\$ 603,708.29	39	2,527	\$ 16,334.20	\$ 2,796,067.06	421,948							
Jan-12	\$ 26,606.87	1,821	11	\$ 27,721.00	114	11,093	\$ -		\$ 27,721.00	1	15	\$ -	\$ 54,327.67	12,914							
Feb-12	\$ 28,127.32	1,986	12	\$ 10,647.00	46	3,613	\$ -	\$ 3,300.35	\$ 13,947.35	1	123	\$ -	\$ 42,074.87	5,999							
Mar-12	\$ 18,655.47	1,655	10	\$ 22,940.00	96	8,695	\$ -		\$ 22,940.00	2	310	\$ 74.66	\$ 41,870.13	10,350							
Apr-12	\$ 11,036.55	993	6	\$ 11,571.00	46	4,380	\$ -		\$ 11,571.00	1	46	\$ -	\$ 22,579.55	5,373							
May-12	\$ 34,889.43	2,483	15	\$ 16,864.50	67	5,836	\$ -		\$ 16,864.50	2	100	\$ -	\$ 51,753.93	8,319							
Jun-12	\$ 58,197.09	3,807	23	\$ 15,329.75	61	5,159	\$ -	\$ 2,967.82	\$ 18,297.57	1	80	\$ -	\$ 76,494.66	8,959							
Jul-12	\$ 9,959.32	662	4	\$ 9,761.25	39	3,247	\$ 4,854.60		\$ 14,615.85	1	\$ 752.88	\$ 26,566.20	\$ 3,928	\$ 32.75	1	27	\$ 545.40	\$ 660.00	\$ 1,238.15		
Aug-12	\$ 11,201.71	828	5	\$ 20,962.50	68	5,521	\$ 4,177.38	\$ 3,191.29	\$ 28,331.17	1	300	\$ -	\$ 40,002.20	6,186	0	0	\$ 469.32	\$ -	\$ 469.32		
Sep-12	\$ 18,613.74	1,655	10	\$ 19,773.00	71	5,830	\$ 26,874.79		\$ 46,647.79	1	\$ 77.00	\$ 68,357.83	\$ 7,352	0	0	\$ 3,019.30	\$ -	\$ -	\$ 3,019.30		
Oct-12	\$ 44,496.36	2,814	17	\$ 26,722.75	92	8,511	\$ -		\$ 26,722.75	1	338	\$ 48.01	\$ 71,219.11	11,229	0	0	\$ -	\$ -	\$ -	\$ -	
Nov-12	\$ 25,387.54	1,821	11	\$ 32,152.69	109	10,167	\$ -		\$ 32,152.69	10	338	\$ 48.01	\$ 58,285.28	11,981	1	142	\$ -	\$ -	\$ 361.29	\$ 697.04	
Dec-12	\$ 26,890.57	1,490	9	\$ 26,602.81	107	9,695	\$ -		\$ 26,602.81	4	205	\$ 19.04	\$ 52,512.42	10,093	0	0	\$ -	\$ -	\$ -	\$ -	
2012 Totals	\$ 313,033.97	22,015	133	\$ 241,048.25	918	80,736	\$ 35,906.77	\$ 9,459.46	\$ 286,414.48	25	1,471	\$ 971.59	\$ 605,843.85	102,283	2	168	\$ 4,034.02	\$ 1,021.29	\$ 5,423.81		
Cum. Totals	\$ 2,502,935.99	261,206	1,578	\$ 703,935.25	2,952	265,479	\$ 148,111.63	\$ 38,075.89	\$ 890,122.77	64	3,998	\$ 17,305.79	\$ 3,401,910.91	524,231	2	168	\$ 4,034.02	\$ 1,021.29	\$ 5,423.81		
Jan-13	\$ 11,810.31	993	6	\$ 32,262.26	127	10,362	\$ -		\$ 32,262.26	1	56	\$ 250.00	\$ 48,507.82	13,215	16	1,860	\$ -	\$ -	\$ -	\$ 4,185.25	
Feb-13	\$ 3,928.37	331	2	\$ 17,791.25	66	4,795	\$ -	\$ 3,899.33	\$ 21,690.58	2	177	\$ 58.61	\$ 27,387.92	5,668	4	551	\$ -	\$ -	\$ 442.91	\$ 1,710.16	
Mar-13	\$ 14,274.51	828	5	\$ 39,275.75	143	11,671	\$ -		\$ 39,275.75	2	116	\$ -	\$ 55,024.26	12,987	8	489	\$ -	\$ -	\$ -	\$ 1,474.00	
Apr-13	\$ 12,070.14	993	6	\$ 25,206.47	92	8,752	\$ -		\$ 25,206.47	4	141	\$ 20.73	\$ 43,262.34	9,901	21	2,246	\$ -	\$ -	\$ -	\$ 5,965.00	
May-13	\$ 14,787.25	828	5	\$ 28,725.93	114	9,388	\$ 80.75	\$ 3,413.30	\$ 32,219.98	0	0	\$ -	\$ 94,929.43	30,097	150	19,901	\$ -	\$ -	\$ 387.70	\$ 47,922.20	
Jun-13	\$ 24,865.79	1,821	11	\$ 24,634.83	87	6,653	\$ -		\$ 24,634.83	0	0	\$ -	\$ 53,012.37	9,866	15	1,392	\$ -	\$ -	\$ -	\$ 3,511.75	
Jul-13	\$ 15,406.13	993	6	\$ 23,124.83	87	6,512	\$ -		\$ 23,124.83	0	0	\$ -	\$ 42,259.96	8,441	12	936	\$ -	\$ -	\$ -	\$ 3,726.00	
Aug-13	\$ 24,686.73	1,324	8	\$ 15,174.97	499	20,701	\$ -	\$ 3,337.87	\$ 154,512.83	0	0	\$ -	\$ 179,871.45	22,178	2	153	\$ -	\$ -	\$ -	\$ 379.13	\$ 671.88
Sep-13	\$ 6,398.85	497	3	\$ 21,163.75	78	6,430	\$ -		\$ 21,163.75	0	0	\$ 1,472.00	\$ 30,367.35	7,383	6	456	\$ -	\$ -	\$ -	\$ 1,332.75	
Oct-13	\$ 35,643.88	1,986	12	\$ 51,789.50	246	16,618	\$ 36,311.87		\$ 88,101.37	3	290	\$ 128.96	\$ 129,450.22	21,267	5	663	\$ 4,124.51	\$ -	\$ -	\$ 5,676.01	
Nov-13	\$ 11,768.29	862	4	\$ 129,862.23	426	16,038	\$ 8,135.88	\$ 3,550.69	\$ 140,348.80	4	571	\$ 363.55	\$ 154,417.07	16,865	2	165	\$ 924.12	\$ -	\$ -	\$ 403.31	\$ 1,948.43
Dec-13	\$ 2,500.00	166	1	\$ 45,348.45	209	16,876	\$ -		\$ 45,348.45	3	352	\$ 1,906.41	\$ 49,754.86	17,042	0	0	\$ -				

Atmos Cares Report 2000 thru Current Month

ATMOS CARES ANNUAL TOTALS

Weatherization				Residential Rebates						Education			Monthly Totals		Commercial Rebates						
Payment Month	Expenses	Ccf Savings	Houses	Rebate Expenses	Rebates Issued	Ccf Savings	Promo & Misc.	Qty. Fees	Monthly Totals	Presentations	# of Students	Expenses	Expenditures	Ccf Savings	Rebate Expenses	Rebates Issued	Ccf Savings	Promo & Misc.	Qty. Fees	Monthly Totals	
Jan-14	\$ -	0	0	\$ 42,895.25	161	13,872	\$ -	\$ -	\$ 42,895.25	1	100	\$ 358.17	\$ 43,253.42	13,872	\$ -	0	\$ -	\$ -	\$ -	\$ -	\$ -
Feb-14	\$ -	0	0	\$ 42,924.48	175	13,283	\$ -	\$ 3,608.33	\$ 46,532.81	1	100	\$ 34.82	\$ 47,824.30	13,678	\$ 855.75	3	395	\$ -	\$ 400.93	\$ -	\$ 1,256.68
Mar-14	\$ 7,719.09	497	3	\$ 35,991.23	136	11,252	\$ -	\$ -	\$ 35,991.23	1	200	\$ -	\$ 45,378.82	12,182	\$ 1,668.50	7	433	\$ -	\$ -	\$ -	\$ 1,668.50
Apr-14	\$ 4,796.18	331	2	\$ 56,676.73	295	22,478	\$ -	\$ -	\$ 56,676.73	1	30	\$ -	\$ 67,165.66	24,332	\$ 5,692.75	15	1,523	\$ -	\$ -	\$ -	\$ 5,692.75
May-14	\$ 9,736.32	662	4	\$ 27,388.75	100	8,215	\$ -	\$ -	\$ 31,303.98	6	462	\$ -	\$ 43,944.32	9,431	\$ 2,469.00	6	556	\$ -	\$ 435.03	\$ -	\$ 2,904.03
Jun-14	\$ 29,991.82	2,152	13	\$ 51,809.75	178	15,406	\$ -	\$ -	\$ 51,809.75	0	0	\$ 620.00	\$ 86,056.82	19,002	\$ 3,635.25	10	1,445	\$ -	\$ -	\$ -	\$ 3,635.25
Jul-14	\$ 21,459.47	1,490	9	\$ 35,056.25	136	9,948	\$ -	\$ -	\$ 35,056.25	0	0	\$ 481.44	\$ 57,827.66	11,993	\$ 830.50	5	565	\$ -	\$ -	\$ -	\$ 830.50
Aug-14	\$ 20,050.37	1,324	8	\$ 22,650.00	91	7,562	\$ -	\$ 3,504.38	\$ 26,154.38	0	0	\$ 25.44	\$ 46,619.56	8,886	\$ -	0	\$ -	\$ -	\$ 389.38	\$ 389.38	
Sep-14	\$ 31,624.03	2,317	14	\$ 24,210.00	97	8,136	\$ -	\$ -	\$ 24,210.00	0	9	\$ -	\$ 57,995.19	11,003	\$ 1,961.16	7	550	\$ -	\$ -	\$ -	\$ 1,961.16
Oct-14	\$ -	0	0	\$ 25,538.20	96	7,952	\$ -	\$ -	\$ 25,538.20	0	392	\$ 7.09	\$ 26,476.79	8,269	\$ 931.50	3	318	\$ -	\$ -	\$ -	\$ 931.50
Nov-14	\$ 16,447.10	1,159	7	\$ 31,213.20	112	10,543	\$ -	\$ 3,802.05	\$ 35,015.25	4	217	\$ 338.96	\$ 64,389.76	12,269	\$ 2,166.00	6	567	\$ -	\$ 422.45	\$ -	\$ 2,588.45
Dec-14	\$ 21,099.70	1,490	9	\$ 56,390.91	200	16,612	\$ -	\$ -	\$ 56,390.91	6	458	\$ 3,145.02	\$ 81,339.86	18,320	\$ 704.25	3	218	\$ -	\$ -	\$ -	\$ 704.25
2014 Totals	\$ 162,924.08	11,422	69	\$ 452,744.76	1,777	145,258	\$ -	\$ 14,829.98	\$ 467,574.74	20	1,959	\$ 5,010.94	\$ 658,072.19	162,738	\$ 20,914.66	63	6,058	\$ -	\$ 1,847.78	\$ -	\$ 22,562.43
Cum. Totals	\$ 2,843,429.32	284,049	1,716	\$ 1,745,840.23	6,903	545,504	\$ -	\$ 192,640.13	\$ 1,938,480.36	103	7,659	\$ 26,507.19	\$ 4,966,228.14	881,968	\$ 92,644.91	306	35,038	\$ 9,082.65	\$ 4,282.12	\$ -	\$ 106,009.88
Jan-15	\$ 16,114.96	1,517	6	\$ 28,779.23	109	9,151	\$ 150.00	\$ -	\$ 29,929.23	1	101	\$ -	\$ 48,788.19	11,720	\$ 2,744.00	9	1,052	\$ -	\$ -	\$ -	\$ 2,744.00
Feb-15	\$ 4,911.61	506	2	\$ 40,492.50	147	11,302	\$ -	\$ 4,055.85	\$ 44,548.35	0	0	\$ -	\$ 51,458.11	12,265	\$ 1,552.50	5	457	\$ -	\$ -	\$ -	\$ 1,998.15
Mar-15	\$ 16,656.22	1,517	6	\$ 46,068.46	170	12,609	\$ -	\$ -	\$ 46,068.46	4	531	\$ 3,048.41	\$ 69,867.59	15,140	\$ 4,094.50	14	1,013	\$ -	\$ -	\$ -	\$ 4,094.50
Apr-15	\$ 14,235.29	1,517	6	\$ 50,121.23	202	15,527	\$ -	\$ -	\$ 50,121.23	0	0	\$ -	\$ 67,295.02	17,596	\$ 2,938.50	8	552	\$ -	\$ -	\$ -	\$ 2,938.50
May-15	\$ 14,381.95	2,023	8	\$ 30,986.50	105	7,897	\$ -	\$ 4,128.83	\$ 35,115.33	1	238	\$ -	\$ 51,596.95	10,235	\$ 1,648.00	4	315	\$ -	\$ 453.67	\$ -	\$ 2,099.67
Jun-15	\$ 22,929.30	2,276	9	\$ 27,936.71	99	8,172	\$ -	\$ -	\$ 27,936.71	0	0	\$ -	\$ 52,100.51	10,642	\$ 1,234.50	3	194	\$ -	\$ -	\$ -	\$ 1,234.50
Jul-15	\$ -	0	0	\$ 31,531.75	107	8,803	\$ -	\$ -	\$ 31,531.75	0	0	\$ -	\$ 32,117.25	10,111	\$ 585.50	4	308	\$ -	\$ -	\$ -	\$ 585.50
Aug-15	\$ 14,194.18	1,265	5	\$ 29,486.50	107	7,992	\$ -	\$ 3,656.03	\$ 33,142.53	0	0	\$ 199.00	\$ 50,052.93	9,743	\$ 2,115.50	6	487	\$ -	\$ 401.72	\$ -	\$ 2,517.22
Sep-15	\$ 8,332.12	1,265	5	\$ 30,655.10	105	9,331	\$ -	\$ -	\$ 30,655.10	0	0	\$ 1,687.35	\$ 41,908.07	10,874	\$ 1,234.50	3	278	\$ -	\$ -	\$ -	\$ 1,234.50
Oct-15	\$ 12,270.16	1,517	6	\$ 31,857.00	107	9,274	\$ -	\$ -	\$ 31,857.00	2	120	\$ 63.87	\$ 45,544.53	11,059	\$ 1,653.50	5	288	\$ -	\$ -	\$ -	\$ 1,653.50
Nov-15	\$ 13,096.81	1,770	7	\$ 25,944.75	96	7,928	\$ -	\$ 3,860.54	\$ 29,805.29	4	307	\$ -	\$ 44,523.06	9,796	\$ 1,418.75	4	399	\$ -	\$ 402.21	\$ -	\$ 1,820.96
Dec-15	\$ 9,038.78	759	3	\$ 31,747.87	113	9,542	\$ -	\$ -	\$ 31,747.87	5	577	\$ -	\$ 42,556.15	10,712	\$ 1,769.50	7	411	\$ -	\$ -	\$ -	\$ 1,769.50
2015 Totals	\$ 146,161.38	15,933	63	\$ 406,307.60	1,467	118,228	\$ 150.00	\$ 15,501.25	\$ 421,958.86	17	1,854	\$ 4,998.63	\$ 597,809.36	138,894	\$ 22,987.25	72	5,733	\$ -	\$ 1,703.25	\$ -	\$ 24,690.50
Cum. Totals	\$ 2,989,590.70	299,982	1,779	\$ 2,152,147.83	8,370	663,732	\$ 192,790.13	\$ 31,001.41	\$ 2,472,546.26	120	9,513	\$ 31,505.82	\$ 5,566,037.51	1,001,862	\$ 115,632.16	378	40,771	\$ 9,082.65	\$ 5,985.36	\$ -	\$ 130,700.17
Jan-16	\$ 9,002.00	759	3	\$ 54,992.80	196	16,103	\$ 134,584.84	\$ -	\$ 169,577.64	1	90	\$ -	\$ 214,217.29	17,123	\$ 780.00	3	262	\$ 14,787.90	\$ -	\$ -	\$ 15,567.90
Feb-16	\$ 3,870.69	253	1	\$ 32,504.45	119	9,445	\$ 1,385.74	\$ 4,040.99	\$ 37,931.17	1	125	\$ -	\$ 43,665.39	9,965	\$ 1,267.25	4	287	\$ 152.26	\$ 444.02	\$ -	\$ 1,863.53
Mar-16	\$ 18,529.35	1,770	7	\$ 31,641.67	109	9,010	\$ 2,193.35	\$ -	\$ 33,835.02	2	185	\$ -	\$ 57,614.62	12,444	\$ 4,909.25	25	1,664	\$ 241.00	\$ -	\$ -	\$ 5,150.25
Apr-16	\$ 5,048.64	759	3	\$ 40,829.48	165	12,336	\$ 518.08	\$ -	\$ 41,347.56	2	44	\$ -	\$ 49,081.12	13,653	\$ 2,628.00	7	558	\$ 56.93	\$ -	\$ -	\$ 2,684.93
May-16	\$ 13,093.22	1,265	5	\$ 41,904.99	167	9,816	\$ 1,126.34	\$ 4,138.52	\$ 47,169.85	0	0	\$ -	\$ 61,253.06	11,145	\$ 411.50	1	85	\$ 123.76	\$ 454.73	\$ -	\$ 969.99
Jun-16	\$ 11,529.17	1,012	4	\$ 31,862.00	114	7,721	\$ 3,790.30	\$ -	\$ 35,652.30	0	0	\$ -	\$ 48,428.44	8,843	\$ 930.50	3	110	\$ 416.47	\$ -	\$ -	\$ 1,246.97
Jul-16	\$ -	0	0	\$ 29,176.75	96	8,044	\$ -	\$ -	\$ 29,176.75	0	0	\$ 3,269.03	\$ 32,445.78	8,044	\$ -	0	\$ -	\$ -	\$ -	\$ -	\$ -
Aug-16	\$ 5,902.84	506	2	\$ 48,787.23	179	15,076	\$ 2,955.05	\$ 3,764.83	\$ 55,507.11	0	0	\$ -	\$ 63,592.32	15,869	\$ 1,444.00	4	287	\$ 324.70	\$ 413.67	\$ -	\$ 2,182.37
Sep-16	\$ 7,606.85	759	3	\$ 30,155.25	112	8,243	\$ 50,610.35	\$ -	\$ 80,765.60	1	25	\$ 63.07	\$ 94,358.86	9,026	\$ 310.50	1	24	\$ 5,612.84	\$ -	\$ -	\$ 5,923.34
Oct-16	\$ 13,764.40	1,265	5	\$ 29,489.25	104	9,306	\$ 11,613.25	\$ -	\$ 41,102.50	4	227	\$ -	\$ 56,890.19	10,806	\$ 747.25	2	235	\$ 1,276.04	\$ -	\$ -	\$ 2,023.29
Nov-16	\$ 5,017.39	506	2	\$ 38,259.75	122	11,946	\$ 3,437.07	\$ 3,722.38	\$ 45,419.20	2	310	\$ -	\$ 53,313.51	13,255	\$ 2,090.25	6	804	\$ 377.66	\$ 409.01	\$ -	\$ 2,876.92
Dec-16	\$ 6,694.25	759	3	\$ 31,455.25	117	8,635	\$ 2,469.79	\$ -	\$ 33,925.04	3	385	\$ 590.30	\$ 41,480.97	9,394	\$ -	0	\$ -	\$ 271.38	\$ -	\$ -	\$ 271.38
2016 Totals	\$ 100,128.55	9,810	38	\$ 441,058.87	1,600	125,883	\$ 214,684.16	\$ 15,666.71	\$ 671,409.74	16	1,391	\$ 3,922.40	\$ 816,241.55	139,588	\$ 15,418.50	56	4,276	\$ 23,640.93	\$ 1,721.43	\$ -	\$ 40,780.86
Cum. Totals	\$ 3,089,719.25	309,592	1,817	\$ 2,593,206.70	9,970	789,415	\$ 407,474.29	\$ 30,275.02	\$ 3,099,950.00	136	10,904	\$ 35,428.22	\$ 6,382,279.05	1,141,431	\$ 131,050.66	434	45,046	\$ 32,723.58	\$ 7,706.79	\$ -	\$ 171,481.03
Jan-17	\$ 9,030.32	759	3	\$ 71,442.88	252	20,280	\$ 2,172.18	\$ -	\$ 73,615.06	2	135	\$ -	\$ 82,853.73	21,038	\$ -	0	\$ -	\$ -	\$ -	\$ -	\$ 238.67
Feb-17	\$ 10,030.32	1,012	4	\$ 43,548.45	154	11,919	\$ 2,755.26	\$ 4,025.67	\$ 50,329.37	1	82	\$ -	\$ 64,033.02	14,030	\$ 2,928.25	10	1,099	\$ 302.74	\$ 442.33	\$ -	\$ 3,673.32
Mar-17	\$ 13,745.35	1,517	6	\$ 23,152.47	84	4,994	\$ 756.84	\$ -	\$ 23,909.31	2	162	\$ -	\$ 38,247.57	6,684	\$ 509.75	4	173	\$ 83.16	\$ -	\$ -	\$ 592.91
Apr-17	\$ 11,166.10	1,012	4	\$ 30,622.00	117	7,866	\$ 2,022.75	\$ -	\$ 32,644.75	1	25	\$ -	\$ 44,033.10	8,877	\$ -	0	\$ -	\$ 222.26	\$ -	\$ -	\$ 222.26
May-17	\$ 4,284.01	506	2	\$ 30,385.25	109	7,600	\$ 1,342.49	\$ 4,268.94	\$ 35,996.68	0	0	\$ -	\$ 40,897.26	8,105	\$ -	0	\$ -	\$ 147.51	\$ 469.06	\$ -	\$ 616.57
Jun-17	\$ 32,078.59	2,782	11	\$ 35,369.72	124	9,931	\$ -	\$ -	\$ 35,369.72	0	0	\$ -	\$ 67,448.31	12,713	\$ -	0	\$ -	\$ -	\$ -	\$ -	\$ -
Jul-17	\$ 5,426.42	506	2	\$ 17,715.50	86	4,749	\$ 425.21	\$ -	\$ 18,140.71	0	0	\$ -	\$ 23,949.60	5,297	\$ 335.75	1	142	\$ 46.72	\$ -	\$ -	\$ 382.47
Aug-17	\$ 8,387.35	759	3	\$ 40,330.66	143	11,755	\$ 4,405.89	\$ 4,121.08	\$ 48,857.64	0	0	\$ -	\$ 58,181.91	12,514	\$ -	0	\$ -	\$ 484.11	\$ -	\$ -	\$ 936.93
Sep-17	\$ 5,165.52	506	2	\$ 48,987.25	172	13,392	\$ -	\$ -	\$ 48,987.25	0	0	\$ 297.63	\$ 54,861.00	13,991	\$ 411.50	1	93	\$ -	\$ -	\$ -	\$ 411.50
Oct-17	\$ -	0	0	\$ -	0	0	\$ -	\$ -	\$ -	0	0	\$ 34.68	\$ 34.68	0	\$ -	0	\$ -	\$ -	\$ -	\$ -	\$ -
Nov-17	\$ -	0	0	\$ -	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	0	\$ -	0	\$ -	\$ -	\$ -	\$ -	\$ -
Dec-17	\$ -	0	0	\$ -	0	0	\$ -	\$ -	\$ -	0	0	\$ -	\$ -	0	\$ -	0	\$ -	\$ -	\$ -	\$ -	\$ -
2017 Totals	\$ 99,283.66	9,357	37	\$ 341,554.19	1,221	92,485	\$ 13,880.61	\$ 12,415.69	\$ 367,850.48	6	404	\$ 332.31	\$ 474,541.09								